Ministry of Finance

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 2017

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Ministry of Finance
Letenská 15, 118 10 Prague 1
Czech Republic
Tel.: +420 257 041 111
E-mail: pd@mfcr.cz

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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
EA12	Euro area (12 countries)
ECB	European Central Bank
EIB	European Investment Bank
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 2017 (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 2017 is also a more detailed quantification of the prediction of interest expenditure on the state debt service in 2018 and in the medium-term horizon through Cost-at-Risk methodology.

The real GDP growth of the Czech Republic reached 4.3% in 2017 based on preliminary estimate, again exceeding the growth rate of most EU member states and the EU average alone. Economic growth was driven primarily by domestic and, to a lesser extent, foreign demand. Household spending on consumption was supported in particular by dynamic growth in wage and salary volumes, decreasing savings rate reflecting low unemployment and high consumer confidence. Growth in gross fixed capital formation was driven by private investment. Foreign trade, supported by rising external demand, also contributed positively to economic growth. The year-on-year rate of inflation is in the upper half of the tolerance band of the Czech National Bank's inflation target since the end of 2016 and its average value was 2.5% in 2017. The Czech Republic has ranked among the countries with one of the lowest unemployment rates in the last few years with an average internationally comparable value of only 2.9% in 2017. In December, after seasonal adjustment, it fell to 2.4%, representing the lowest value across the EU. Also, the number of workers was the highest since the emergence of the Czech Republic, with the manufacturing industry as well as the wholesale, retail and education sectors contributing most to the growth of employment. In the field of external economic equilibrium, a moderate surplus of the current account balance is also expected in 2017. The financial sector remains stable and has sufficient available liquidity. Banking profitability also has a positive impact on capital adequacy, which goes far beyond the European regulatory rules.

Dynamic growth of the Czech economy is positively reflected in the general government sector. The state budget performance in cash methodology reached CZK 53.8 billion better result in 2017 in comparison with the approved deficit of CZK 60.0 billion set by the State Budget Act of the Czech Republic for 2017 when the final deficit amounted to CZK 6.2 billion. The whole government sector's performance in the ESA 2010 methodology, according to the Ministry of Finance, was again in surplus, at a record level of 1.1% of GDP. The estimated value of the general government structural balance in 2017 is 0.5% of GDP and is thus above the medium-term budgetary objective, implying prudent management and sustainability of public finances. The consolidated general government gross debt, according to the October notification, declined by 3.2 p.p. to 36.8% of GDP in 2016 and its further decline by 2.2 p.p. to 34.6% of GDP is estimated for 2017.

The positive perception of the Czech Republic on domestic and foreign financial markets was repeatedly confirmed in 2017 by the above-average rating of all major rating agencies with international scope, not only leaving a stable outlook, but Fitch Ratings' outlook was even improved to positive. All agencies unanimously assessed the prudent fiscal policy of the government and continued fiscal consolidation, allowing for a steady decline in the Czech Republic's indebtedness supported by effective state debt and state treasury resources management.

In 2017 there was a slight increase in the state debt by CZK 11.3 billion from CZK 1,613.4 billion to a final CZK 1,624.7 billion. However, this increase was caused by the decision of the Ministry to respond operatively to a strong demand from investors and to issue state treasury bills in December maturing in April of the following year, in a total nominal value of CZK 23.0 billion, whose extraordinary attractiveness is evidenced by the achieved auction yield of -0.80% p.a. representing an additional state budget revenue of almost CZK 70 million. In case of state debt expressed as a share of GDP, the year-on-year decrease was achieved, reaching 1.6 p.p. from 33.8% to 32.2% at the end of 2017, underlining the long-term trend of the Czech Republic's indebtedness reduction for the fourth year, while overall, the share of state debt in GDP decreased by 8.9 p.p. in last four years. This ranks the Czech Republic among one of the least indebted EU countries. This was facilitated by a more effective state treasury liquidity management and a related involvement of its available resources in covering the state's financing needs, by the revival of the economy of the Czech Republic, with an increase of 5.3% p.a. in current prices in the period from 2014 to 2017, and a responsible budgetary policy, when, after reaching a record budget surplus of CZK 61.8 billion in 2016, the state budget in 2017 reached a very low deficit of only CZK 6.2 billion. Due to a lower state budget deficit by CZK 53.8 billion compared to its budgeted amount of CZK 60 billion approved by the State Budget Act of the Czech Republic for 2017, there was a decrease in financing needs, which amounted to CZK 241.7 billion in 2017 and was thus CZK 49.0 billion lower compared to the planned financing needs according to The Czech Republic Funding and Debt Management Strategy for 2017 published on 22 December 2016 (hereinafter the „Strategy").

The financing of gross borrowing requirement, whose value in 2017 amounted to CZK 257.7 billion, was carried out on the domestic market only almost exclusively through the sale of CZK-denominated government bonds. Gross issue of medium-term and long-term government bonds in 2017 amounted to CZK 213.1 billion, i.e. CZK 1.5 billion more than in the previous year. This evidences the relatively stable demand for medium-term and long-term government bonds of the Czech Republic and their high attractiveness to investors. Fixed-rate and to a lesser extent variable-rate medium-term and long-term government bonds were sold in 2017 on the domestic market mainly through primary auctions, whose number was 58 in 22 auctions days. The share of variable-rate government bonds in total gross issue was 1.3%, and its decline was consistent with the Ministry's response to a significant decrease in yields on fixed-rate government bonds and the expected increase in reference interest rates. The Ministry carried out a total of 29 auctions of state treasury bills in 29 auction days, and in accordance with the Strategy, issued state treasury bills at all maturities within one year. Total gross issue of state treasury bills, including roll-over, amounted to CZK 409.9 billion, the majority of which was not primarily used to cover financing needs or gross borrowing requirements, but to utilize exceptionally favourable market conditions when all state treasury bills were issued with a negative yield.

In 2017, the Ministry responded flexibly to the financial market situation and continued to utilize the environment of negative yields of CZK-denominated government bonds with a relatively short time to maturity prevailing until the third quarter of this year when it placed government bonds with a maturity of up to five years on the market even after the April exit from the foreign exchange intervention regime and the increase in the basic rates of the Czech National Bank, first in almost ten years, by a total of 45 basis points from 0.05% p.a. to 0.50% p.a. The Ministry has sold out of its own asset account zero-coupon medium-term government bonds with maturities in years 2018 and 2019, and in February issued two more new zero-coupon medium-term government bonds with maturities in 2020 and 2022 in line with the Strategy, with the aim of maximizing the use of favourable market conditions to obtain additional government revenues. Zero-coupon medium-term government bonds in a total nominal value of CZK 72.1 billion and fixed-rate government bonds with maturity up to 2022 in a total nominal value of CZK 11.2 billion were sold in the primary and secondary markets, for the whose sales the Ministry collected additional net revenues of state budget of CZK 490.6 million. Issuance of state treasury bills brought revenues of the state budget from auction premiums amounting to CZK 714.0 million.

In 2017, government bonds in total nominal value of CZK 493.2 billion were sold for negative yield, bringing additional net state budget revenues of CZK 1.2 billion. The total state budget revenues from the sale of government bonds for negative yields reached CZK 2.4 billion from 2015 until the end of 2017. Another positive impact of government bond sales for negative yield was an increase in the share of state debt, with which no interest expenditures for the Czech Republic are and will ever be associated or even for which net interest revenues were received, from 12.0% to 15.2% of total state debt in 2017.

By appropriately timing the issuance activity and responding flexibly to developments on the financial markets in 2017, the Ministry achieved a decrease in net interest expenditures on state debt service by CZK 1.0 billion, which, after taking into account a decrease by CZK 4.7 billion in 2016, CZK 3.2 billion in 2015 and CZK 2.3 billion in 2014, means a total savings of CZK 29.1 billion on interest expense on state debt service achieved since the beginning of 2014. The average weighted yield of CZK-denominated medium-term and long-term government bonds sold in auctions in 2017 was 0.51% p.a.

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 2017, which served as a supplement to the primary auctions and also served as a channel for the sell-off of government bonds in a situation when the primary dealers' interest in using these bonds in lending facilities fell. Through these operations, the Ministry sold medium-term and long-term government bonds in a total nominal value of CZK 11.6 billion.

Government bonds were also offered on the MTS Czech Republic electronic trading platform within exchange operations of government bonds. The main objectives of these operations are to reduce the refinancing risk of the state debt portfolio and to manage the interest expenditure of the state budget. Within these operations, the Ministry offered medium-term and long-term government bonds maturing along the entire yield curve in exchange for government bonds maturing between 2017 and 2019. During 2017, government bonds in a total nominal value of CZK 3.8 billion with an average residual time to maturity of 0.6 years were exchanged for government bonds in a total nominal value of CZK 3.9 billion with an average residual time to maturity of 10.7 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 2017, when government bonds in total nominal value of CZK 71.8 billion were provided from the Ministry's assets account through lending facilities in a form of repo operations, which represents a year-on-year increase of CZK 0.5 billion, and government bonds in a total nominal value of CZK 92.6 billion were provided from the Ministry's asset accounts in the form of collateralized loans, which represents a year-on-year increase of CZK 32.5 billion.

Due to the continued strong interest of investors in bonds bearing an interest at the shorter end of the yield curve, particularly during the first half of 2017, gross issue of medium-term and long-term government bond in the residual maturity segment of up to 5 years prevailed, accounting for 39.5% of total gross issuance. In spite of this fact, the Ministry sold government bonds with longer residual time to maturity, selling 33.2% of total gross issue in residual maturity segment of 5 to 10 years and 27.2% of total gross issue in residual maturity segment of over 10 years.

Net issue of CZK-denominated medium-term and long-term government bonds in 2017 amounted to CZK 3.8 billion, representing a stabilization of the level of the total nominal value of domestic medium-term and long-term government bonds outstanding. In 2017, redemptions of three domestic medium-term and long-term government bonds totalling CZK 207.9 billion were carried out, followed by the exchanges of government bonds maturing in 2018 and 2019 in a total nominal value of CZK 1.5 billion. In 2017 there was no redemption of a government bonds issued on foreign markets and the Ministry also did not carry out any borrowing operations on foreign markets due to high interest in Czech government bonds on the domestic market as well as the higher expenditures associated with this issue compared to the comparable issue of government bonds on domestic market after taking into account the costs of currency risk hedging.

Due to the coming into force of the Act No. 128/2016 Coll., which amends the Act No. 218/2000 Coll. on budgetary rules and on amendment to some related laws (budgetary rules), as amended, a nine-month transitional period, during which the new mandatory clients of the state treasury together with state contributory organizations had to establish their accounts in the Czech National Bank and transfer their funds from previous accounts in banks or other payment service providers, ended on 10 February 2017. In this context, the treasury single accounts were extended to the accounts of these clients, bringing an additional increase of the treasury single accounts balance by CZK 49.3 billion compared with 2016 on average. 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 with positive impact on interest expenditure of the state budget.

Revenues from state treasury liquidity management operations amounted to CZK 312.3 million in 2017, which is CZK 191.7 million 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 basic rates in the second half of 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 233.8 million 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 1,541.3 million in 2017, which is CZK 606.0 million more than in 2016.

1 – Macroeconomic Framework and Financial Markets

Economic Development

The real GDP in Q1 2017 reached a quarter-on-quarter growth of 1.5% followed by a quarter-on-quarter growth of 2.5% in Q2, 0.5% in Q3, and in Q4, acceleration of quarter-on-quarter growth to 0.7% is expected (seasonally adjusted). For the whole year 2017, the real GDP growth of 4.3% is estimated.

Economic growth was driven in the first place by domestic demand in 2017. 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 which has been followed by the decreasing propensity to save. These factors reflect good conditions on the labour market and low level of interest rates. Mainly expenditures on durable goods increased, which suggests optimism of households regarding the future economic development. General government consumption grew due to increase in employment, salaries growth in state administration and higher spending on goods and services. Growth in fixed capital investment, which recovered in 2017, was mainly driven by private investment. The contribution of foreign trade to economic growth has slightly decreased, which is related to the faster growth of the domestic economy compared to business partners as well as to the high import intensity of investments. From the perspective of individual branches development, manufacturing and the goods and services sector contributed mainly to the growth.

Table 1: Main Macroeconomic Indicators of the Czech Republic

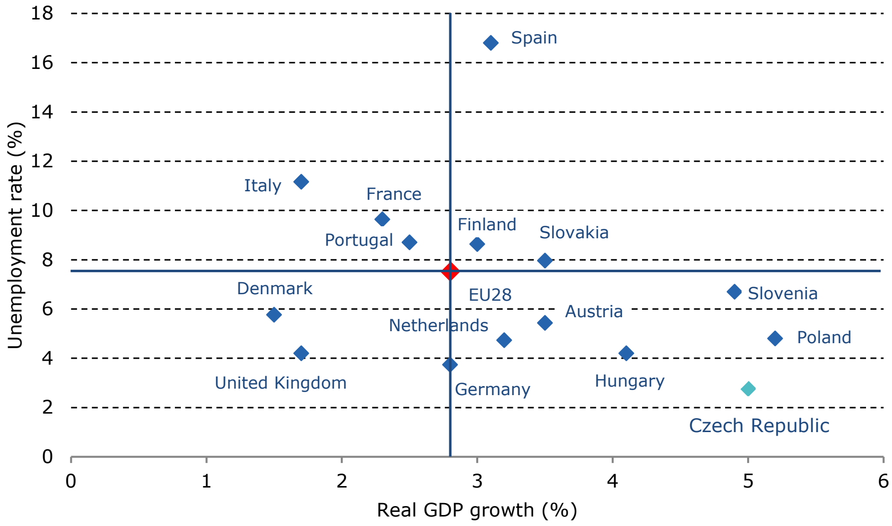
	2011	2012	2013	2014	2015	2016	2017F
Real GDP growth (%)	2.0	-0.8	-0.5	2.7	5.3	2.6	4.3
Household consumption growth (%)	0.3	-1.3	0.5	1.8	3.7	3.6	4.0
Government consumption growth (%)	-2.2	-2.0	2.5	1.1	1.9	2.0	1.9
Growth of gross fixed capital formation (%)	0.9	-3.1	-2.5	3.9	10.2	-2.3	5.6
Contribution of foreign trade to GDP growth (p.p.)	1.8	1.3	0.1	-0.5	-0.2	1.2	1.0
Average inflation rate (%)	1.9	3.3	1.4	0.4	0.3	0.7	2.5[2]
Unemployment rate (%)[1]	6.7	7.0	7.0	6.1	5.1	4.0	2.9[2]
Nominal wage and salary growth (%)	2.3	2.6	0.5	3.6	4.8	5.8	7.9
Current account balance on GDP (%)	-2.1	-1.6	-0.5	0.2	0.2	1.1	0.5
CZK/EUR exchange rate	24.6	25.1	26.0	27.5	27.3	27.0	26.3[2]
Real Eurozone GDP growth (%)[2]	1.5	-0.9	-0.2	1.3	2.1	1.8	2.4

[1] *Average unemployment rate based on the method of Labour Force Survey.*
[2] *Officially published figure.*
[3] *EA12.*
Source: MoF, CZSO

Since the end of 2016, year-on-year consumer price growth, with exceptions, was permanent in the upper half of the CNB's inflation target range. The average annual rate of inflation reached 2.5% in 2017

The Czech Republic belongs to countries with the lowest unemployment rates in the last years. In 2017, the unemployment rate (according to the Labour Force Survey methodology) was only 2.9%. In December decreased to 2.4% (after seasonal adjustment), which represented the lowest rate in the whole EU. For comparison, the unemployment rate of EU reached level of 7.3%. The total number of workers was the highest since the origin of the Czech Republic; with the manufacturing industry contributing most to the growth of employment. Significant contributions were also recorded in the wholesale, retail and education sectors. Lack of workers was evident in all market sectors and the labour market began to show signs of overheating during 2017.

Figure 1: GDP Growth and Unemployment Rate in Selected EU Countries in 2017



Note: GDP expressed as a year-on-year seasonally adjusted growth in Q3 2017. Unemployment rate adjusted for seasonality in Q3 2017.
Source: CZSO, Eurostat

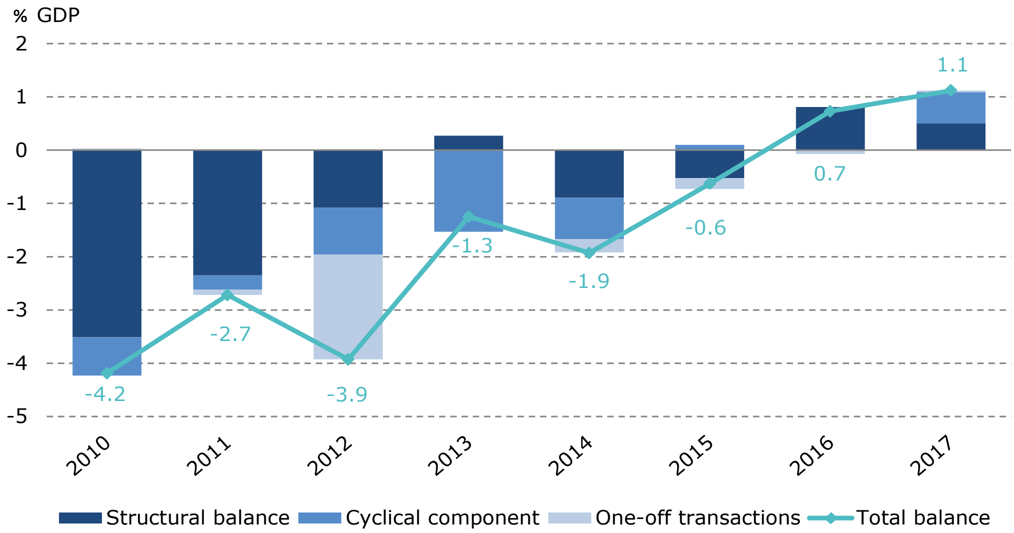
Since 2014, the current account of the balance of payments has been in a permanent surplus. In 2017 current account balance should reached a surplus of 0.5% of GDP. The positive balance of goods and services outperformed the deficit of primary incomes, which is most affected by the outflow of foreign 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, which was additionally increased by direct interventions of the CNB on FX market until April 2017. The profitability of banks has a positive impact on capital adequacy. Household indebtedness remains relatively low on an international comparison due to the moderate pace of their borrowing, and the share of non-performing loans on total loans is still decreasing, being 2.5% for households and 4.2% for non-financial corporations at the end of December 2017. Consumer loans growth in the Q4 2017 was on average 7.5%. Dynamic growth rate was slightly slowed down in Q4 2017 in year-on-year comparison, but development of housing loans still shows a swift increase. The high volume of deposits by residents and sufficient liquidity in the banking system mean that the domestic banking sector is independent of foreign funding sources in the long term. Capital adequacy measured as Capital Adequacy Ratio Tier I reached 16.95% at the end of Q3 2017 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. As a consequence of this strategy and renewed economic growth, the public finance balance improved by 1.3 p.p. to the value -0.6% of GDP in 2015. The first surplus of the general government sector in the history of the Czech Republic (0.7%) was recorded in year 2016. Ministry estimates that in 2017 total balance ended with a surplus of 1.1%, which would represent a year-on-year improvement of 0.4 p.p. Given the steps on the revenue and expenditure side of the budget, the expected value of the general government structural balance in 2017 is 0.5% of GDP. Structural balance is thus expected to have been approximately 1.5 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 2: 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 2018.
Source: MoF

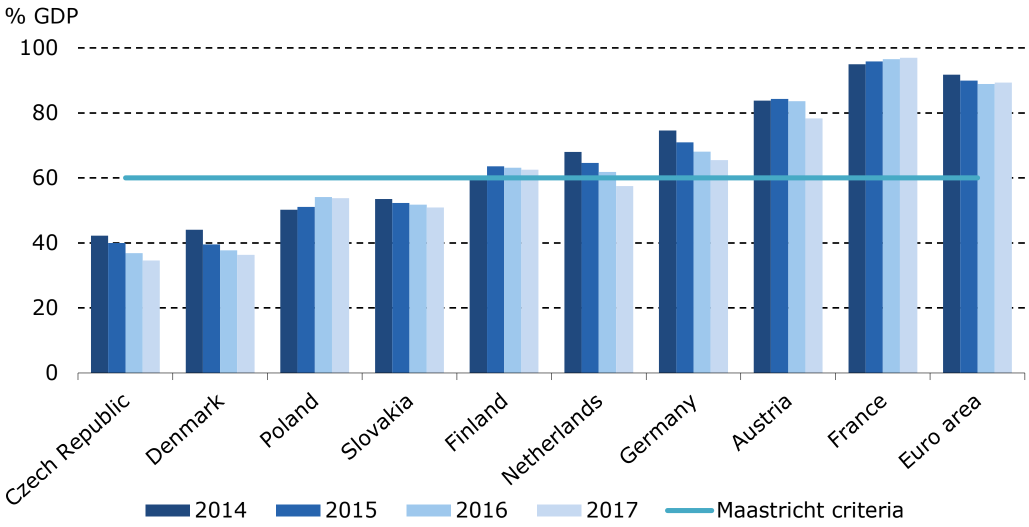
In the cash methodology, the state budget ended in 2017 with a slight deficit of CZK 6.2 billion, which is the result worse by CZK 67.9 billion compared to 2016. Compared to the result of 2016, when the surplus of CZK 61.8 billion was recorded, the decrease was mainly due to the decrease in EU funds received and financial mechanisms. In comparison with to the amount stipulated by the State Budget Act of the Czech Republic for 2017, the economy was better by CZK 53.8 billion. This was the second best result of state budget performance since 1997.

Total revenue of the state budget in 2017 reached CZK 1,273.6 billion, which implies year-on-year decrease by CZK 8.0 billion mainly due to the lower budget received from the EU budget and financial mechanisms by CZK 81.9 billion. This negative factor was offset by a higher collection of tax revenues, including social security premiums, which grew year-on-year by CZK 82.4 billion and was thus compared to originally approved budget higher by CZK 41.1 billion. Exceeded total revenue by CZK 24.4 billion compared to budgeted revenue was caused mainly by higher than planned collection of tax revenue including social security premium. The result was caused both by more effective tax collection and continuing economic growth accompanied by record high number in employment and increasing salaries both in private and public sector. It is supported also by the collection of tax revenue (without social security premium and public health insurance premium) which at the level of state budgets increased by 7.0%.

Total expenditure in 2017 reached the amount of CZK 1,279.8 billion, which represented a year-on-year increase of CZK 60.0 billion. Compared to expenditure in the originally approved budget, the saving of expenditure in the amount of CZK 29.5 billion was reached. The combination of moderate deficit performance and low interest rates led to the significant saving in the interest costs on state debt service compared to the approved budget, particularly CZK 6.2 billion.

According to the October Notification, the general gross (consolidated) government debt decreased by 3.2 p.p. to 36.8% of GDP in 2016. Further decrease of the debt by 2.2 p.p. to 34.6% of GDP is expected in 2017. 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 3: Government Sector Debt in Selected EU Countries (ESA 2010)

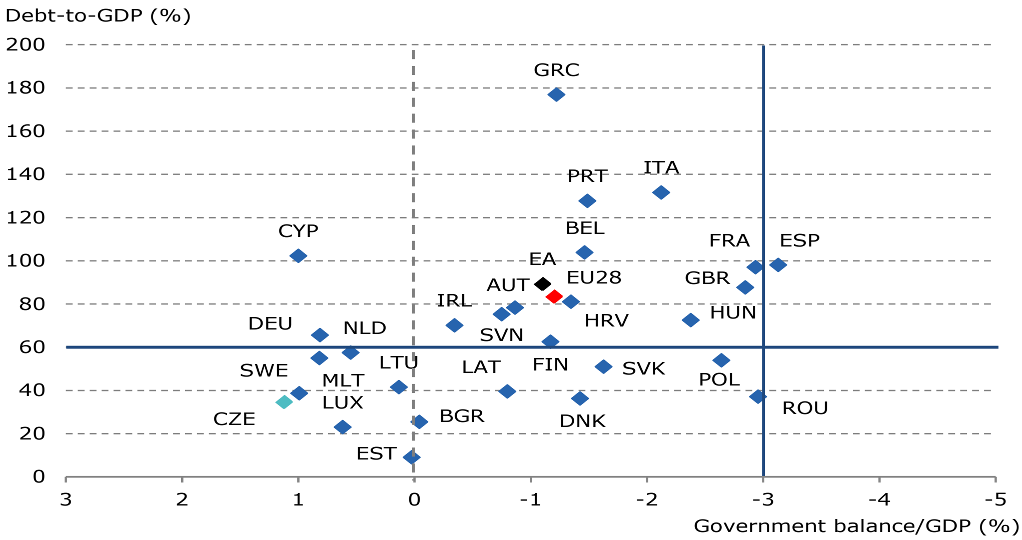


Note: The Maastricht criterion is a part of the condition for EU members to join the single currency union. The value of the share of government sector debt to GDP should not exceed 60%. Eurozone is stated in conception comprising 19 countries. Data from 2014 to 2017 are taken from Fiscal Outlook – November 2017. Data for the Czech Republic are taken from Macroeconomic Forecast of the Czech Republic - January 2018.
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 1.1% GDP in 2017. In case of general government debt, the Czech Republic shows the fourth lowest debt-to-GDP ratio in 2016 and 2017 as well. Lower relative debt recorded only Estonia, Luxembourg and Bulgaria.

A significant reduction in the government debt ratio from 44.9% of GDP in 2013 to the expected level of 34.6% of GDP in 2017 is positively influenced by the fiscal effort, surplus managed by the sub-sector of local government, decrease in interest cost of government debt and dynamic GDP growth. Important factor behind the positive debt dynamic is more effective liquidity management of the state treasury general account, which contributes to the lower gross borrowing requirement and lower interest costs of the debt burden.

Figure 4: Government Sector Deficit and Debt in EU Countries (ESA 2010)



Source: MoF, Eurostat

Financial Markets

The Czech government bond yields performed substantially unstable development due to expectation of exit from the CNB exchange rate commitment, ending interventions on 6 April 2017 and subsequent gradual rise in interest rates. Effective as from 4 August 2017 CNB increased the two-week repo rate to 0.25% p.a. and from 3 November 2017 by 25 basis points to 0.50% p.a. In accordance with the change of monetary policy course, yields of Czech government bond rose across all segments of the yield curve in the second half of 2017 compared to previous year.

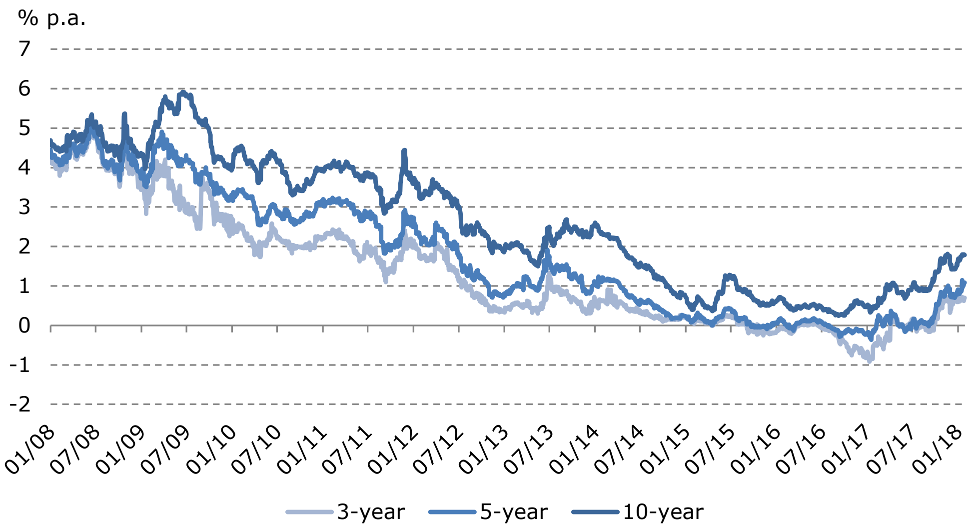
In January 2017 the Czech 10-year government bond yields stagnated around the average 0.4% p.a. and even fell below the level of the German "bunds" with the similar time to maturity. Czech 3-year government bond yields reached the historically lowest point -0.92% p.a. on 10 January. The significant increase in demand for Czech government bond by foreign investors helped to stabilize yields, which was in contrast to the January increase in interest rates on the international market. In the following months the yields on the Czech 10-year government bond rose gradually to 1,0% p.a. at the end of March 2017. The short end of the yield curve was primarily determined by the expected exit from the CNB's exchange rate commitment and due to this reason yields of Czech government bond with the maturity up to three years remained in a deep negative territory.

Termination of the CNB's exchange rate commitment did not lead to bond sales and sharp increase in Czech government bond yields as predictions expected. Despite the slight shift in the short end of the yield curve, yields of Czech government bond within two years maturity remained negative. The stronger long-term interest rate increase did not even occur at the long end of the yield curve, on the contrary by the end of May, yields on the Czech 10-year government bond fell back to 0.7% p.a.

Between end-April and June yields on medium and long term government bonds were affected by their inclusion into the GBI-EM Index by J.P. Morgan which put downward pressure on yields. Since the second half of June 2017, in line with development on the international market and rising inflation expectation, yields on Czech government bond began to grow. Expectation of further monetary policy tightening contributed to yields growth. The Czech 10-year government bond yields reached 1.1% p.a. at the beginning of June, by mid-September the average yields in this segment ranged between 0.9% and 1,0% p.a.

Since mid-September Czech government bond yields started to grow sharply due to the expected further increase in the CNB's interest rate. The local maximum reached the yield 1.8% p.a. of the Czech 10-year government bond on 21 November 2017. By the end of December it declined again to the value around 1.4% p.a.

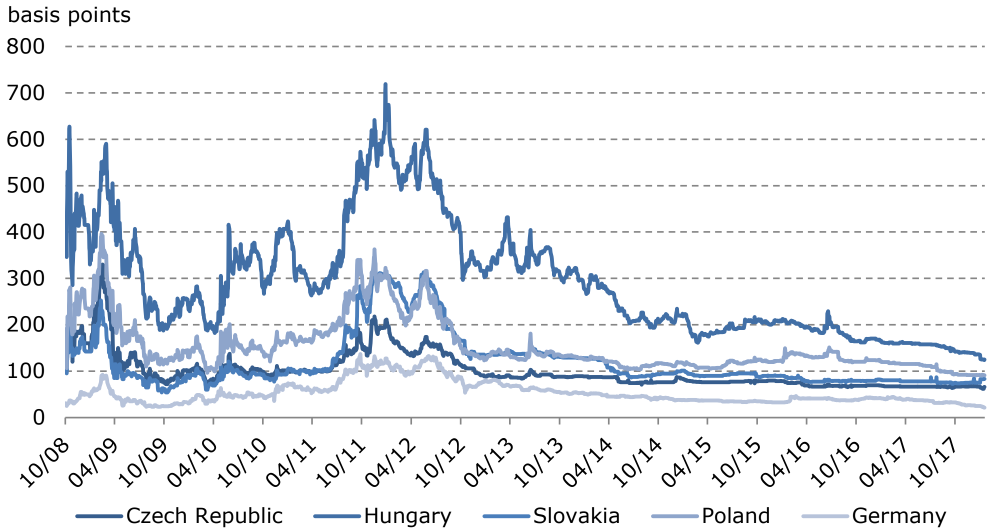
Figure 5: Development of Czech Government Bonds Yields



Source: Thomson Reuters

From a historical point of view yields on the Czech government bond still maintain a relatively low level and in long run stay below the EU average. 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 government 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 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. In contrast, flexible issuance strategy enables the Ministry to respond quickly to constantly changing market conditions. 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.

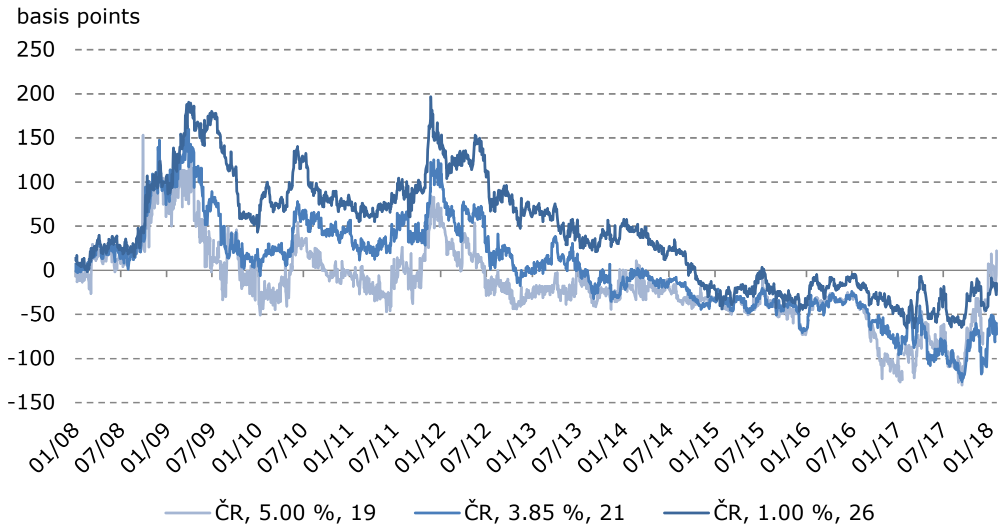
Figure 6: Premiums on Credit Default Swaps - Middle Europe (10-year)



Source: Thomson Reuters

The development of the risk premium measured using the spread to comparable swap rates ("asset swap spread") indicates a decrease of the risk premium on Czech government bonds approximately since the half of 2016, especially at the short end of the yield curve.

Figure 7: "Asset Swap Spread" Risk Premium on Czech Government Bonds

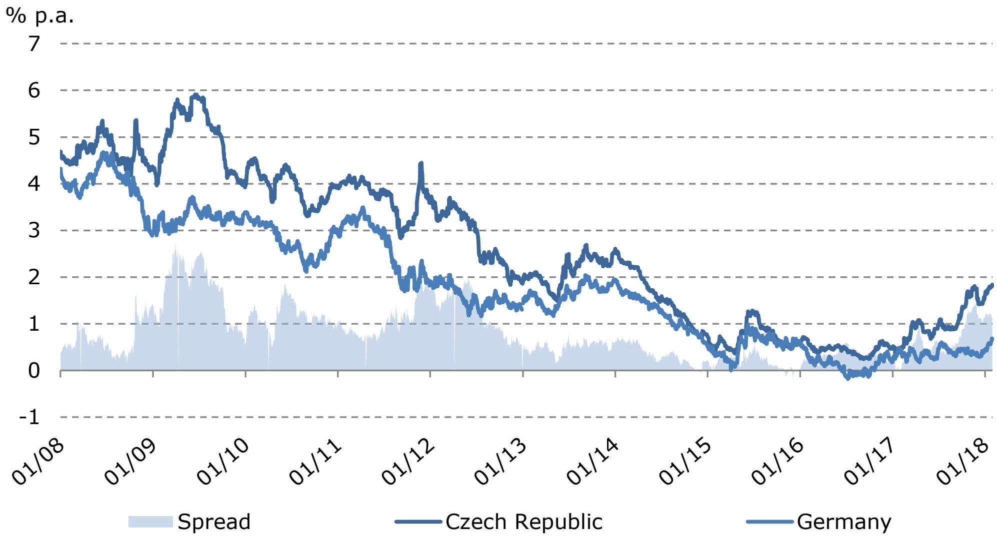


Source: Thomson Reuters

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 part of the year. During 2017 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 CNB‛s monetary policy, which began with the interest rate growth, while the ECB´s monetary policy stance was still on the accommodative side. Extending the interest rate differential to the CNB's two-week repo rate was reflected in the increase of spread to the German "bunds" in the second half of 2017.

In mid-March 2016, ECB cut deposit facility interest rate by 10 basis points from -0.30% p.a. to -0.40% p.a. The interest rate was maintained at the same level throughout the year 2017. ECB decided to extend Asset purchase programme on its meeting on 8 December 2016. ECB's asset purchase programme remained at the average monthly pace of EUR 80 billion until March 2017, but from April 2017 to December 2017 the net purchases were reduced to monthly pace of EUR 60 billion. At the end of October, the ECB decided to reduce net asset purchases to monthly pace of EUR 30 billion for the period of January 2018 to September 2018. The ECB leaves the possibility of further prolongation of the program open with regard to sustainable inflation over the medium term.

Figure 8: Comparison of Yields of the Czech and German 10-year Government Bonds



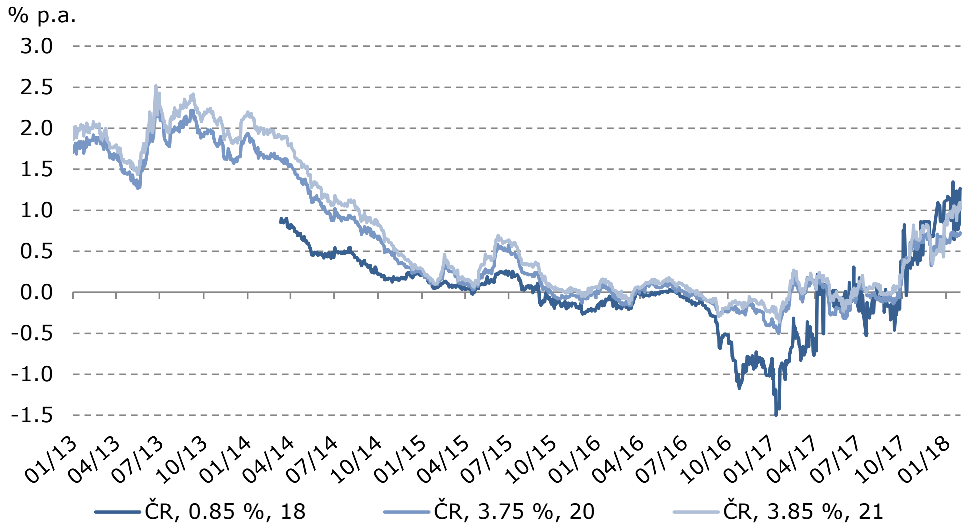
Source: Thomson Reuters

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 is subsequently reflected in the overall decrease of government bond yields with a 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.

The short end of the yield curve is greatly influenced by the monetary policy decisions of the CNB. The alternative monetary policy instrument in the form of the one-sided exchange rate commitment of the CNB contributed positively to the decline in yields on Czech government bonds in the first quarter of 2017. Czech Republic Government Bond, 2014-2018, 0.85% yields hit -1.5% p.a. in mid-January 2017. After the end of the exchange rate commitment, a gradual normalization of yields at the short end of the yield curve and subsequent growth in line with the increase in the CNB's interest rates occurred in 2017 although negative yields at the short end of the yield curve lasted until the beginning of October 2017. Foreign investors seem to have become longer-term investors in Czech government bonds with a hold-to-maturity strategy. This could be confirmed by the structure of holders of Czech government bonds, when the share of non-residents in CZK-denominated government bonds decreased from 47.3% (before the end of the exchange rate commitment) in March to 41.6% at the end of 2017. Foreign investors are not motivated to swiftly close their positions due to the ongoing appreciation of the koruna and the expectation of further interest rate growth, and this should continue to positively influence the demand for Czech government bonds.

Figure 9: Yields Development of Selected T-Bonds in Short-Term and Middle-Term Segment of the Yield Curve



Source: Thomson Reuters

Unsterilized currency interventions have contributed to a long-term increase in the liquidity of the banking system in the Czech Republic. Free liquidity can be placed by financial institutions in Czech short-term government bonds and government treasury bills. At the end of 2017, bank deposits reached CZK 2.3 trillion in the CNB.

In maturity segments of up to 1 year, auctions yields of all state treasury bills were in negative level in all auctions in 2017. The average state treasury bills auction yield in 2017 amounted to -0.51% p.a. The Ministry used the end-of-year calendar effect to issue state treasury bills in November and December.

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 2017, all major credit rating agencies confirmed their ratings of the Czech Republic with a stable outlook, in the case of Fitch Ratings an improvement of the outlook for domestic and foreign long-term liabilities to positive occurred.

Table 2: Czech Republic's Sovereign Credit Rating

Rating Agency	Domestic long-term liabilities	Outlook	Foreign long-term liabilities	Outlook	Granted/ affirmed
Moody's	A1	Stable	A1	Stable	26/8/2017[1]
Standard & Poor's	AA	Stable	AA-	Stable	19/1/2018
Fitch Ratings	A+	Positive	A+	Positive	8/2/2018
JCR	AA-	Positive	A+	Positive	27/9/2016
R&I	AA-	Stable	A+	Stable	2/7/2017
Scope Ratings	AA	Stable	AA	Stable	26/1/2018
Dagong Global Credit Rating	A+	Stable	A+	Stable	8/2/2017

[1] "Credit Opinion" supporting current rating.
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 needs to acquire over the course of the respective calendar year through alternative 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 of 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	2011	2012	2013	2014	2015	2016	2017
Primary balance of state budget	97.6	59.6	30.4	29.3	17.5	-102.4	-33.6
Net expenditure on state debt[1]	45.1	41.4	50.9	48.5	45.3	40.7	39.8
T-Bonds redemptions[2]	104.1	121.7	107.9	143.7	123.9	157.8	209.4
Redemptions and early redemptions on savings government bonds	0.0	9.6	7.7	11.9	11.9	30.2	16.9
T-Bills redemptions[3]	113.3	162.6	189.1	120.9	107.6	84.4	4.2
Other money market instruments redemptions[3]	0.0	0.0	0.0	0.0	2.5	2.2	0.0
Repayments on credits and loans	1.1	5.3	2.8	11.1	2.5	1.7	5.1
Total financing needs	**361.3**	**400.2**	**388.8**	**365.3**	**311.2**	**214.5**	**241.7**
Gross T-Bills issue[3,4]	162.6	189.1	120.9	107.6	84.4	4.2	44.0
Other money market instruments[3]	0.0	0.0	0.0	2.5	2.2	0.0	0.0
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[4]	180.3	164.6	145.6	153.3	180.4	211.6	213.1
Gross issue of T-Bonds on foreign markets[4]	0.9	69.0	0.0	0.0	0.0	0.0	0.0
Gross issue of savings government bonds[5]	20.4	45.4	39.1	2.1	1.0	1.0	0.6
Received credits and loans	5.3	4.0	4.3	0.0	0.0	0.0	0.0
Financial asset and liquidity management	-8.2	-71.8	78.9	99.7	43.2	-2.3	-16.1
Total financing sources	**361.3**	**400.2**	**388.8**	**365.3**	**311.2**	**214.5**	**241.7**
Gross borrowing requirement	**369.5**	**472.0**	**309.9**	**265.6**	**268.1**	**216.9**	**257.7**

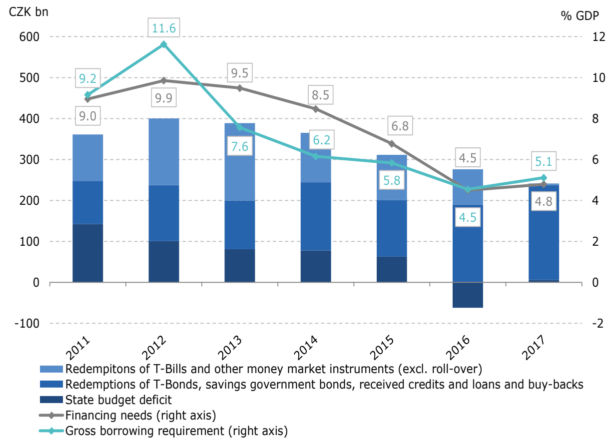
[1] Balance of the budgetary chapter 396 – State Debt.
[2] Incl. effect of buy-backs and exchanges.
[3] Excl. T-Bills issued and redeemed within respective year, and roll-over of other money market instruments.
[4] Nominal value; premiums and discounts included in the net expenditure on state debt, i.e.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

In 2017, the financing needs decreased by CZK 49.0 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 deficit of CZK 6.2 billion. Compared to the approved deficit, it was lower by CZK 53.8 billion. The savings on net expenditures on state debt service, which were lower by CZK 6.6 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 share of financing needs and its components in GDP, 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 gross borrowing requirement in GDP. The financing needs have been decreasing since 2012, both in absolute terms and in terms of its share in GDP. In relation to GDP, there has been slight increase of 0.3 p.p. year-on-year, although there has been a decrease by 2.0 p.p. compared to 2015.

Figure 10: Financing Needs



Note:GDP in the ESA 2010 methodology. The source of data for 2011 – 2016 is CZSO, for 2017 the Macroeconomic Forecast of the Czech Republic – January 2018. T-Bonds redemptions including effect of buy-backs and exchanges.
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 drawing of loans and credits.

Table 4: Financing of the Gross Borrowing Requirement

CZK bn	2011	2012	2013	2014	2015	2016	2017
Gross borrowing requirement	**369.5**	**472.0**	**309.9**	**265.6**	**268.1**	**216.9**	**257.7**
Gross T-Bills issue[1,2]	162.6	189.1	120.9	107.6	84.4	4.2	44.0
Other money market instruments[1]	0.0	0.0	0.0	2.5	2.2	0.0	0.0
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]	180.3	164.6	145.6	153.3	180.4	211.6	213.1
Gross issue of T-Bonds on domestic market up to 5 years[2,3]	45.3	31.4	37.8	37.3	100.0	119.6	84.2
Gross issue of T-Bonds on domestic market from 5 to 10 years[2,3]	73.6	93.3	79.6	50.0	23.3	48.4	70.9
Gross issue of T-Bonds on domestic market over 10 years[2,3]	61.4	39.9	28.3	65.9	57.1	43.7	58.0
Gross issue of T-Bonds on foreign markets[2]	0.9	69.0	0.0	0.0	0.0	0.0	0.0
Gross issue of savings government bonds[4]	20.4	45.4	39.1	2.1	1.0	1.0	0.6
Received credits and loans	5.3	4.0	4.3	0.0	0.0	0.0	0.0
Total financing of gross borrowing requirement	**369.5**	**472.0**	**309.9**	**265.6**	**268.1**	**216.9**	**257.7**

[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.
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, for example between 2013 and 2015, and may be higher if there is accumulation of financial assets through the borrowing operations of the state as in 2011 and 2012. In the course of 2017, the accumulation of financial assets mainly resulted from increased short-term borrowing operations in the form of state treasury bills maturing in 2017 in order to obtain state budget revenue from the auction premiums. The financial resources received from these operations were further invested in state treasury liquidity management with a positive impact on the state budget performance.

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.

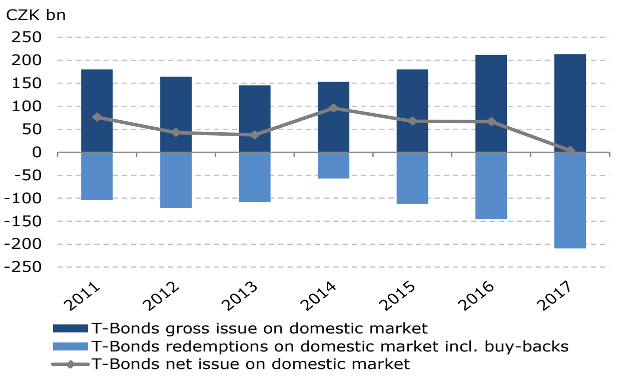
Net borrowing requirement is funded by the same instruments as gross borrowing requirement. However, when financing net borrowing requirement, it is necessary to take into account the total redemptions of the nominal values (principals) of the debt portfolio instruments, including related derivatives.

Table 5: Net Borrowing Requirement

CZK bn	2011	2012	2013	2014	2015	2016	2017
Gross borrowing requirement	**369.5**	**472.0**	**309.9**	**265.6**	**268.1**	**216.9**	**257.7**
T-Bonds redemptions[1]	104.1	121.7	107.9	143.7	123.9	157.8	209.4
Redemptions and early redemptions on savings government bonds	0.0	9.6	7.7	11.9	11.9	30.2	16.9
T-Bills redemptions[2]	113.3	162.6	189.1	120.9	107.6	84.4	4.2
Other money market instruments redemptions[2]	0.0	0.0	0.0	0.0	2.5	2.2	0.0
Repayments on credits and loans	1.1	5.3	2.8	11.1	2.5	1.7	5.1
Net borrowing requirement	**151.0**	**172.8**	**2.3**	**-21.9**	**19.6**	**-59.4**	**22.2**

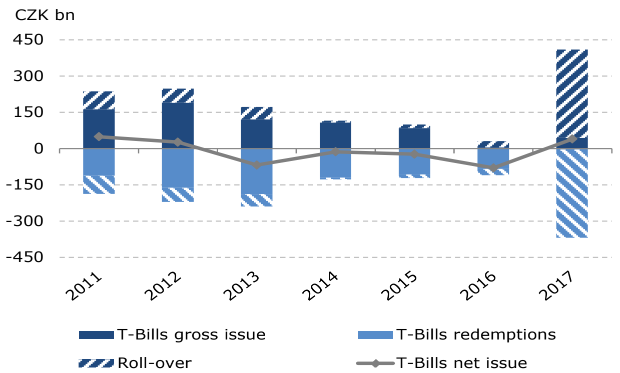
[1] Incl. effect of buy-backs and exchanges.
[2] Excl. T-Bills issued and redeemed within respective year, and roll-over of other money market instruments.
Source: MoF

Figure 11: Net Issue of T-Bonds on the Domestic Market



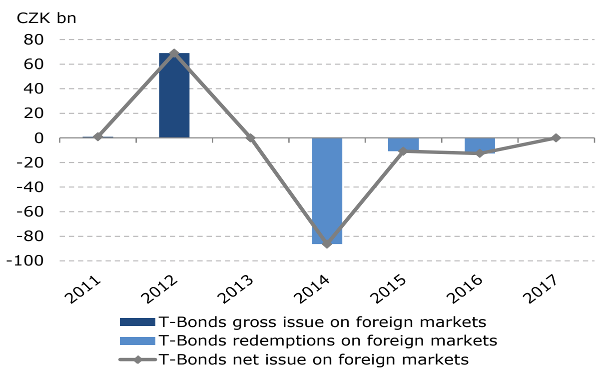
Source: MoF

Figure 13: Net Issue of T-Bills on the Domestic Market



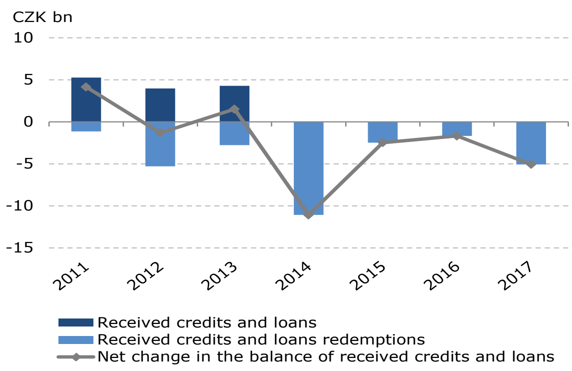
Source: MoF

Figure 12: Net Issue of T-Bonds on the Foreign Markets



Source: MoF

Figure 14: Net Change in the Balance of Received Credits and Loans



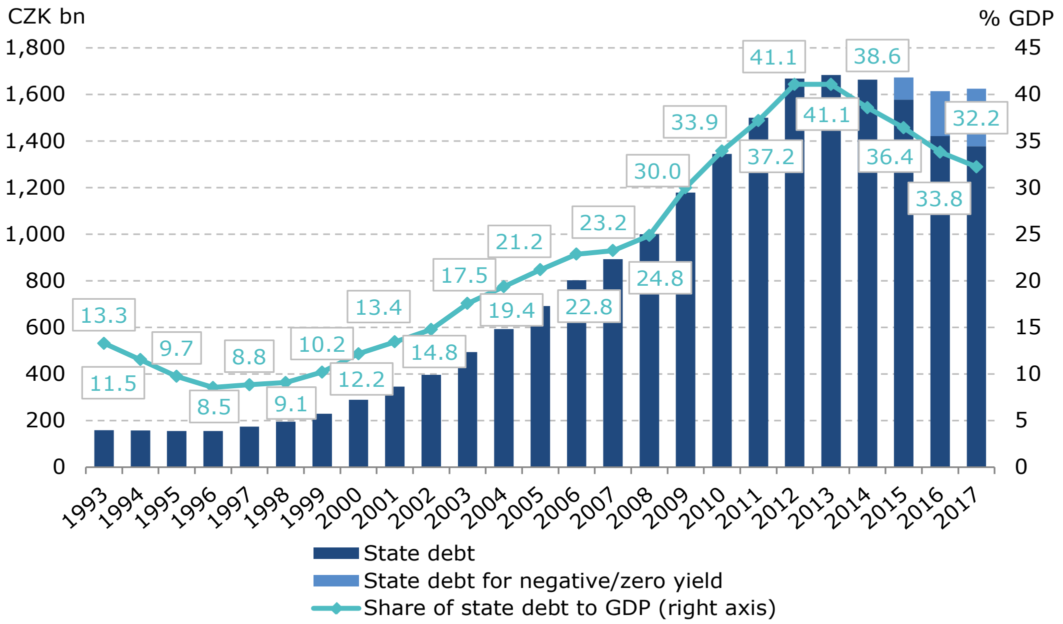
Source: MoF

Table 6: Net Borrowing Requirement and Change in State Debt

CZK bn	2011	2012	2013	2014	2015	2016	2017
Gross state debt as at 1 January	**1,344.1**	**1,499.4**	**1,667.6**	**1,683.3**	**1,663.7**	**1,673.0**	**1,613.4**
Primary state budget balance	97.6	59.6	30.4	29.3	17.5	-102.4	-33.6
Net expenditure on state debt service[1]	45.1	41.4	50.9	48.5	45.3	40.7	39.8
Financial asset and liquidity management operations	8.2	71.8	-78.9	-99.7	-43.2	2.3	16.1
Net borrowing requirement	**151.0**	**172.8**	**2.3**	**-21.9**	**19.6**	**-59.4**	**22.2**
T-Bills net issue	49.3	26.5	-68.2	-13.3	-23.2	-80.2	39.8
Net change in the balance of other money market instruments	0.0	0.0	0.0	2.5	-0.4	-2.2	0.0
T-Bonds net issue on domestic market	76.2	42.9	37.7	96.0	67.4	66.4	3.8
T-Bonds net issue on foreign markets	0.9	69.0	0.0	-86.4	-10.8	-12.6	0.0
Savings government bonds net issue	20.4	35.8	31.4	-9.7	-10.9	-29.2	-16.3
Net change in balance of received credits and loans	4.1	-1.3	1.5	-11.1	-2.5	-1.7	-5.1
Financing of net borrowing requirement	**151.0**	**172.8**	**2.3**	**-21.9**	**19.6**	**-59.4**	**22.2**
Revaluation of state debt[2]	4.5	-4.4	13.4	2.3	-10.3	-0.2	-10.9
Promissory notes net change	-0.2	-0.1	0.0	0.0	0.0	0.0	0.0
Gross state debt change	**155.3**	**168.3**	**15.7**	**-19.7**	**9.3**	**-59.6**	**11.3**
Gross state debt as at 31 December	**1,499.4**	**1,667.6**	**1,683.3**	**1,663.7**	**1,673.0**	**1,613.4**	**1,624.7**
Share of GDP (%)[3]	**37.2**	**41.1**	**41.1**	**38.6**	**36.4**	**33.8**	**32.2**

[1] Balance of budgetary chapter 396 – State debt.
[2] 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.
[3] GDP in the ESA 2010 methodology. The source of data for 2011 – 2016 is CZSO, for 2017 the Macroeconomic Forecast of the Czech Republic – January 2018.
Source: MoF, CZSO

Figure 15: Czech Republic's State Debt Development



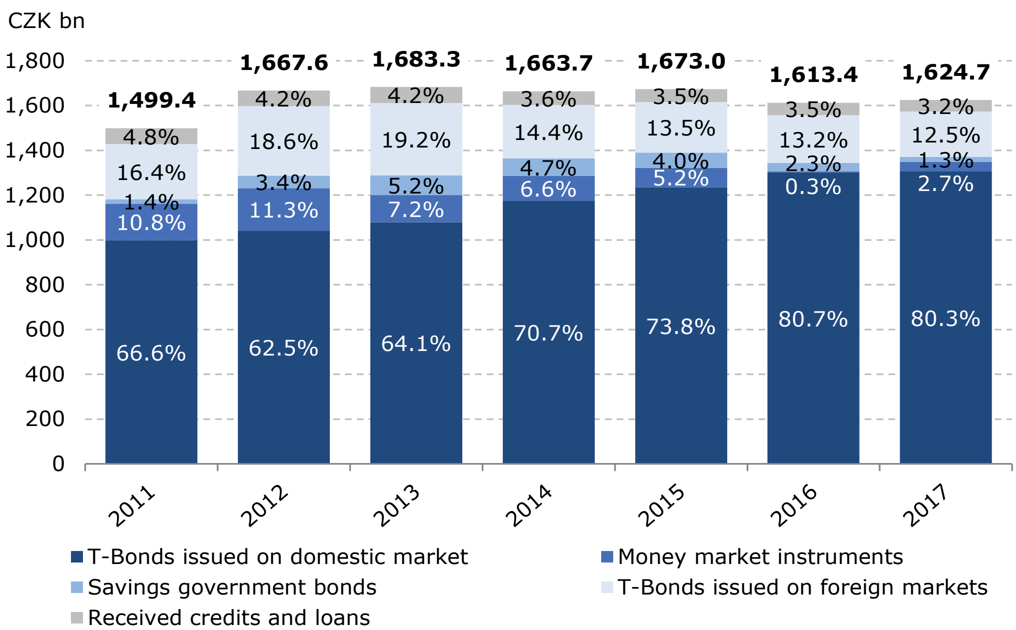
Note: GDP in the ESA 2010 methodology. The source of data for 1993 – 2016 is CZSO, for 2017 the Macroeconomic Forecast of the Czech Republic – January 2018.
Source: MoF, CZSO

Table 7: Balance and Structure of the Debt Portfolio

CZK bn	2011	2012	2013	2014	2015	2016	2017
Gross state debt	**1,499.4**	**1,667.6**	**1,683.3**	**1,663.7**	**1,673.0**	**1,613.4**	**1,624.7**
T-Bills	162.6	189.1	120.9	107.6	84.4	4.2	44.0
Other money market instruments	0.0	0.0	0.0	2.5	2.9	0.0	0.0
Received collateral in cash	0.0	0.0	0.0	0.0	0.0	0.0	0.0
T-Bonds issued on domestic market	999.1	1,042.0	1,079.7	1,175.7	1,235.2	1,301.6	1,305.4
T-Bonds issued on foreign markets	245.7	310.3	323.7	239.6	225.6	213.5	202.6
Savings government bonds	20.4	56.2	87.6	77.8	66.9	37.8	21.5
Received credits and loans	71.3	70.0	71.5	60.4	58.0	56.3	51.2
Promissory notes	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Liquid state financial assets	**119.7**	**191.5**	**116.7**	**67.8**	**77.1**	**62.2**	**60.5**
Nuclear portfolio	16.6	18.5	20.7	22.7	24.5	25.6	27.2
Pension portfolio	22.0	22.4	22.6	22.7	22.9	23.0	23.1
Special-purpose state financial assets accounts	10.5	10.6	10.7	10.9	11.1	10.7	10.1
On-lending over 1 year[1]	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cash reserve[2]	70.6	139.9	62.7	11.5	18.6	2.9	0.2
State financial assets	**121.4**	**193.2**	**116.7**	**67.8**	**77.1**	**62.2**	**60.5**
Liquid state financial assets	119.7	191.5	116.7	67.8	77.1	62.2	60.5
On-lending[3]	1.7	1.7	0.0	0.0	0.0	0.0	0.0
Net debt portfolio	**1,378.0**	**1,474.4**	**1,566.7**	**1,595.8**	**1,595.9**	**1,551.2**	**1,564.2**

[1] 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.
[2] 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.
[3] 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 16: Structure of the Debt Portfolio by Instrument



Source: MoF

State Treasury Liquidity Management

After the Czech National Bank's exit from the foreign exchange interventions regime on 6 April 2017 and 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.

Effective as from 10 May 2016 there has been a key extension of the treasury single accounts given by the Act No. 128/2016 Coll., which amends the Act No. 218/2000 Coll. on budgetary rules and on amendment to some related laws (budgetary rules), as amended. The treasury single accounts have been extended by the accounts of General Health Insurance Company of the Czech Republic including the special account of public health insurance, accounts of departmental, professional, corporate and other health insurance companies, and the associations of health insurance companies, which thus became the mandatory clients of state treasury. At the same time, the Railway Infrastructure Administration state organisation transited from the non-mandatory regime to mandatory one.

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, bringing an additional increase of the account balance by CZK 49.3 billion compared with 2016 on average. 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	2015		2016		2017	
	CZK	EUR	CZK	EUR	CZK	EUR
Liquid state financial assets	**58.5**	**0.7**	**59.3**	**0.1**	**60.3**	**0.0**
Mandatory clients of state treasury[1]	114.3	2.0	156.6	0.1	194.6	0.8
Optional clients of state treasury	10.0	0.0	29.1	0.0	41.5	0.0
Liabilities to the state treasury (-)	-81.8	-0.8	-82.9	-0.1	-57.1	-0.6
Total liquidity position of the state treasury[2]	**101.0**	**1.9**	**162.2**	**0.1**	**239.4**	**0.2**
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	0.4	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	1.4	0.0	0.0	0.0	0.0
On-lending[3]	0.0	0.0	0.0	0.0	0.0	0.0
Investment in securities	7.5	0.0	8.1	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	93.5	0.0	154.1	0.0	234.8	0.0
Ministry's cash resources in commercial banks accounts[4]	0.0	0.0	0.0	0.0	0.0	0.2
Total investment position of the state treasury	**101.0**	**1.9**	**162.2**	**0.1**	**239.4**	**0.2**

[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

Ministry took advantage of the current market situation of two two-week repo rate hikes by CNB during 2017 and reached CZK 218.0 million higher yields from the investment operations on the money market within the state treasury liquidity management in 2017 compared to 2016. Furthermore, the increase in yields was complemented by the net revenue from the issuance activity with negative yields achieved especially in the first half of 2017 in the primary auctions of the government bonds in a total amount of CZK 1,204.7 million, taking into account the future expenditure on coupon payments related to the bonds until their maturity, unless they were zero-coupon bonds. The Ministry traded with 12 counterparties in 2017, with 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 7,743.7 billion were carried out in 2017. The average interest rate achieved when investing with the use of these collaterals recorded a significant increase over the previous year and reached 0.13% p.a. Short-term investments in form of deposit operations in a total nominal value of CZK 5,865.0 billion were carried out as well. The average interest rate achieved when investing in form of deposit operations was 0.05% p.a. Yields of CZK 293.5 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, no short-term investments were carried out in 2017. Ministry carried out short-term loans in a total nominal value of EUR 65 million due within the year. The total revenue from these loans amounted to CZK 1.0 million. In 2017, the Ministry also carried out foreign exchange swaps with maturities in 2017 and 2018 in the total nominal value of EUR 641 million, and the average interest rate achieved in these operations was 31.4% p.a. Yields of CZK 1.0 million from operations within the EUR-denominated state treasury liquidity management together with CZK 17.7 million of yields from foreign exchange swaps 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.

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

CZK mil.	2015	2016	2017	2016/2015	2017/2016
CZK operations	40.2	59.7	293.5	1.5	4.9
EUR operations (in CZK)	67.1	16.9	1.0	0.3	0.1
Lending facilities	3.9	11.6	24.4	3.0	2.1
FX swaps	0.0	44.0	17.7	-	0.4
Issuance with negative yield[1]	413.7	803.2	1 204.7	1.9	1.5
Total	**524.9**	**935.3**	**1 541.3**	**1.8**	**1.6**

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

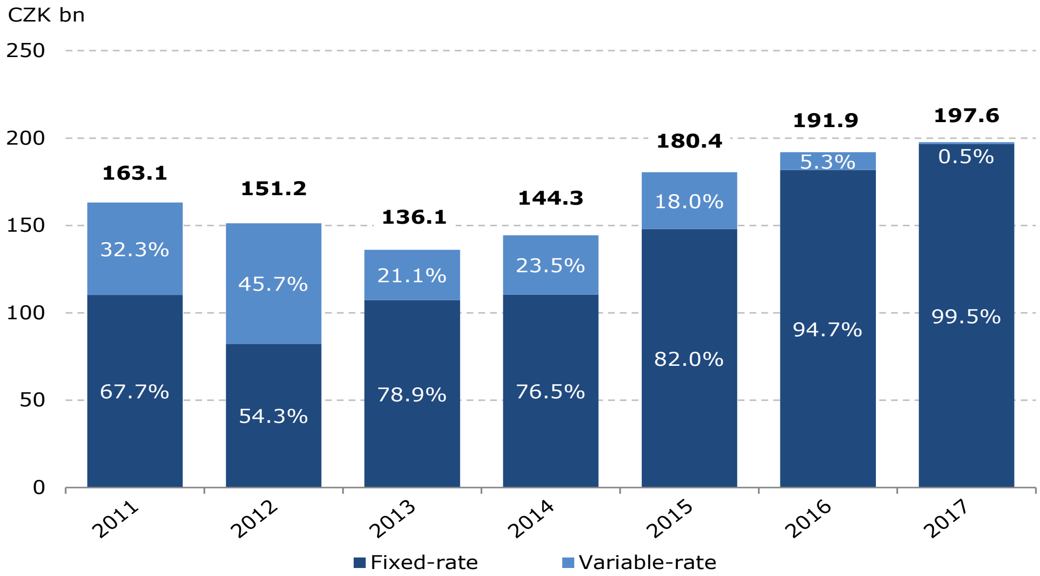
The medium-term and long-term government bonds issuance plan for 2017 was set at the minimum level of CZK 150 billion within the Strategy, and CZK 180 billion within the Updated strategy when the issuance plan was increased by CZK 30 billion. The actual gross issue of medium-term and long-term government bonds in the primary and secondary markets amounted to CZK 213.1 billion in 2017. In a loose monetary policy environment and unprecedented demand from primary dealers for government bonds bearing an interest at the short end of the yield curve, the Ministry utilized favourable financial market conditions, when yields of government bonds with relatively short time to maturity reached negative values, thus adjusting its issuance activity, when the medium-term and long-term government bonds in the total nominal value of CZK 83.3 billion were put on the primary and secondary markets for a negative yield, thus obtaining additional financial resources of CZK 490.6 million.

With the abandonment of the exchange rate commitment of koruna against the euro and in particular with the two-fold increase in the Czech National Bank's basic interest rates during the second half of 2017, which was reflected in the growth of government bond yields over the across the yield curve, the Ministry focused on meeting the defined objectives and limits for the medium-term horizon and began to sell medium-term and long-term government bonds with a relatively longer time to maturity in a greater scope.

On the domestic market of medium-term and long-term government bonds, a total of 58 primary auctions were held in 2017 in 22 auction days. On one auction day, up to three different government bonds were offered. In the auctions, the Ministry offered almost exclusively fixed-rate government bonds, including zero-coupon government bonds, which accounted for 99.5%. Due to the low yields and the expected increase in the reference interest rates, the Ministry reduced the issue of variable-rate government bonds with a positive impact on the interest rate risk of the debt portfolio, whose share of gross issue in the primary market was 0.5%.

In the primary market, the Ministry sold out zero-coupon medium-term government bonds with maturities in 2018 and 2019 from its own asset account, and on 10 and 24 February 2017 issued first tranches of new zero-coupon medium-term government bonds maturing in 2020 and 2022 with the aim of maximizing the use of favourable market conditions, particularly in the first half of the year, to obtain additional financial resources in the form of auction premiums. The Ministry thus sold zero-coupon medium-term government bonds in a total nominal value of CZK 69.6 billion in 2017.

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



Source: MoF

The Ministry issued four new issues in 2017, Government Bond of the Czech Republic, 2017–2020, 0.00% in eight tranches in total nominal value of CZK 40.3 billion, Government Bond of the Czech Republic, 2017–2027, 0.25% in seven tranches in total nominal value of CZK 23.4 billion, Government Bond of the Czech Republic, 2017–2033, 2.00% in three tranches in total nominal value of CZK 5.4 billion, and Government Bond of the Czech Republic, 2017–2022, 0.00% in three tranches in total nominal value of CZK 0.9 billion.

Also in 2017, the Ministry tried to utilize favourable conditions on the financial markets, where government bond yields at the short end of the yield curve, given the unprecedented interest of primary dealers, reached negative values, and sold government bonds in the maturity segment up to 3 years in particular in the first half of the year. Within this segment, the Ministry sold Government Bond of the Czech Republic, 2017–2020, 0.00% in total nominal value of CZK 40.3 billion, Government Bond of the Czech Republic, 2016–2018, 0.00% in total nominal value of CZK 19.2 billion, Government Bond of the Czech Republic 2015-2019, 0.00% in total nominal value of CZK 9.2 billion, and Czech Republic Government Bond 2013-2019, 1.50% in total nominal value of CZK 5.2 billion. The segment of up to 3 years thus accounts for 37.3% of total gross issue in the primary market, which represents a decrease by 15.3 p.p. compared to 2016.

In the maturity segment of 3 to 5 years, the Ministry sold government bonds totalling CZK 1.9 billion, which represents 1% of the total gross issue in the primary market.

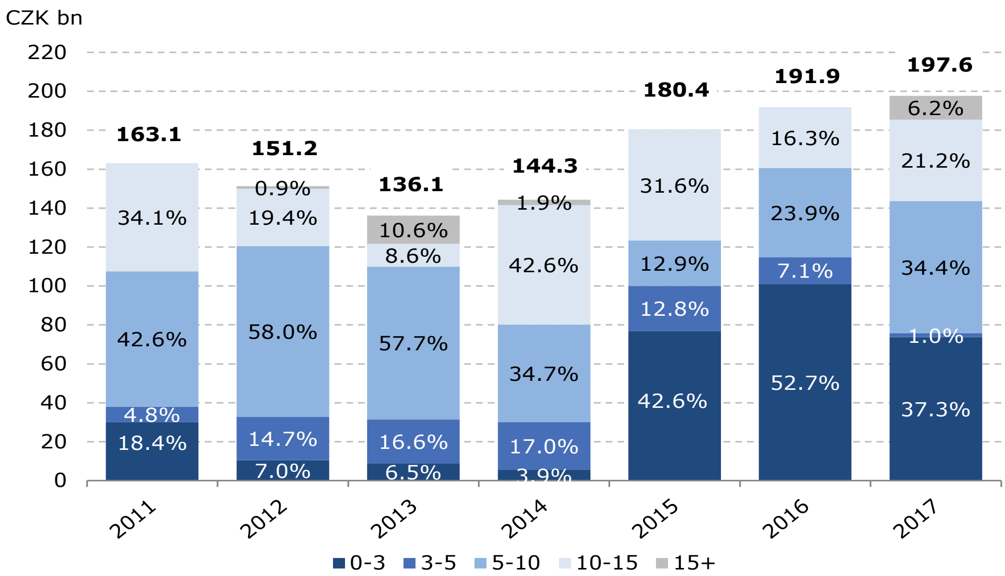
The Ministry sold more than a third of medium-term and long-term government bonds on the primary market in the segment of the residual time to maturity of 5 to 10 years, namely Government Bond of the Czech Republic, 2017-2027, 0.25% in the total nominal value of CZK 23.4 billion, Government Bond of the Czech Republic, 2015-2023, 0.45% in the total nominal value of CZK 18.9 billion, the Government Bond of the Czech Republic, 2015-2026, 1.00% in the total nominal value of CZK 17.9 billion, and Czech Republic Government Bond, 2014-2025, 2.40%, whose total nominal value amounted to CZK 7.7 billion. In total, CZK 67.9 billion was sold in this segment, which represents an increase of 10.5 p.p. to 34.4% in comparison with 2016.

The segment of residual maturity of 10 to 15 years reached a share of 21.2% in total gross issue in the primary market, i.e. 4.9 p.p. higher than in the previous year. Within this segment, Czech Republic Government Bond, 2013-2028, 2.50% was sold in the total nominal value of CZK 21.7 billion and Government Bond of the Czech Republic, 2015-2030, 0.95% in the total nominal value of CZK 20.2 billion.

In the segment of residual maturity over 15 years, the Ministry sold government bonds totalling CZK 12.2 billion, which corresponds to a share in the total gross issue of 6.2%. These are the Czech Republic Treasury Bond, 2006-2036, 4.20% with a total nominal value of CZK 6.6 billion, Government Bond of the Czech Republic, 2017-2033, 2.00% with a total nominal value of CZK 5.4 billion, and Czech Republic Treasury Bond, 2007-2057, 4.85%, with a total nominal value of CZK 0.2 billion.

In total, CZK 197.6 billion of medium-term and long-term government bonds was placed on the primary market in 2017, which is CZK 5.7 billion, i.e. 3.0% more than in 2016. This increase is mainly due to higher financing needs to be covered by government bond issuance compared to 2016 and the Ministry's efforts to meet the demand of primary dealers and to make the most of the extraordinarily favourable conditions prevailing in the domestic financial market in the first half of 2017. 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, especially in the second half of the year, came closer to meeting the announced refinancing risk limits for the medium-term horizon.

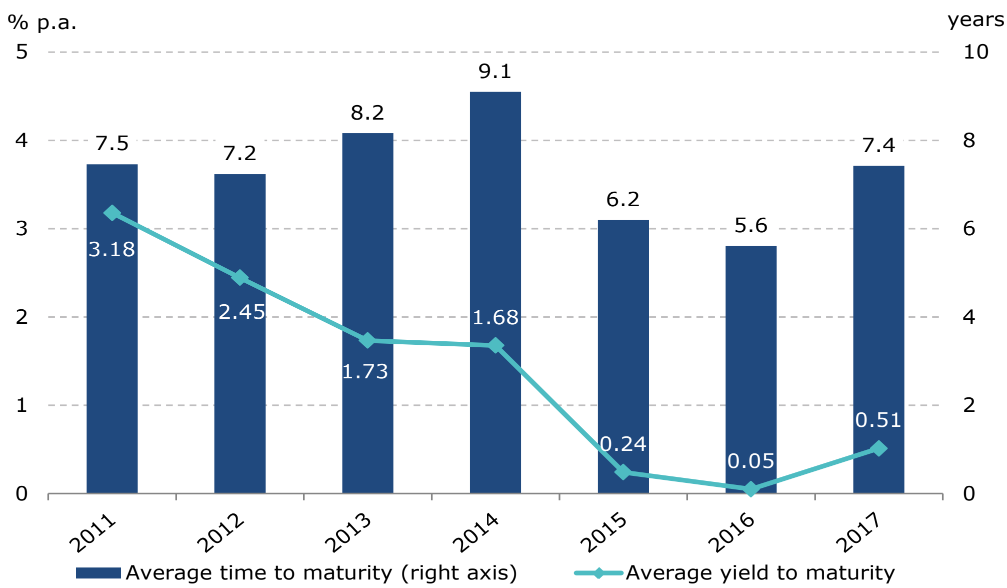
Figure 18: Maturity Structure of T-Bonds Sold in Auctions on Primary Market



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 2017 was 0.51% p.a. which is 0.46 p.p. higher than in 2016. However, this increase is due to an extending of the residual time to maturity of sold government bonds, which increased by 1.8 years to the level of 7.4 years, and the implementation of the restrictive monetary policy by the Czech National Bank in the form of leaving the exchange rate commitment of the koruna against the euro and raising the key interest rates in the second half of 2017. Despite these factors, it is one of the lowest values in history, which reflects the high interest in holdings of government bonds from both domestic and foreign investors and their confidence in the Czech government.

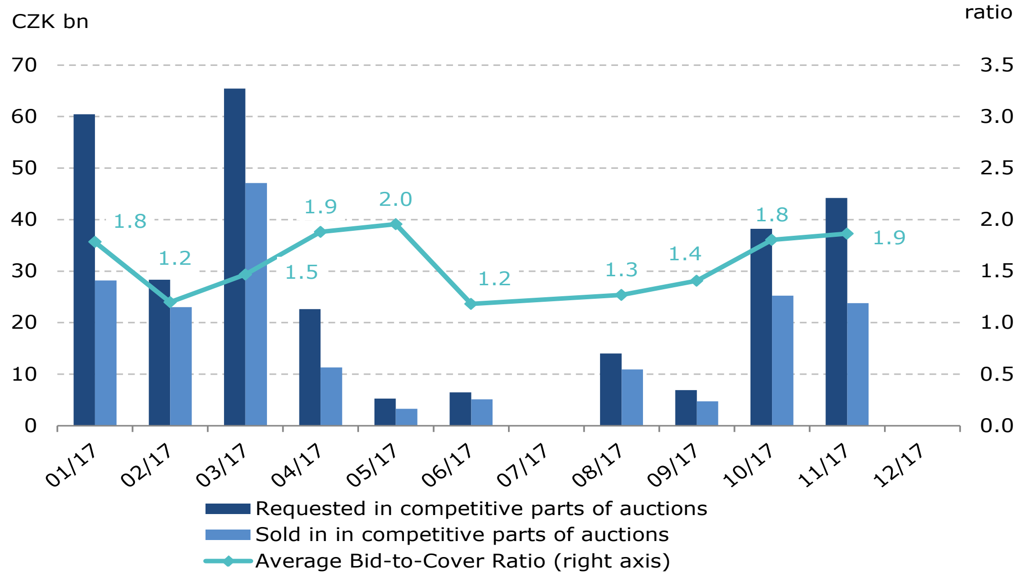
Figure 19: Average Yield and Time to Maturity of T-Bonds in Auctions on Primary Market



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

The Ministry recorded especially in the first half of 2017 an increased demand from primary dealers for government bonds with relatively short time to maturity, as evidenced by the average ratio of total demand to satisfied demand in the competitive part of the auction (the so-called „Bid-to-Cover Ratio") in a segment with a residual time to maturity of up to three years, reaching 2.0 in 2017. Although the Ministry tried to more diversify the government bonds offered in the auctions, when it auctioned also government bonds with a longer time to maturity, the demand for these bonds with such low yields was weaker compared to the previous segment. The increase in demand for government bonds bearing an interest at the longer end of the yield curve was driven by a rise in government bond yields in the second half of the year given mainly due to the abandonment of the loose monetary policy by the Czech National Bank. Overall, the average "Bid-to-Cover Ratio" in 2017 reached 1.6, down by 0.5, compared to the previous year.

Figure 20: T-Bonds Auctions on Primary Market



Source: MoF, CNB

The Ministry continued in the exchange operations program on the secondary market through the MTS Czech Republic trading platform in 2017. 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 and a relatively high coupon rate and sells bonds with longer residual time to maturity and 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 have a positive effect on the state budget due to the savings resulting from the non-realization of future coupon payments. In the year 2017, the Ministry exchanged Czech Republic Treasury Bond, 2007-2017, 4.00% in the total nominal value of CZK 1.6 billion and Czech Republic Treasury Bond, 2012-2017, VAR% in the total nominal value of CZK 0.8 billion before the redemption date. Furthermore, the Ministry exchanged other government bonds maturing in the following years in a total nominal value of CZK 1.5 billion. In total, the Ministry exchanged bonds in a total nominal value of CZK 3.8 billion with an average residual time to maturity of 0.6 years for government bonds in a total nominal value of CZK 3.9 billion with an average residual time to maturity of 10.7 years.

The Ministry focused to a greater extent compared to the previous year on 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 11.6 billion with maturities between 2018 and 2028. The Ministry thus benefited from a wide range of operations in the primary and secondary markets in 2017 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. As a result of secondary market operations, additional financial resources of CZK 40.6 million were obtained from the sale of government bonds with negative yield.

In 2017, three redemptions of CZK-denominated medium-term and long-term government bonds were carried out that were spread evenly throughout the year. It was Czech Republic Treasury Bond, 2007-2017, 4.00%, which was redeemed in April in a total nominal value of CZK 88.7 billion, Czech Republic Treasury Bond, 2012-2017, VAR%, which was redeemed in July in the total nominal the value of CZK 46.8 billion, and Government Bond of the Czech Republic, 2015–2017, 0.00 %, which was redeemed in November in a total nominal value of CZK 70.0 billion. In total, CZK-denominated medium-term and long-term government bonds in a total nominal value of CZK 209.4 billion were redeemed in 2017, 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 3.8 billion. No buy-backs of medium-term and long-term government bonds were carried out in 2017.

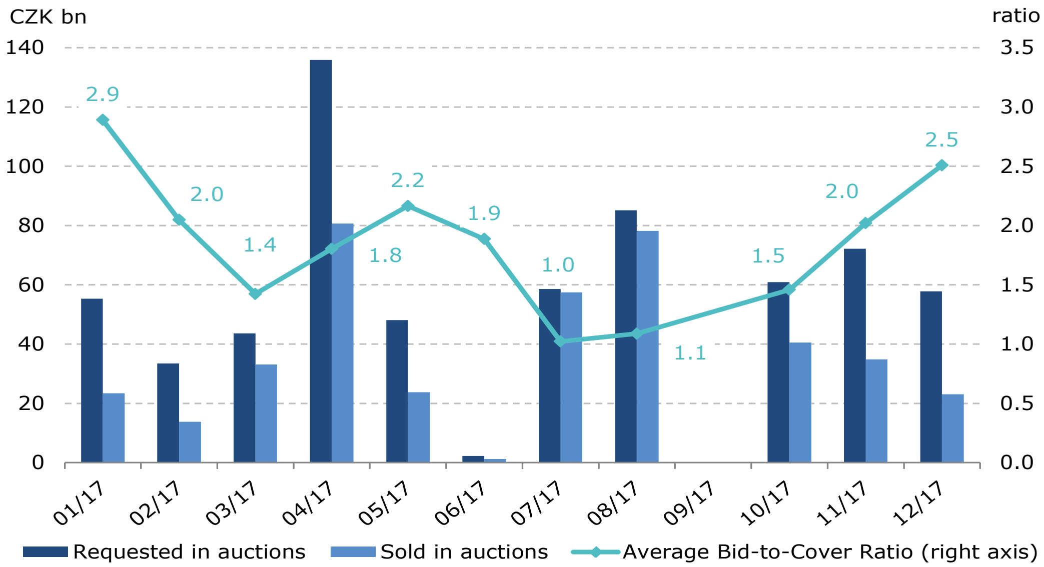
There was no redemption of government bonds denominated in a foreign currency in 2017, thus taking into account other factors such as the relatively low gross borrowing requirement, the higher interest in CZK-denominated government bonds and higher expenditures associated with possible foreign issue compared to the comparable government bond issue on domestic market, taking into account the expenses for hedging currency risk, the Ministry did not have a natural need to carry out borrowing operations on foreign markets.

Money Market Instruments

In 2017, the total nominal value of gross issue of money market instruments excl. roll-over amounted to CZK 44.0 billion, consisting exclusively of state treasury bills. The total nominal value of the net issue of state treasury bills in 2017 amounted to CZK 39.8 billion. In 2017, the Ministry sold state treasury bills primarily for the purpose of obtaining additional revenues in the form of auction premiums, while the financial resources obtained from the sale of these bonds were not involved in covering the financing needs, but were further invested within the treasury single accounts liquidity management resulting in additional revenues of the state budget, which was completely in line with the Strategy and Updated strategy. The role of short-term bonds involved in covering the financing needs was taken over primarily by the zero-coupon medium-term government bonds, as it was already in 2016.

The Ministry carried out a total of 29 auctions in 29 auction days. The gross issue of state treasury bills, including roll-over, amounted to CZK 409.9 billion at the demand of primary dealers amounting CZK 653.2 billion, when the average auction yield of state treasury bills reached -0.51% in 2017. The relatively high demand for state treasury bills is documented by the "Bid-to-Cover Ratio", which reached an average of 1.9. The Ministry sold state treasury bills at all maturities within one year, with all state treasury bills issued in 2017 were placed on the market with negative yield, even during the second half of the year, when the basic rates of the Czech National Bank were increased. Within this effective timing of the issuance activity and the selection of appropriate maturities, additional state budget revenues of CZK 714.0 million resulting from the sale of government treasury bills with negative auction yield were obtained.

Figure 21: T-Bills Auctions



Source: MoF, CNB

Even in 2017, 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 71.8 billion were provided from the Ministry`s asset accounts against financial resources of CZK 78.7 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 2017 was -0.06% p.a. Primary dealers used lending facilities of this type to the same extent as in 2016 when the Ministry provided medium-term and long-term bonds to primary dealers in a total nominal value of CZK 71.3 billion, i.e. CZK 0.5 billion less.

As part of the further support of the secondary market for medium-term and long-term government bonds in 2017, 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 for fee from its own asset account against another government bond of the Czech Republic or CNB treasury bill for a short period of time. This collateralised loan can be used by primary dealers for a period of up to 90 days, and 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. As part of these operations, the Ministry provided medium-term and long-term government bonds to primary dealers in a total nominal value of CZK 92.6 billion in the course of 2017, representing an increase of CZK 32.5 billion compared to 2016. The average fee achieved within the lending facility in the form of collateralised loan during 2017 was -0.24% p.a.

Other Debt Instruments

No tranches of the loans from the European Investment Bank were drawn in 2017. In the course of the year, the repayments of EIB loans tranches in a total amount of CZK 5.1 billion were carried out.

In the area of savings government bonds, the total nominal value of the gross issue amounted to CZK 0.6 billion issued solely in the form of reinvestment of yields. In June 2017, a regular redemption of Reinvestment Savings Government Bond of the Czech Republic, 2012-2017, FIX% in a total nominal value of CZK 5.9 billion and regular redemption of Coupon Savings Government Bond of the Czech Republic, 2012-2017, FIX% in a total nominal value of CZK 1.1 billion was carried out. In December 2017, a regular redemption of Reinvestment Savings Bond of the Czech Republic, 2012-2017 II, FIX% in a total nominal value of CZK 8.1 billion and Coupon Savings Government Bond of the Czech Republic, 2012-2017 II, FIX% in a total nominal value of CZK 1.8 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 2017 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 2017, such early redemption was requested for a total nominal value of CZK 62.6 million, which is 0.2% of the total nominal value of savings government bonds outstanding as at the end of 2016. The total nominal value of regular redemptions of savings government bonds and redemptions of savings government bonds before the specified maturity date amounted to CZK 16.9 billion in 2017.

At the end of 2017, the total nominal value of savings government bonds outstanding amounted to CZK 21.5 billion, representing a decrease of CZK 16.3 billion compared to the end of 2016. The share of savings government bonds in total state debt is 1.3% and the share in all CZK-denominated government bonds is 1.6%.

Table 10: Issues and Redemptions on Savings Government Bonds

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

Source: MoF

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, the Ministry has embarked on a new risk management concept starting in 2016, 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. Another effect of this step can be the reduction of the total net expenditures for state debt service with a positive impact on the state budget performance and, ultimately, the level of state debt.

Starting in 2016, the concept of managing the refinancing risk through the indicator of the average time to maturity of state debt, and interest rate risk through the indicator of the average time to re-fixing of the state debt when the target band was abandoned for both indicators and the medium-term target value was established instead, with a possibility of a short-term deviation from this value. The reason for this is the market situation where the Ministry, at the short end of the yield curve, was able to achieve extraordinary savings in the service of state debt in 2016 and 2017 and it was therefore desirable to use it to the maximum extent possible. Maintaining a fixed band would contradict this intention. The Ministry closely monitors and evaluates the situation on the financial markets.

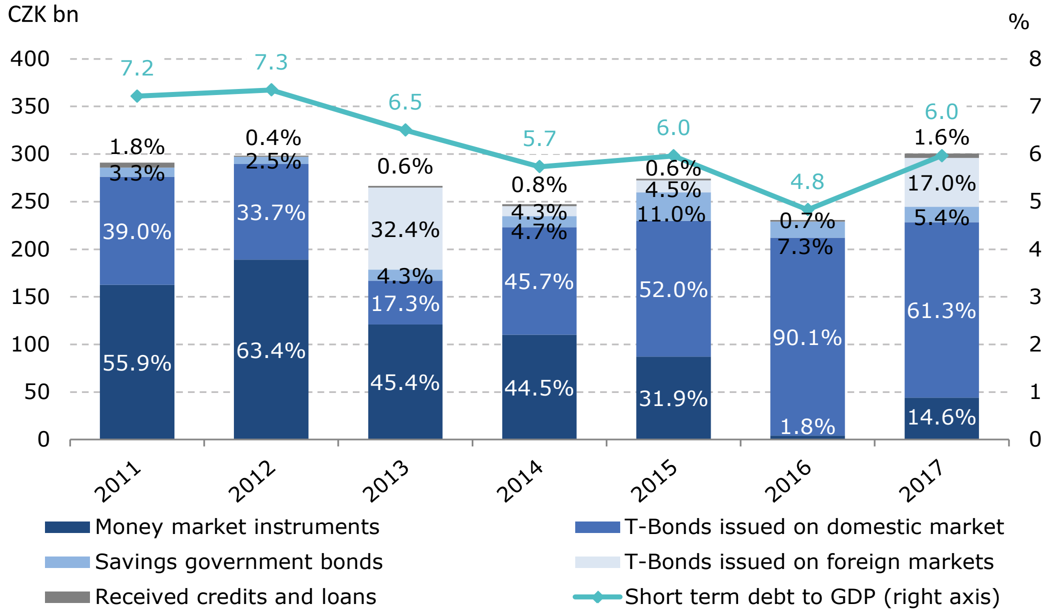
Refinancing Risk

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 2017 was 18.5% of the total state debt, representing an increase of 4.2 p.p. compared to the end of 2016, but still below the limit for the medium-term horizon. The average monthly value of the share of short-term state debt in the total state debt in 2017 is 22.4% when compared to 2016 it grew by 6.6 p.p., mainly due to the exceptionally favourable situation on the financial market where the Ministry, in order to obtain additional state budget revenues, issued to a larger extent state treasury bills maturing mostly in 2017.

Figure 22: Structure of Short-Term State Debt by Instrument



Note: As at the end of particular year. The source for GDP for 2011 to 2016 is the CZSO, for 2017 the Macroeconomic Forecast of the Czech Republic – January 2018.
Source: MoF, CZSO

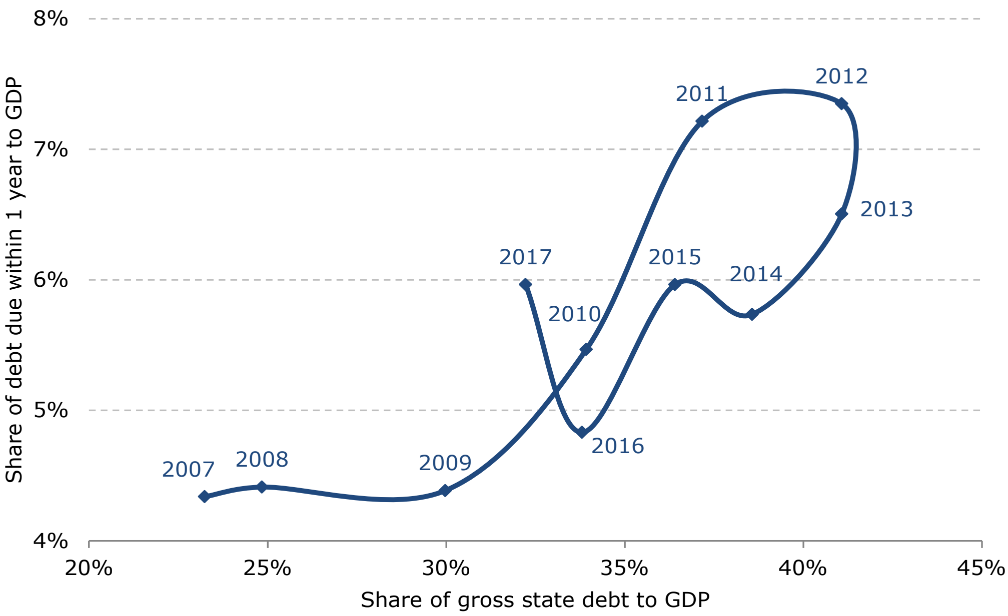
In the course of 2017, the absolute value of the short-term state debt increased by CZK 70.1 billion to CZK 300.7 billion. Compared to the end of 2016, the short-term debt structure changed, mainly due to an increase in the share of money market instruments, which at the end of 2017 amounted to 14.6% of the short-term state debt, increasing by 12.8 p.p. compared to the end of 2016. The share of money market instruments in the total state debt at the end of 2017 was 2.7% and increased by 2.4 p.p. compared to the end of 2016. In both cases the increase in the share is mainly due to the utilization of negative yields environment at the end of 2017 and the issuance of state treasury bills maturing in 2018, thus increasing the absolute amount of the short-term state debt by CZK 39.8 billion year-on-year.

Even at the end of 2017, 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.

In the case of CZK-denominated medium-term and long-term government bonds maturing within one year, there was a decrease by 28.8 p.p. due to the redemptions of three issues of medium-term and long-term government bonds in 2017 in the total nominal value of CZK 207.9 billion compared to the redemptions of three medium-term and long-term government bonds in 2018 in the total nominal value of CZK 184.4 billion. Regarding government bonds issued on foreign markets maturing within one year, the year-on-year increase was 17.0 p.p. due to one redemption of foreign issue in a total nominal value of EUR 2.0 billion in 2018 compared to no redemption of foreign issues in 2017. Regarding savings government bonds maturing within one year the year-on-year decrease was 1.9 p.p. due to four regular redemptions of savings government bond issues in the total value of CZK 16.8 billion in 2017 compared to four regular redemptions of savings government bond issues in the nominal value of CZK 16.4 billion in 2018. Due to the higher repayments of EIB loans in 2018 compared to 2017, the share of received credits and loans in short-term state debt increased by 0.9 p.p. year-on-year.

The share of short-term state debt in GDP rose by 1.1 p.p. compared to 2016 to 6.0% in 2017, but remained at a similar level as in 2015. Overall, the share of short-term state debt in GDP decreased by 1.4 p.p. in 2012 to 2017. Since 2012, the share of total state debt to GDP has also declined from 41.1% to 32.2% by the end of 2017. The decline in this share was 8.9 p.p. since 2012.

Figure 23: 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 2016 is the CZSO, for 2017 the Macroeconomic Forecast of the Czech Republic – January 2018.
Source: MoF, CZSO

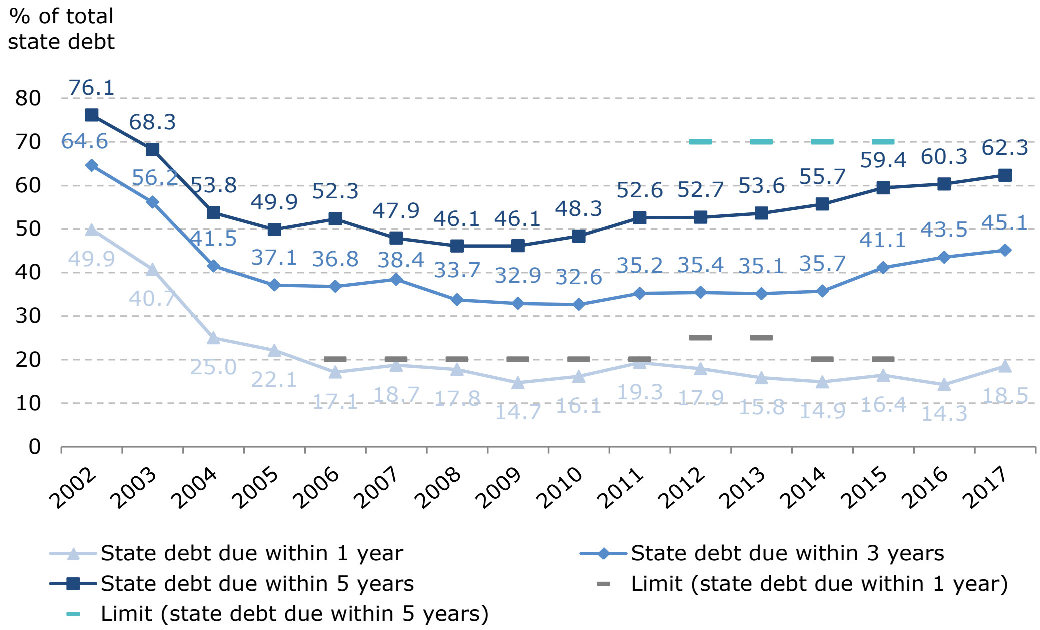
In connection with the refinancing risk, it is also necessary to mention the early redemptions of savings government bonds, the amount of which is not significant in 2017 and does not represent a significant increase in refinancing risk when the total nominal value of early redemptions of savings government bonds in 2017 is CZK 0.1 billion. From the pilot series of issues in 2011 to the end of 2017, redemptions of savings government bonds before the maturity date amount to CZK 1.3 billion, which represents only 1.1% of all issued savings government bonds in this period including the reinvestment of yields. The Ministry continues to monitor the situation, but there is currently no greater expectation of a larger increase in redemptions of savings government bonds before the maturity date, due to higher yields on these bonds than the current government bond market situation. Refinancing risk associated with the early redemptions of savings government bonds is also gradually decreasing with the decreasing number of these bonds outstanding, as they are gradually being replaced by medium-term and long-term government bonds.

In 2017, the Ministry also used a lending facility for providing medium-term and long-term government bonds in the form of repo operations, in which the collateral is medium-term and long-term government bonds provided from the Ministry‘s asset accounts. While the primary purpose of this facility is to increase the liquidity of government bonds on the secondary market, in particular in the event of short-term excess demand over the supply of particular government bond, due to very low repo rates, the Ministry considers these operations to be a favourable source in the short-term financing segment. As a result, these operations contribute to saving on net interest expenditure on state debt service - but also increase refinancing and interest rate risk. Given the relatively low share of state treasury bills in the total state debt and, in general, the overall relatively low refinancing and interest rate risk of the state debt portfolio, the lending facilities do not pose a significant risk to the state debt portfolio.

As part of further support for the secondary market for medium and long-term government bonds, the Ministry used the lending facility in the form of a collateralized loan, taking into account the demand of primary dealers. Compared to the repo lending facility, collateralized loans do not affect the level of gross state debt and, therefore, the risk indicators of the state debt portfolio, but the Ministry also closely monitors and evaluates these loans of securities.

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 state debt at the end of 2017 is 62.3%, and although it grew by 2.0 p.p. compared to the end of 2016, the indicator still remains safely below the set limit for the medium-term horizon. The average monthly value of the share of the medium-term state debt in total state debt in 2017 is 63.9% and grew by 3.5 p.p. compared to the average monthly value of this indicator in 2016. The share of state debt due within three years amounts to 45.1%, representing an increase of 1.6 p.p. compared to the end of 2016.

Figure 24: State Debt by Maturity Baskets



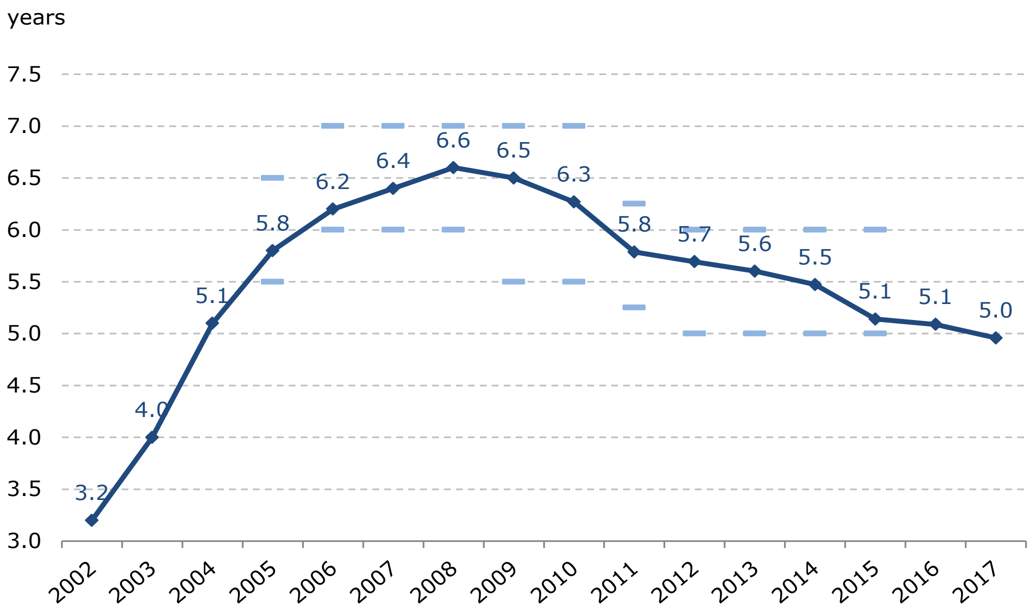
Note: As at the end of each year.
Source: MoF

Another indicator used in the management of refinancing risk is the average time to maturity of the state debt. For the average time to maturity of the state debt, 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 EIB loans.

The average time to maturity of the state debt at the end of 2017 is 5.0 years and decreased by 0.1 years compared to 2016. This decline is entirely due to the Ministry's flexible response to market conditions at the end of 2017, when it issued state treasury bills maturing in 2018 for a negative yield. If the Ministry did not use this favourable situation and did not issue these state treasury bills, the average time to maturity of the state debt at the end of 2017 would be at the same level as at the end of 2016. The average monthly value of the average time to maturity of the state debt in 2017 is 4.7 years, and declined by 0.3 years compared to the average monthly value of this indicator in 2016, which is mainly related to the increased issuance of state treasury bills for negative yield throughout the year 2017.

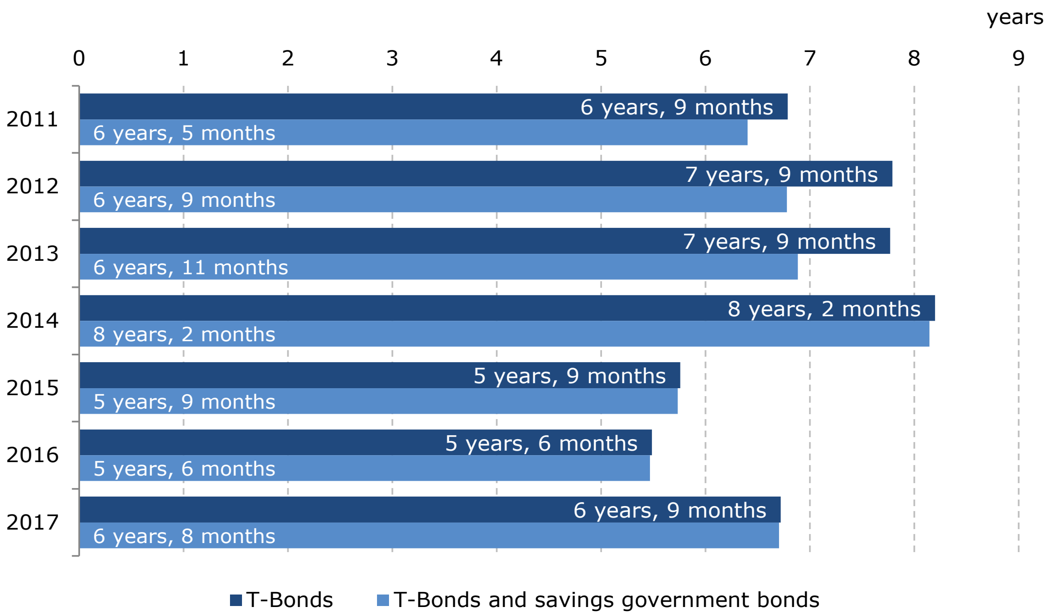
The decrease in average time to maturity of state debt occurred despite the fact that the average time to maturity of the gross issue of medium-term and long-term government bonds increased by 1 year and 3 months in 2017 (as of the end of the year) compared to 2016 due to the response of the Ministry to market conditions especially after the end of the foreign exchange interventions regime of the CNB and increased issuance of medium-term and long-term government bonds at the long end of the yield curve. On the other hand, the Ministry also responded to market conditions at the shortest end of the yield curve and increased the state treasury bills outstanding by the end of 2017 compared to the previous year. Moreover the decline in the average time to maturity is effected by another factor - the fact that the average time to maturity of that part of the state debt that was not due in 2017 and which amounts to approximately CZK 1.4 trillion decreased by 1 year, substituted mainly by gross issue of medium-term and long-term government bonds totalling approximately CZK 213 billion, i.e. about one sixth of the remaining debt portfolio, with an average time to maturity of 6.7 years, i.e. 6 years and 9 months at the end of the year.

Figure 25: Average Maturity of State Debt and Declared Targets



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

Figure 26: Average Time to Maturity of T-Bonds and Savings Government Bonds on the Domestic Market



Note: Residual time to maturity of sold CZK-denominated T-Bonds 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 money market instruments has stabilized at 0.4 years since 2009; at the end of 2017 it is 0.3 years. The average time to maturity of foreign issues at the end of 2017 decreased by 1.0 year to 3.2 years compared to the end of 2016, as during the year 2017 the Ministry did not carry out any lending operations on foreign markets. The average time to maturity of savings government bonds at the end of 2017 decreased by 0.4 years to 1.1 years compared to the end of 2016, when no new series of savings government bond issues were carried out in 2017, the gross issue of savings government bonds of CZK 0.6 billion was carried out only through reinvestment of the yields. The average time to maturity of non-tradable state debt declined by 1.1 years mainly due to the non-drawing of new tranches of EIB loans in 2017 and their regular and early repayments this year. The average time to maturity of CZK-denominated medium-term and long-term government bonds at the end of 2017 increased by 0.2 years to 5.3 years compared to the end of 2016. This increase in the average time to maturity of these bonds is influenced by the above-described discrepancy between the total nominal value of an existing portfolio of CZK-denominated medium-term and long-term government bonds and the total nominal value of newly issued CZK-denominated medium-term and long-term government bonds during the year for which the average time to maturity related to the end of 2017 is 6.7 years.

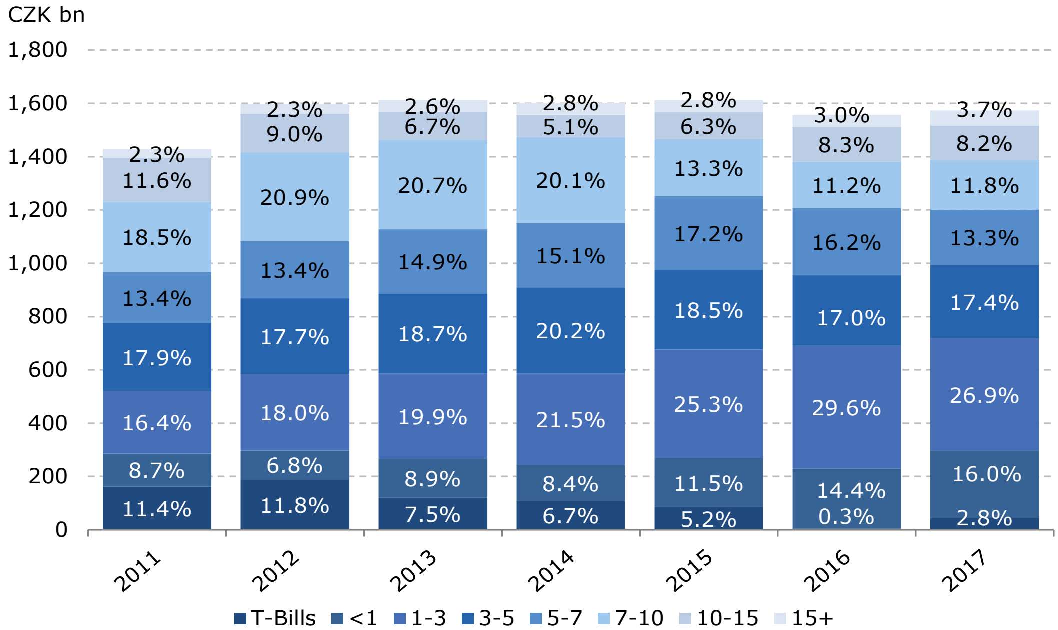
Table 11: Average Time to Maturity of Individual Components of the State Debt

years	2011	2012	2013	2014	2015	2016	2017
T-Bonds issued on domestic market	6.2	6.3	6.2	5.8	5.5	5.2	5.3
Savings government bonds	3.0	3.3	3.1	2.5	1.7	1.5	1.1
T-Bonds issued on foreign markets	6.2	6.1	5.1	5.8	5.0	4.3	3.2
Money market instruments	0.4	0.4	0.4	0.4	0.4	0.1	0.3
Non-marketable state debt	11.5	11.8	11.4	10.4	9.8	9.1	7.9

Note: Residual time to maturity as at the end of each year. Non-marketable state debt does not include savings government bonds.
Source: MoF

The downward trend of the average time maturity of government bonds from 2013 is due in particular to an increase in the total nominal value of government bonds outstanding in the segment with a residual time to maturity of up to one year, whose share in the total nominal value of all government bonds outstanding at the end of the year 2017 is 18.8% and grew by 4.1 p.p. compared to the end of 2016. These are mainly the state treasury bills issued in order to obtain additional state budget revenues, whose share in all government bonds outstanding at the end of 2017 increased by 2.5 p.p. to 2.8%. In the segment of residual time to maturity of 1 to 5 years, the total nominal value of government bonds outstanding has decreased. Overall, in the segment of residual time to maturity of 1 to 5 years, the share in the total nominal value of all government bonds outstanding at the end of 2017 reached 44.3% and thus decreased by 2.3 p.p. In the segment of residual time to maturity of 5 to 10 years the total nominal value of government bonds outstanding has decreased. Overall, in the segment of residual time to maturity of 5 to 10 years, the share in the total nominal value of all government bonds outstanding at the end of 2017 reached 25.1% and thus decreased by 2.3 p.p. In the segment of residual time to maturity of over 10 years, on the other hand, the total nominal value of government bonds outstanding increased and the share in the total nominal value of all government bonds outstanding at the end of 2017 increased by 0.5 p.p. to 11.8% compared to the end of 2016.

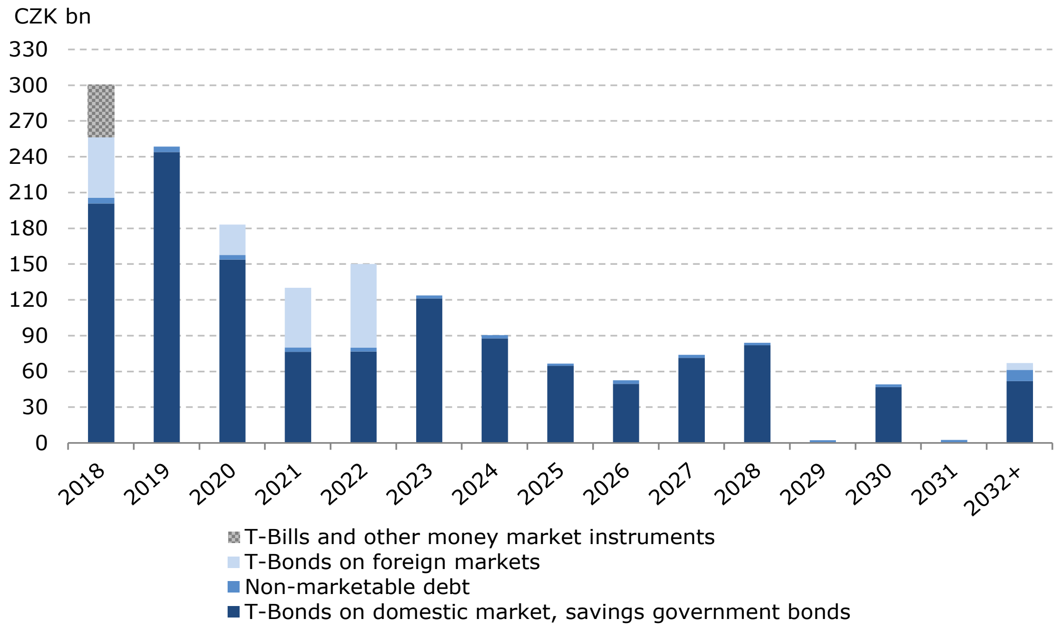
Figure 27: Structure of Government Bonds by Time to Maturity



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 EIB 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 2018, a significant increase in funding 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 28: Maturity Profile of State Debt

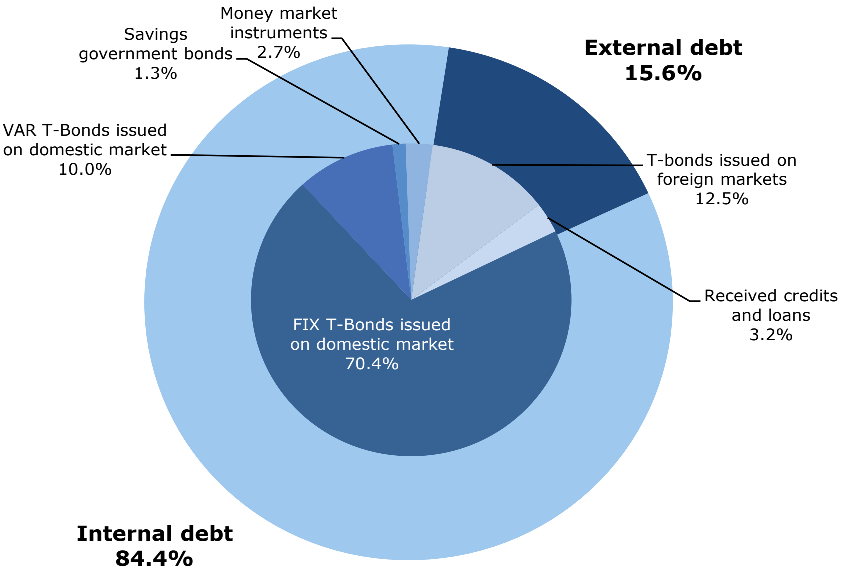


Note: As at the end of 2017. Non-marketable state debt does not include savings government bonds.
Source: MoF

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 zero-coupon government bonds cover the largest share in the long run, with a share of 70.4% of total state debt at the end of 2017, which represents an increase of 2.5 p.p. compared to the end of 2016. The share of CZK-denominated variable-rate medium-term and long-term government bond in total state debt is 10.0% at the end of 2017, which represents a decrease of 2.8 p.p. compared to the end of 2016 when the Ministry redeemed government bonds of this type in 2017. Due to the expected increase in interest rates in following years the Ministry almost exclusively issued fixed-rate medium-term and long-term government bonds including zero-coupon government bonds on domestic market in 2017.

The share of the total nominal value of foreign issues in total state debt amounts to 12.5% at the end of 2017, which represents a decrease of 0.8 p.p. compared to the end of 2016 due to the end of the Czech National Bank's foreign exchange intervention regime followed by a significant strengthening of the koruna's exchange rate by the end of 2017. At the same time, the Ministry did not make any foreign issue in 2017 and there was no redemption of government bonds denominated in a foreign currency. The share of money market instruments in total state debt at the end of 2017 is 2.7%, which represents an increase of 2.4 p.p. compared to the end of 2016. The share of savings government bonds in total state debt at the end of 2017 is 1.3%, which represents a decrease of 1.0 p.p. compared to the end of 2016.

Figure 29: Structure of State Debt by Instrument

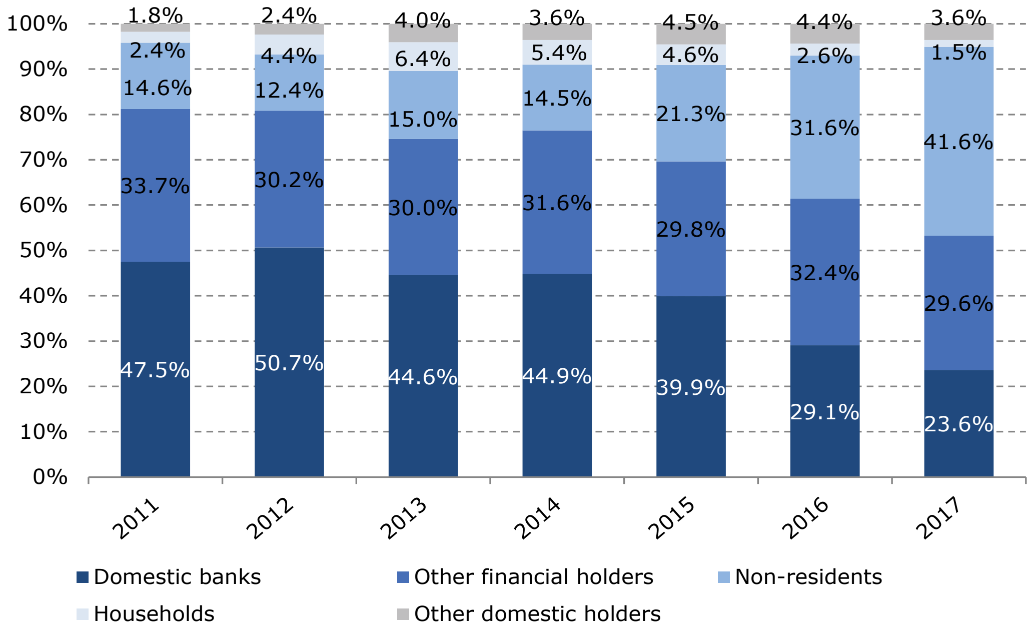


Note: As at the end of 2017.
Source: MoF

The structure of holders of CZK-denominated government bonds has been significantly influenced by financial market developments in recent years when the loose monetary policy of the Czech National Bank and unprecedented demand for government bonds reduced government bond yields to historical minimums across the yield curve. This was reflected in a partial decline in the share of the domestic banking sector in the holdings of government bonds issued on the domestic market and, on the other hand, in an increase in the share of non-resident holders. This development is mainly due to the high interest of non-residents on government bonds bearing interest at the short end of the yield curve, especially on zero-coupon medium-term government bonds with maturities in 2018, 2019 and 2020 and Czech Republic Government Bond, 2014–2018, 0.85%. Compared to the previous year, the share of non-resident holdings increased by 10.1 p.p. to 41.6% and the share of other sectors decreased, especially domestic banks holdings decreased by 5.4 p.p. to 23.6%. However, account must be taken of the fact that the increase in non-residents�much holdings is also partly offset by the fall in external debt due to the absence of new foreign-currency issues since 2013 and the appreciation of the koruna against the euro and the Japanese yen in recent months.

The sector of other financial holders is relatively stable over time, holding close to 30% of CZK-denominated government bonds, similarly as the other domestic holdings whose share in domestic government bonds was 3.6% at the end of 2017. The households‛ decline to level 1.5%, i.e. by 1.1 p.p. compared to the previous year, is mainly due to the non-realization of any tranches or new issue of savings government bonds (except reinvestment of yields), and by their four regular redemptions in June and December 2017 and early redemptions in the total nominal value of CZK 16.9 billion.

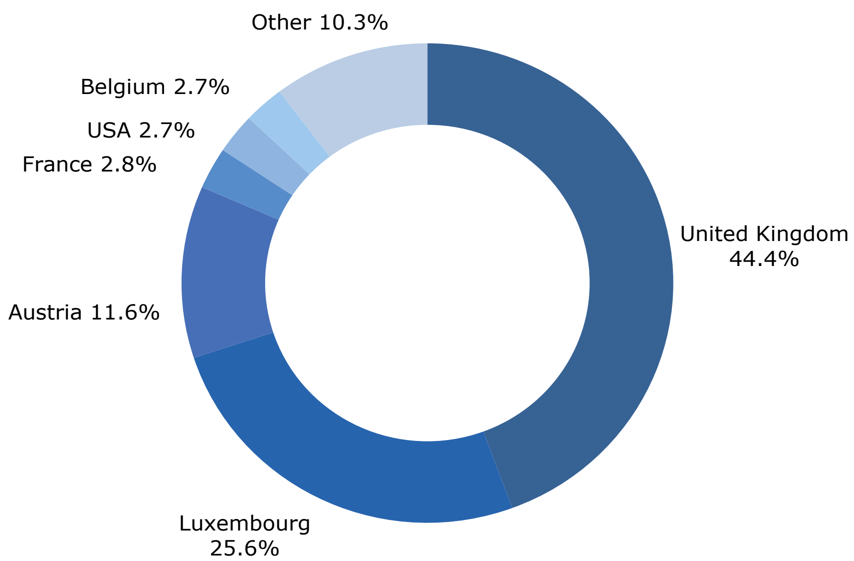
Figure 30: Structure of CZK-Denominated Government Bonds by Type of Holder



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

In terms of geographical structure of non-residents holding CZK-denominated government bonds, non-residents from the United Kingdom and Luxembourg dominate, accounting for 70% of all non-resident holders of domestic government bonds at the end of 2017. At the end of 2017, non-residents from EU countries represent 92.3%, which is 2.5 p.p. higher than in 2016. European countries that are not members of the European Union then account for 2.7%. Other non-European countries account for 5.0% of non-resident holders.

Figure 31: Structure of Non-Resident Holders of CZK-Denominated Government Bonds



Note: As at the end of 2017. Excl. T-Bills.
Source: MoF, CDCP

Interest Rate Risk

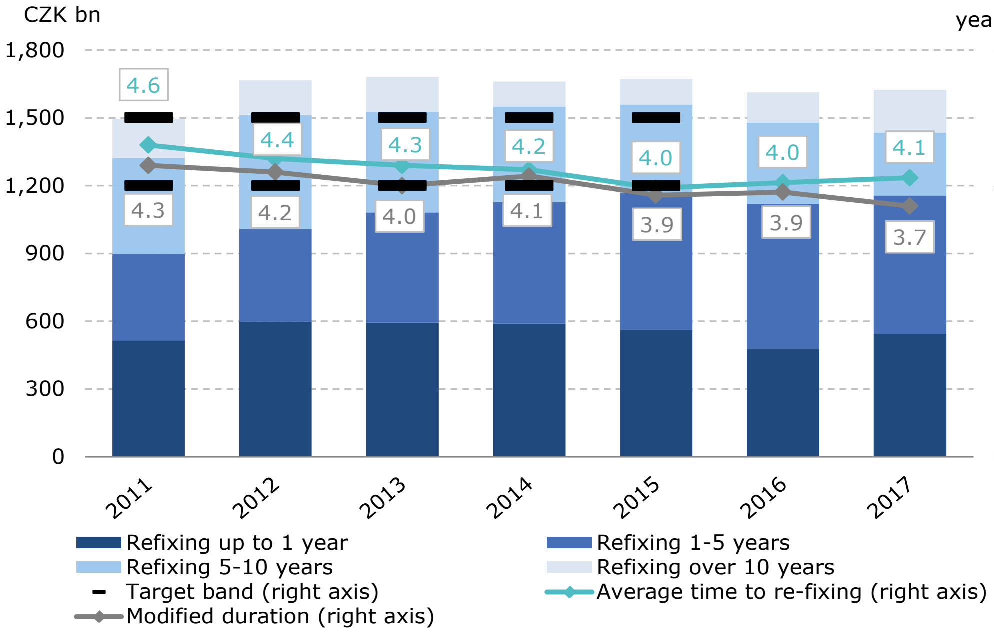
Interest rate risk remains the most important market risk of state debt management. The Ministry manages the interest rate risk by the strategic indicator - average time to re-fixing of state debt. Beginning in 2016, the Ministry, in accordance with the new concept of interest rate risk management, sets a medium-term target value of 4.0 years for the average time to re-fixing of state debt.

The average time to re-fixing of the state debt at the end of 2017 is 4.1 years and is thus above the target for the medium-term horizon. Compared to the end of 2016 this indicator increased by 0.1 years. The average monthly value of the average time to re-fixing of the state debt in 2017 is 3.8 years and decreased by 0.1 years compared to 2016. In the area of debt re-fixing, the Ministry managed to maintain a debt portfolio structure that roughly corresponds to the target value of the indicator over the course of 2017.

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 2.8 billion were issued on the primary and secondary market in 2017, which is 1.3% of the total gross issue of CZK-denominated medium-term and long-term government bonds in 2017. 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 2017 decreased by 5.8 p.p. compared to 2016 when it was 7.1%. 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 the primary and secondary markets in 2017 in a total nominal value of CZK 81.0 billion, representing 38.0% of the total gross issue of CZK-denominated medium-term and long-term government bonds in 2017. 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 2017 decreased by 10.8 p.p. compared to 2016, when this share was 48.8%. The share of state treasury bills outstanding on the total state debt at the end of 2017 is 2.7%, increasing by 2.4 p.p. from 0.3% at the end of 2016, while the share of other money market instruments outstanding in total state debt at the end of 2016 and 2017 is 0.0%.

By decreasing the average time to re-fixing of the state debt, interest expenditure on state debt is generated at the shorter end of the yield curve on average, which should contribute to savings on interest expenditure in the medium term horizon. The price for generating this savings is an increased risk of rising interest rates and yields, which may also result in negative savings in the coming years. In the case of the issuance of variable-rate medium-term and long-term government bonds in 2008 to 2017, accrual savings on interest costs of more than CZK 25 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 32: Interest Re-fixing of State Debt



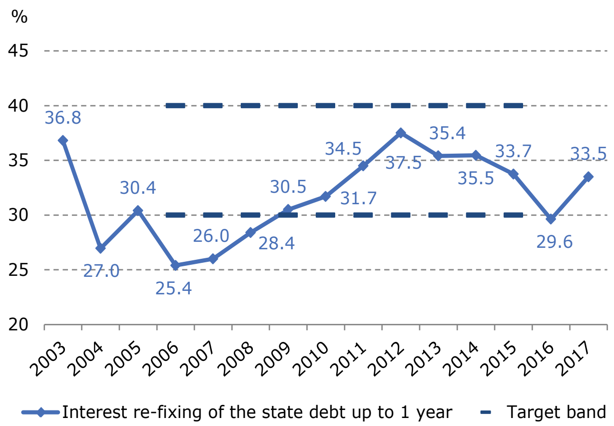
Note: As at the end of each year.
Source: MoF

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. This target is in line with the medium-term target of the average time to re-fixing of the state debt at the level of 4.0 years. At the end of 2017, this indicator increased by 3.9 p.p to 33.5% compared to the end of 2016, thus remaining within the medium-term target band. The average monthly value of interest rate re-fixing within one year on total state debt portfolio in 2017 is 36.6%. Compared to 2016, the average monthly interest rate re-fixing within one year on total state debt increased by 4.6 p.p. in 2017. Even in the case of this indicator, the Ministry maintained a structure of the state debt portfolio in line with the target band during 2017.

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. The debt portfolio, which is sensitive to interest rate fluctuations in the financial market in 2018, consists mainly of CZK-denominated fixed-rate medium-term and long-term government bonds or CZK-denominated zero-coupon medium-term government bonds (33.9%) and CZK-denominated variable-rate medium-term and long-term government bonds (29.7%). Government bonds issued on foreign markets account for 17.1% of this portfolio, state treasury bills and other money market instruments account for 8.1%, credits and loans received account for 7.4%, and savings government bonds account for 3.8% of this portfolio.

Compared to 2016, there was a change in the structure of the interest rate re-fixing of the state debt within one year, especially for CZK-denominated variable-rate medium-term and long-term government bonds, where the share decreased by 13.5 p.p. due to redemption of one issue of these bonds in 2017 in a total nominal value of CZK 47.6 billion against the gross issue of these bonds on the primary and secondary markets in 2017 in a total nominal value of CZK 2.8 billion. In case of CZK-denominated fixed-rate medium-term and long-term government bonds and CZK-denominated zero-coupon medium-term government bonds, the share of these bonds in interest rate re-fixing of the state debt within one year increased by 0.4 p.p. compared to 2016 due to one redemption of fixed-rate issue and one redemption of zero-coupon issue in the total nominal value of CZK 160.3 billion in 2017 compared to two redemptions of fixed-rate issues and one redemption zero-coupon issue in the total nominal value of CZK 184.4 billion in 2018. Regarding savings government bonds, there was a decrease of 0.6 p.p. due to four regular redemptions in total nominal value of CZK 16.8 billion in 2017 compared to four regular redemptions in total nominal value of CZK 16.4 billion in 2018. The increase in the share of money market instruments in interest rates re-fixing of the state debt within one year is consistent with the increase in their nominal value outstanding at the end of 2017 and is amounts to 7.2 p.p. compared to the end of 2016. For bonds issued on foreign markets, the share increased by 8.7 p.p., mainly due to one redemption of the foreign issue in a total nominal value of EUR 2.0 billion in 2018 against no redemption of the foreign issue in 2017. EIB loans contributed to a year-on-year decrease in the share of credits and loans in interest rate re-fixing within one year by 2.2 p.p., mainly due to regular and early repayments of tranches of these loans in 2017.

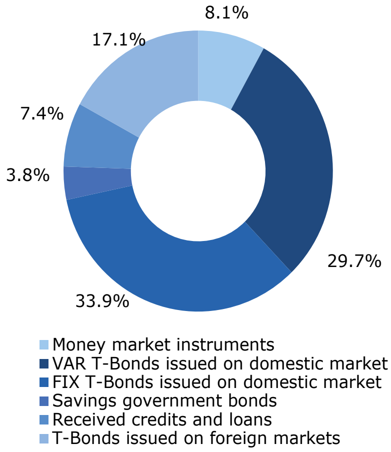
Figure 33: Interest Re-fixing of State Debt within 1 Year



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

The Ministry also monitors the structure of CZK-denominated medium-term and long-term government bonds according to current time to maturity, 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 CZK-denominated fixed-rate medium-term and long-term government bonds or CZK-denominated zero-coupon medium-term government bonds. At the end of 2017, these bonds have an average coupon rate of 2.68% p.a.; bonds maturing in 2018 have an average coupon rate of 2.09% p.a. In the segment of 2 to 4 years of original time to maturity, these bonds have an average coupon rate of 0.19% p.a., in the segment of 4 to 6 years of original time maturity, these bonds have an average coupon rate of 0.00% p.a., in the segment of 6 to 8 years of original time to maturity, these bonds have an average coupon rate of 1.50% p.a., in the segment of 8 to 10 of original time to maturity, these bonds have an average coupon rate of 0.37% p.a.; in the segment of 10 to 15 years of original time to maturity, these bonds have an average coupon rate of 3.74% p.a., and in the segment of over 15 years of original time to maturity these bonds have an average coupon rate of 3.69% p.a.

Figure 34: Structure of Interest Re-fixing of State Debt within 1 Year



Note: As at the end of 2017.
Source: MoF

Discounts from state treasury bills and discounted savings government bonds is a state budget expenditure at the point of sale of the bond and therefore does not affect interest expenditure on state debt service in subsequent years. In 2017, the Ministry opened two new issues of CZK-denominated zero-coupon medium-term government bonds maturing in 2020 and 2022 and two new benchmark issues of CZK-denominated fixed-rate medium-term and long-term government bonds maturing in 2027 and 2033, whose gross issue accounted for approximately 34.7% of the total gross issue of CZK-denominated medium-term and long-term government bonds in the primary and secondary markets in 2017. As the newly issued issues are zero-coupon, the average coupon rate for maturity in 2020 decreased by 1.36 p.p. and for maturity in the year 2022 by 0.08 p.p. For maturities in 2027 and 2033, no fixed-rate medium-term and long-term government bond was included at the end of 2016.

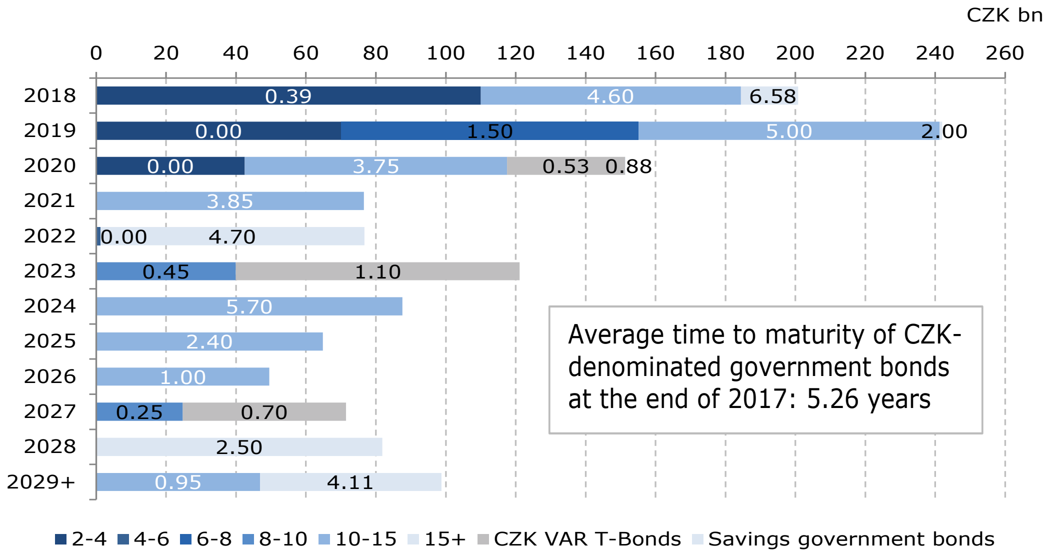
Table 12: Average Coupon Rates and Costs of T-Bonds Issued on Domestic Market by Year of Maturity

% p.a.	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029+	Average
Average coupon rate[1]	2.09	2.31	2.39	3.85	4.62	0.45	5.70	2.40	1.00	0.25	2.50	2.61	2.68
Average costs[1]	1.48	2.02	2.39	3.05	4.25	0.39	4.50	1.12	0.74	1.21	1.92	2.32	2.22

[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 2017.
Source: MoF

The Ministry also monitors the structure of CZK-denominated fixed-rate medium-term and long-term government bonds and CZK-denominated zero-coupon medium-term government bonds 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 2017, the average annual cost of CZK-denominated fixed-rate medium-term and long-term government bonds and CZK-denominated zero-coupon medium-term government bonds is 2.22% p.a. In 2018 bonds with an average annual cost of 1.48% p.a. are redeemed in the following structure: bonds sold as 0- to 2-year with an average annual cost of -0.72% p.a., bonds sold as 2- to 4-year with an average annual cost of 0.15% p.a., bonds sold as 4- to 6-year with an average annual cost of 1.19% p.a., bonds sold as 6- to 8-year with an average annual cost of 2.60% p.a., bonds sold as 10- to 15-year with an average annual cost of 5.02% p.a. and bonds sold over 15-year with an average annual cost of 4.79% p.a.

Figure 35: Maturity Profile of CZK-Denominated Government Bonds by Time to Maturity and Coupon Rate



Note: Maturity profile as at the end of 2017. 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

Negative yields achieved in auctions of medium-term and long-term government bonds with a residual maturity of up to five years in 2017 caused a decline in the average annual costs in maturity segments of up to five years compared to the average annual costs at the end of 2016. The average annual cost of medium-term and long-term government bonds maturing in 2020 decreased most (down by 1.37 p.p.), mainly due to the negative yields to maturity achieved in the sale of the Government Bond of the Czech Republic, 2017–2020, 0.00%. The average annual cost of medium-term and long-term government bonds maturing in 2022 decreased by 0.09 p.p., mainly due to the negative yields to maturity of the Government Bond of the Czech Republic, 2017–2022, 0.00% sales.

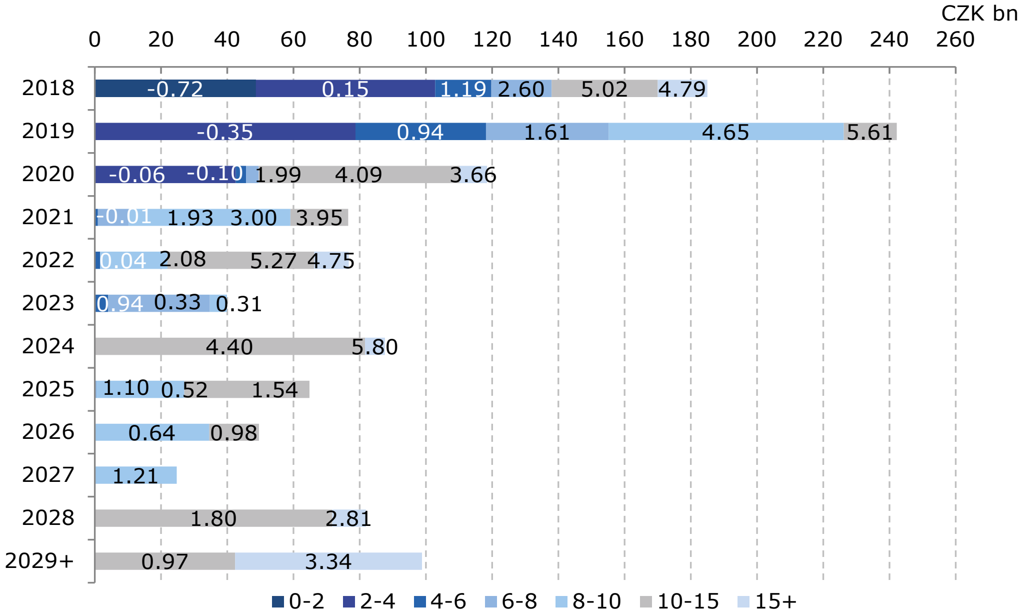
The re-opening of the existing bonds i.e. the Government Bond of the Czech Republic, 2016–2018, 0.00%, the Government Bond of the Czech Republic, 2016–2019, 0.00%, and the Czech Republic Government Bond 2013-2019, 1.50% also resulted in achievement of negative yields to maturity, the annual cost of medium-term and long-term government bonds maturing in 2018 thus decreased by 0.38 p.p. and the average annual cost of medium-term and long-term government bonds maturing in 2019 decreased by 0.17 p.p.

Increasing yields achieved in auctions of medium-term and long-term government bonds with a residual maturity of over five years, especially in the second half of 2017, have led to an increase in the average annual cost in some segments over five years compared to the average annual cost in those segments at the end of 2016.

The re-opening of the existing fixed-rate government bonds with a maturity over 5 years issued from 2015 i.e. the Government Bond of the Czech Republic, 2015-2023, 0.45%, the Government Bond of the Czech Republic, 2015-2026, 1.00%, and the Government Bond of the Czech Republic, 2015-2030, 0.95% resulted in achievement of relatively higher yields to maturity in 2017, the average annual cost of medium-term and long-term government bonds maturing in 2023 increased by 0.16 p.p., the average annual cost of medium-term and long-term government bonds maturing in 2026 increased by 0.11 p.p. and the average annual cost of medium-term and long-term government bonds maturing in 2030 increased by 0.10 p.p.

However, by issuing new and re-opening existing fixed-rate government bonds maturing from 2027, the average annual cost in the segment of these maturities decreased by 0.44 p.p. compared to the average annual cost at the end of 2016.

Figure 36: Maturity Profile of CZK-Denominated T-Bonds By Achieved Yield to Maturity



Note: Maturity profile of CZK-denominated fixed-rate T-Bonds by time to maturity at the moment of sale as of the end 2017. Data in the individual segments represents the average yield to maturity at the moment of the sale of the medium-term and long-term government bonds in % p.a.
Source: MoF

Currency Risk

Currency risk is another market risk to which the state debt portfolio is exposed. 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 Ministry also distinguishes between net foreign-currency exposure of state debt with the impact on state debt level and net foreign-currency exposure with the impact on the level of interest expenditure on state debt service. 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 2017 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 2017. 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. The level of thus stipulated limits was subjected to situation on foreign exchange market in the absence of significant depreciation of koruna against the euro compared to the CNB's commitment close to the level of 27.0 EURCZK, compared to the average development in November 2013, which did not happen.

At the end of 2017, the share of net foreign-currency exposure with the impact on state debt is 10.9% of total state debt and is thus safely below its limit. Compared to the end of 2016 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 11.0% of total state debt at the end of 2016 and is thus safely below the limit. Compared to the end of 2016 this indicator decreased by 0.6 p.p. The decrease in both indicators of net foreign currency exposure is consistent with the appreciation of the koruna exchange rate after the end of the CNB's foreign exchange intervention regime, as well as the increase in the state debt in 2017.

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 2017, the net foreign currency exposure with an impact on the interest expenditure on state debt service is denominated exclusively in the euro. If the EURCZK declined by 1% compared to the end of 2017 at the beginning of 2018, i.e. from 25.540 to 25.795, and this rate would last throughout 2018, then the expected interest expenditure on state debt service would increase by approximately CZK 85 million. More information is contained in the Cost-at-Risk section. The dominant part of the net foreign currency exposure is in euro in the long term.

The share of the foreign currency state debt in the total state debt at the end of 2017 is 12.5% when the indicator decreased by 0.9 p.p. compared to the end of 2016 due to the appreciation of the koruna exchange rate after the end of the CNB's foreign exchange intervention regime as well as the increase of the state debt. In 2017, the Ministry did not issue any government bond issue on foreign markets due to the relatively low gross borrowing requirement, high interest in 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 CZK-denominated fixed-rate bonds.

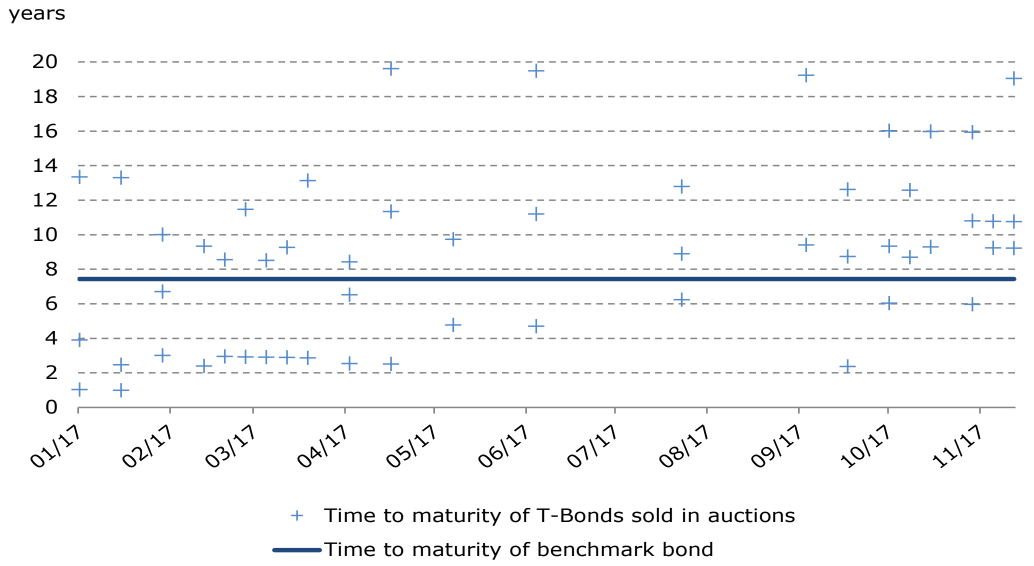
Bonds in the benchmark portfolio are issued on the auction day at the same nominal value as the bonds actually issued. All benchmark portfolio bonds are issued with the same residual time to maturity guaranteeing the same average time to maturity of the synthetic debt portfolio containing benchmark portfolio 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 2017 is 5.0 years. If the actual issues of CZK-denominated medium-term and long-term government bonds are replaced by fixed-rate bonds from benchmark portfolio with a time to maturity of 7.4 years at the time of the auction, the required average time maturity of the synthetic state debt portfolio will be 5.0 years at the end of 2017.

The weighted average yield of the CZK-denominated medium-term and long-term government bonds portfolio actually sold in auctions during 2017 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 0.51% p.a. The weighted average yield of the benchmark portfolio bonds derived from the theoretical yield curve modelled using the Svensson model reached 0.63% p.a. in 2017, i.e. it is 12 basis points higher than the actual portfolio yield.

To assess the actual savings achieved in 2017, 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 CZK-denominated medium-term and long-term government bonds actually sold in auctions during the year 2017 is CZK 1.0 billion. The total annual cost in accrual terms generated in the benchmark portfolio is CZK 1.2 billion.

It should be noted that the annual savings in accrued term of CZK 0.2 billion are generated only by adjustment of the issuance calendar and flowing from the shape of the yield curve. 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.

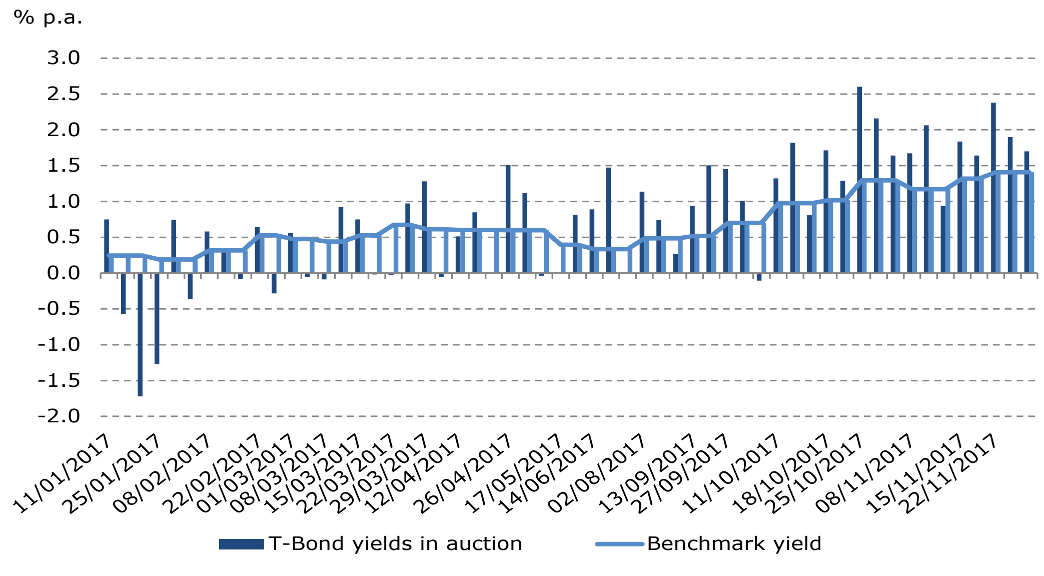
Figure 37: Time to Maturity of CZK-Denominated T-Bonds Sold in Auctions and Benchmark Bond



Note: Residual time to maturity. On 25 October 2017, an auction of T-Bond maturing in 2057 took place. The value of the time to maturity is outside the range of the y-axis.
Source: MoF

Over the course of 2017, 57 auctions of CZK-denominated fixed-rate medium-term and long-term government bonds in a total nominal value of CZK 196.7 billion and one auction of CZK-denominated variable-rate medium-term and long-term government bonds in a total nominal value of CZK 1.0 billion were carried out. The weighted average time to maturity of all CZK-denominated medium-term and long-term government bonds sold in auctions on the primary market during the year 2017 is 7.4 years and is the same as the maturity of the benchmark bond.

Figure 38: Yields of CZK-Denominated T-Bonds Achieved in Auctions and Benchmark Bond



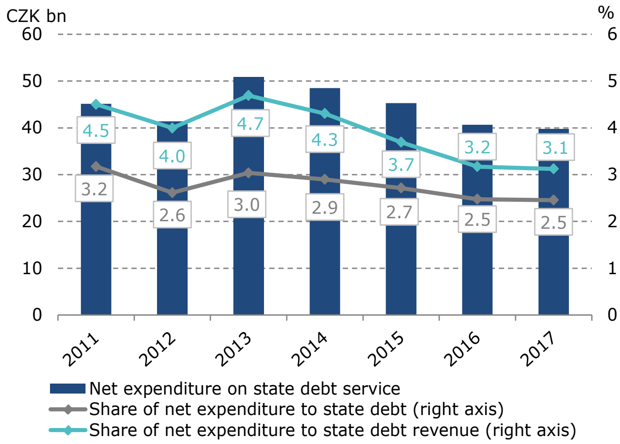
Source: MoF

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, in state debt and also in the GDP has been relatively stable over the past years and since 2014, there has been an apparent downward trend.

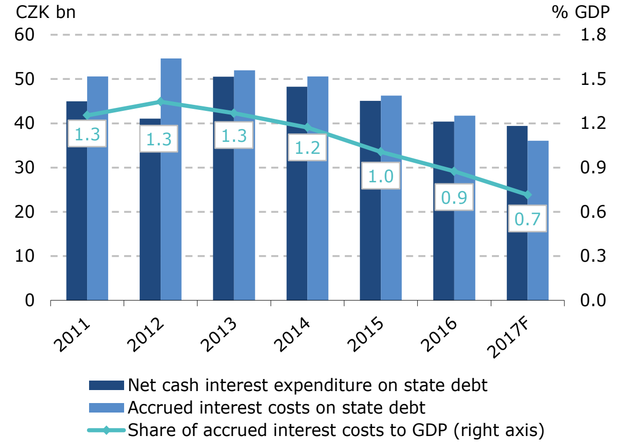
Figure 39: Net Expenditure on State Debt Service



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 2017 is due to the concurrence of decrease in the state debt and ,in the long run, to low levels of government bond yields.

Figure 40: Net Cash Expenditure and Accrued Costs on State Debt Service



Note: The source of GDP in the ESA 2010 methodology in 2011 to 2016 is the CZSO, for 2017 the Macroeconomic Forecast of the Czech Republic – January 2018.
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, EIB 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 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.

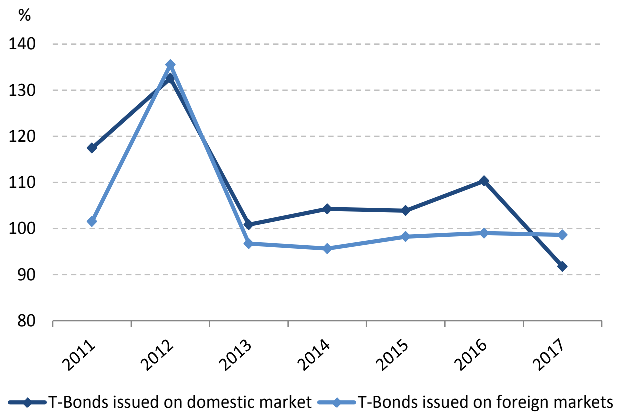
Table 13: Cash Premiums and Discounts and Difference Between Cash Expenditure and Accrued Costs of T-Bonds

CZK bn	2011	2012	2013	2014	2015	2016	2017
T-Bonds cash premiums	7.4	11.8	5.8	6.0	7.1	8.6	8.4
T-Bonds cash discounts	0.7	0.8	1.4	1.3	0.6	0.0	3.0
Difference between T-Bonds cash discounts and premiums	-6.8	-11.0	-4.4	-4.7	-6.5	-8.6	-5.4
Difference between T-Bonds cash expenditure and accrued costs	-5.7	-9.7	-0.3	-1.5	-1.3	-2.8	2.4

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

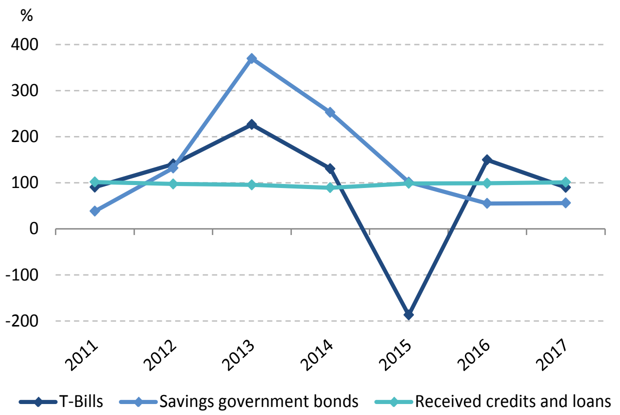
The basic development trends of cash expenditure and accrued costs is largely based on the development of these indicators for medium-term and long-term government bonds issued on the domestic market, which constitute a dominant part of the state debt, and in 2017 accounted for almost three fourths of 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 2017. In the case of medium-term and long-term government bonds issued on the foreign market, which accounted for almost than one fourth of total accrued costs in 2017, the ratio between accrual costs and cash expenditure is approximately balanced. In case of the state treasury bills, there was a prevalence of accrued costs over cash expenditure, or rather cash revenue over accrued revenue. 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 41: Percentage Share of Accrued Costs in Net Cash Interest Expenditure of T-Bonds



Source: MoF

Figure 42: Percentage Share of Accrued Costs in Net Cash Interest Expenditure of Other Components of State Debt



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 46.0 billion. The actual net expenditure on the chapter in 2017 amounted to CZK 39.8 billion, i.e. about 0.8% of GDP and 3.1% of total state budget revenue excluding the revenue of the chapter 396 – State debt. The difference between real net expenditure compared to the originally approved budget of CZK 46.3 billion was CZK 6.6 billion, which partially contributed to the better-than-expected state budget performance in 2017. 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 2016, there was a decrease in net expenditure of about 2.2%.

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

CZK mil.	Actual 2016	Budget 2017		Actual 2017	% Execution	2017/2016 (%)
		Approved	After changes			
1. Total interest expenditure and revenue	40,383	45,893	40,133	39,812	99.2	98.6
	-	-	-	(-) 384	-	-
Internal debt	30,512	35,119	32,371	32,117	99.2	105.3
	-	-	-	(-) 2,051	-	-
Money market instruments	(-) 155	(-) 38	(-) 608	(-) 674	110.8	434.3
	-	-	-	(-) 377	-	-
Savings government bonds	3,072	1,786	1,779	1,778	100.0	57.9
	-	-	-	17	-	-
T-Bonds on domestic market	27,595	33,371	31,200	31,013	99.4	112.4
	-	-	-	(-) 1,690	-	-
External debt	9,871	10,768	7,757	7,695	99.2	78.0
	-	-	-	1,667	-	-
T-Bonds on foreign markets	9,513	10,076	7,460	7,443	99.8	78.2
	-	-	-	1,590	-	-
Received credits and loans	357	692	297	252	84.8	70.5
	-	-	-	77	-	-
Payment accounts	0	5	5	0	-0.5	11.3
	-	-	-	0	-	-
2. Fees	**271**	**450**	**450**	**339**	**75.3**	**124.9**
	0	**-**	**-**	**0**	**-**	**8.0**
Total chapter balance	**40,654**	**46,343**	**40,583**	**39,767**	**-**	**97.8**

Note: (-) means revenue (gains).
Source: MoF

Table 15: Overview of Budgetary Transfers from the State Debt Chapter Realized in 2017

Fund allocation	Amount (CZK)
Increase in scale of basic salary rates by 10% for members of security forces of the Ministry of Interior, Prison service and Custom administration effective as from 1/7/2017	858,085,562
Enforcement of operational expenditure of Security Information Service	28,750,000
Additional financing of social service	462,305,856
Merging of tariff scales effective as from 1/7/2017	541,471,732
Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	3,611,106,425
Increase in salaries in so-called separate chapters effective as from 1/11/2017	15,101,958
Enforcement of expenditure, which are part of the classiefied section of the budget	42,996,940
Covering of the budget deficit of The State Fund for Transport Infrastructure	200,000,000
Total	**5,759,818,473**

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

In the course of 2017, a total of CZK 5.8 billion was transferred to other budget chapters from the State debt chapter via budgetary transfers. The resulting difference in actual net expenditure compared to the final budget adjusted for the budgetary transfers was CZK 0.8 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 next factor is then favourable and during preparation of state budget for 2017 unexpected situation on financial markets, when the yields of government bonds bearing an interest on short end of the yield curve reached negative values also during year 2017. The Ministry reacted flexibly to this situation and sold out zero-coupon government bonds of the Czech Republic with maturity in January 2018 and July 2019 and re-opened the issue of fixed-rate government bonds maturing in October 2019 in the total nominal value of CZK 33.5 billion and issued new issues of zero-coupon government bonds maturing in February 2020 and February 2022 in total nominal value of CZK 41.2 billion. Additionally, the Ministry offered state treasury bills with maturities up to one year in auctions in total nominal value of CZK 409.9 billion with the aim to receive extra revenues of state budget. All this state treasury bills were sold for negative yields. The total extra revenue of the state budget due to the issuance of government bonds and state treasury bills with a negative yield to maturity amounted to CZK 1.2 billion.

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 2017 amounted to more than CZK 25 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 2017 in accrued expression reached CZK 36.1 billion, of which net interest costs for state debt issued in 2017 account for approximately CZK -0.5 billion. The total nominal value of state debt issued in 2017 is CZK 623.0 billion including state treasury bills roll-over. Increase in accrual costs associated with state debt issued in 2017 is due to the absence of accrual income from the sale of state treasury bills and medium-term and long-term government bonds with a relatively short time to maturity for negative yield, which will be gradually redeemed in following years.

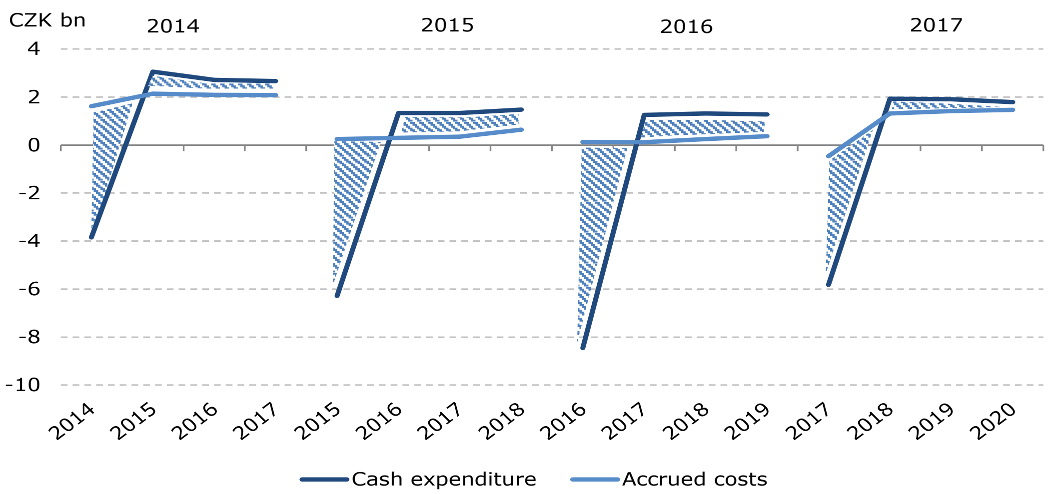
Table 16: Interest Expenditure and Accrued Costs of the Newly Issued State Debt

CZK bn	Nominal value	Net interest expenditure / accrued costs			
		2017	2018F	2019F	2020F
Cash basis expression	623.0	-5.8	1.9	1.9	1.8
Accrued basis expression	623.0	-0.5	1.3	1.4	1.5
Gross issuance of T-Bonds	213.1	0.2	1.4	1.4	1.5
Gross issuance of state treasury bills	409.9	-0.6	-0.1	-	-

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 2017 amounts to CZK -5.8 billion. In 2018 to 2020 the net interest expenditure on newly issued state debt are expected to amount to approx. CZK 1.9 billion and CZK 1.8 billion. Newly generated state debt in 2017 brought state budget cash revenue in total amount of CZK 5.8 billion due to the re-openings of issues with high coupon rate, which together with lower market yields generated auction premiums in 2017. State budget revenue from state debt issued in 2017 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 2014 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. 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 interest 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 decrease in current accrued interest costs for newly issued state debt in 2014 to 2016, which is related firstly to the reduction of the total issue of debt instruments and secondly to the lasting decrease of yields of government bonds. On contrary, gradual increase in yields of government bonds during 2017 was reflected in an increase of accrued costs on new state debt issued in this year.

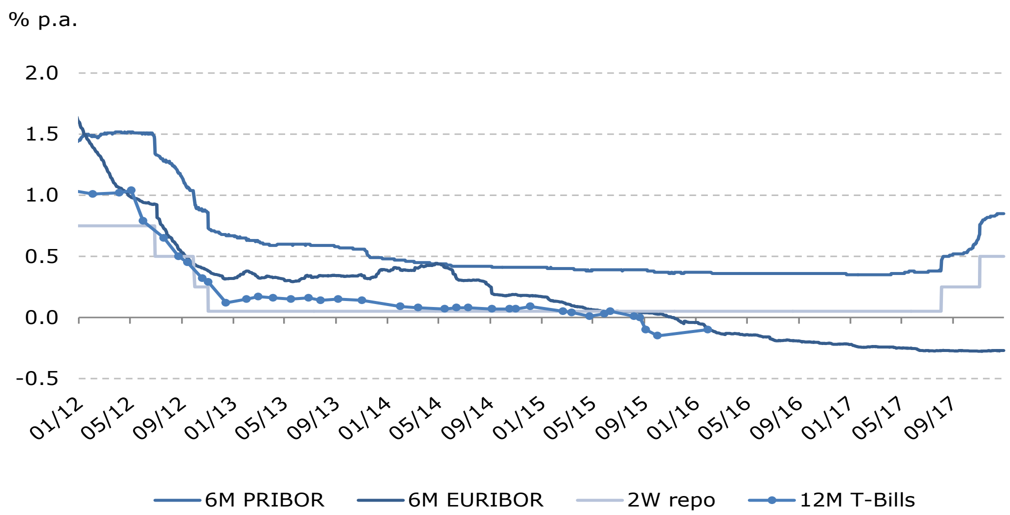
Figure 43: Net Cash Interest Expenditure and Accrued Interest Costs of Newly Issued Debt



Source: MoF

In 2017, the additional decrease of yield curves on EUR money market was observed. The 6-month EURIBOR rate has decreased with very low volatility. Yield curves of CZK money market showed a different development and moved upwards significantly in the course of 2017. The CNB exited from foreign exchange interventions regime and increased twice basic interest rate (two-week repo rate) by 20 basis points in August and 25 basis points in November to 0.50% p.a. 6-month PRIBOR rate, in response to these steps, began to grow at a significantly higher volatility from the beginning of the second quarter of 2017.

Figure 44: Development of Rates: 6M PRIBOR, 6M EURIBOR and 2W Repo and 12M T-Bills Yields

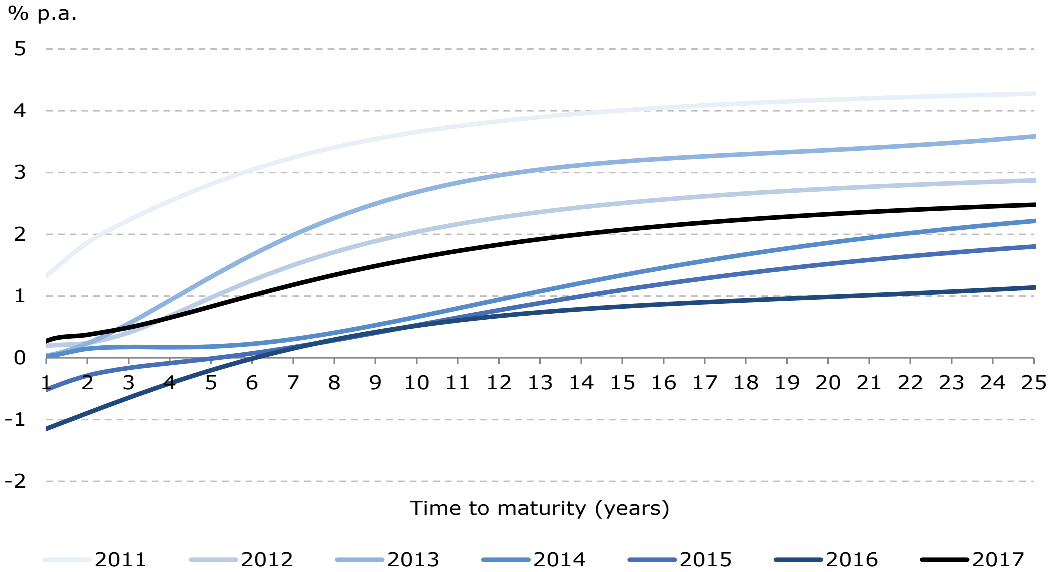


Source: Bloomberg, CNB

Yields of CZK-denominated government bonds across the whole yield curve slowly increased during the first quarter of 2017, then the increased ceased. In second and on beginning of the third quarter the yields stabilized or slightly decreased, while the yields of CZK-denominated government bonds with maturity up to three years remained in negative values. Since the end of the third quarter i.e. after the CNB Bank Board unanimously decided to increase its key interest rates at its monetary policy session, yields across the entire yield curve started to increase more markedly and at the end of 2017 reached the mid-2014 levels.

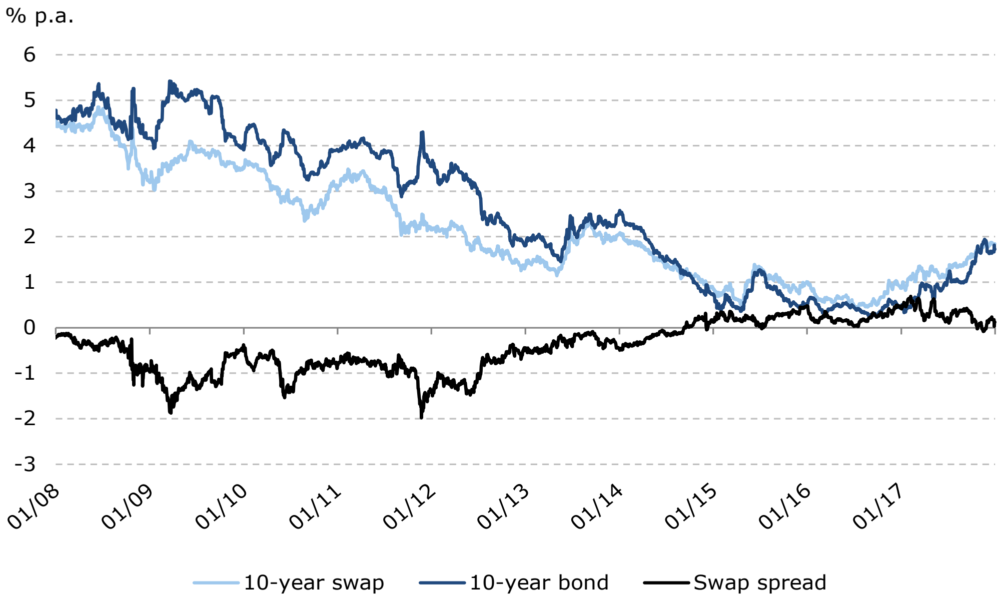
The difference between swap rate and yield of government bonds, i.e. the swap spread, was positive during almost whole 2017 for the 10-year maturity. The positive values of swap spread confirms the attractiveness of the Czech Republic as an issuer of government bonds for investors. The value of swap spread was approx. 40 basis points at the beginning of 2017 in case of 10-year maturity; at the end of December 2017 it reached the value of 10 basis points. The average value of swap spread in case of 10-year swap was approx. 30 basis points in 2017.

Figure 45: Yield Curve of CZK-Denominated Government Bond



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

Figure 46: Swap Rate and Yield to Maturity of CZK-Denominated T-Bond



Source: MoF, Bloomberg

Cost-at-Risk of State Debt

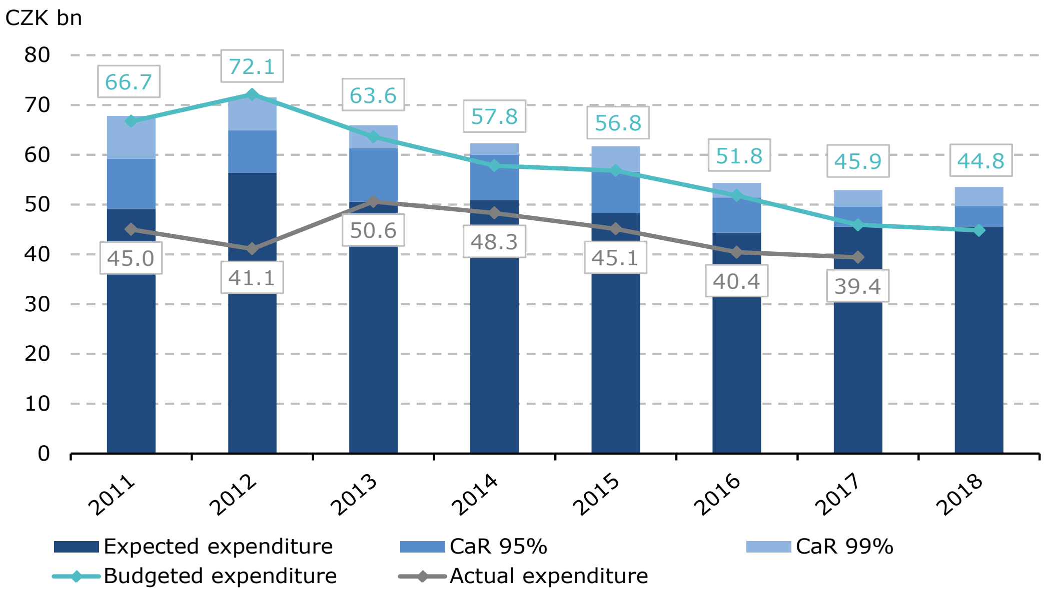
In measuring and managing interest rate risk, the Ministry applies a sophisticated model framework known as Cost-at-risk (CaR) for measuring and managing interest risk since 2005, which is based on Value-at-Risk methodology and simulates future expected and maximum interest expenditure for a particular degree of risk, which is derived from the volatility of the time structure of interest rates. The stochastic element of the CaR model is the yield curve, and the deterministic element is the dynamic structure of the state debt portfolio, which is based on the basic scenario of the funding program while respecting the set strategic goals for managing financial risks.

The primary goal 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 goal 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 do 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 goal, since the predicted maximum interest expenditure was not exceeded in any of those years.

Figure 47: 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	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Budgeted expenditure[1]	66.7	72.1	63.6	57.8	56.8	51.8	45.9	44.8	46.1	48.0
Actual expenditure	45.0	41.1	50.6	48.3	45.1	40.4	39.4	-	-	-
Expected expenditure	49.1	56.4	50.6	50.9	48.2	44.3	45.6	45.5	45.8	47.9
CaR 95%	59.2	64.9	61.3	60.0	56.6	51.4	49.6	49.7	53.7	60.3
CaR 99%	67.8	71.5	65.9	62.3	61.7	54.3	52.9	53.5	57.4	64.2

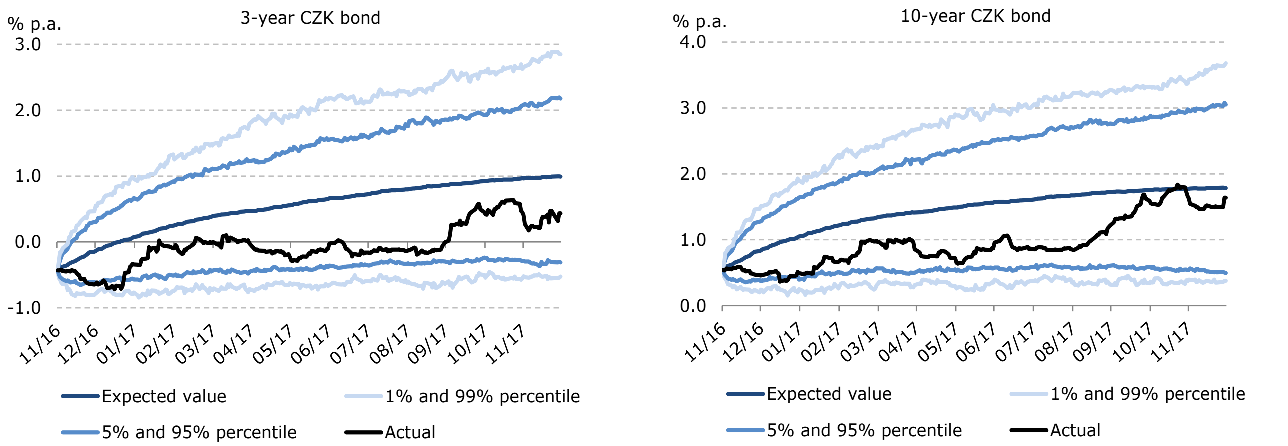
[1] In 2011 through 2018, the original budgeted net interest expenditure. In 2019 and 2020 medium-term outlook.
Source: MoF

Cost-at-Risk for 2017

In The Czech Republic Government Debt Management Annual Report 2016, the Cost-at-Risk of state debt for 2017 was published. Calculation of the CaR indicator is based on simulations of the time structure of interest rates as at 28 November 2016.

A comparison of the real development of the 3-year and 10-year government bonds interest rates with their simulations for the period from 28 November 2016 to 31 December 2017 is shown in the following figures.

Figure 48: Actual vs. Simulated of CZK-Denominated T-Bonds Yields in 2017



Source: MoF

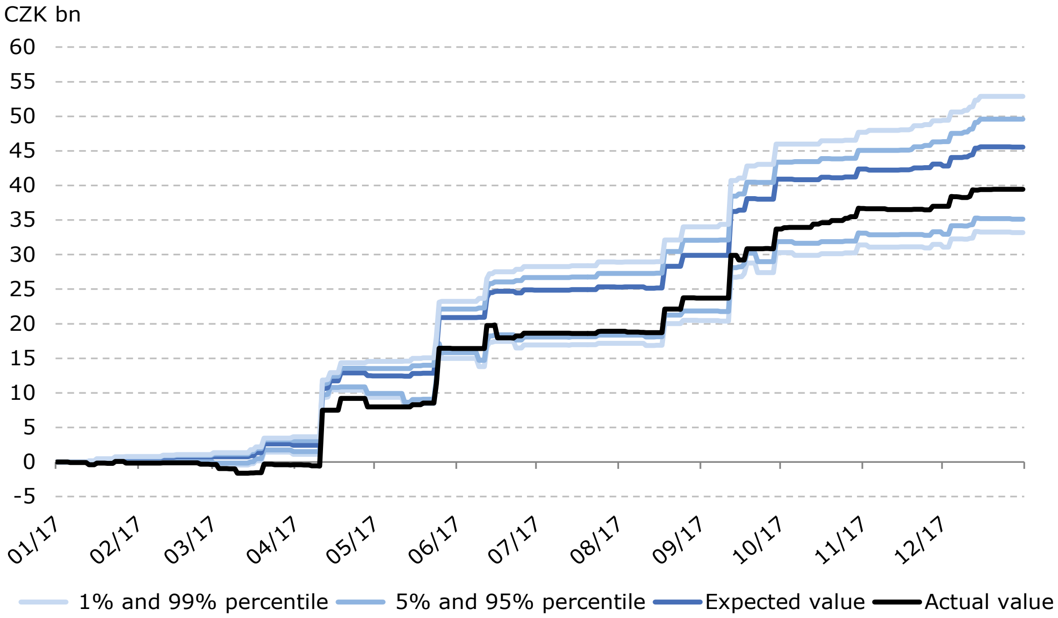
A comparison of the actual net interest expenditure on state debt service with the simulated values of expected expenditure (simulation average) and interest expenditure at risk (95% and 99% percentile of simulations) in 2016 and 2017 is shown in the following table. In 2017 the net interest expenditure amounted to CZK 39.4 billion, the expected net interest expenditure in 2017 predicted by the model amounted to CZK 45.6 billion.

Table 18: Expected vs. Actual Net Interest Expenditure

CZK bn	2016	2017
Actual expenditure	40.4	39.4
Expected expenditure	44.3	45.6
CaR 95%	51.4	49.6
CaR 99%	54.3	52.9
Difference between expectation and reality	3.9	6.1

Source: MoF

Figure 49: Actual vs. Simulated Net Interest Expenditure in 2017



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

The net interest expenditure in 2017 remained below the CaR 95% and CaR 99% level, having been estimated at CZK 49.6 billion and CZK 52.9 billion, respectively. The expected net interest expenditure predicted by the model is CZK 6.1 billion higher than in reality.

The difference in expected net interest expenditure is given primarily by lower yields of CZK-denominated medium-term and long-term government bonds compared to the model-given expectations, which lasted practically throughout whole 2017. Yields of government bonds bearing an interest on the short end of the yield curve reached negative values also during first three quarters of year 2017. The Ministry flexibly reacted to the situation on financial market on the beginning of 2017 and increased the issuance on short end of the yield curve with maturity up to three years. The difference stemming from this reaction amounted to CZK 3.9 billion and is given by the change in the structure of issuance calendar of medium-term and long-term government bonds. The difference of approx. CZK 0.8 billion is caused by the lower-than-expected yields of state treasury bills, as they were also negative in the whole 2017. Total extra revenue of state budget given by issuance of government bonds and state treasury bills with negative yield to maturity amounted to CZK 1.2 billion. The next significant factors were the lower levels of PRIBOR and EURIBOR reference interest rates. The difference amounted to approx. CZK 1.1 billion due to the lower-than-expected values of reference rates. The difference of approx. CZK 0.3 billion is given by higher-than-expected revenue related to the state treasury liquidity management after the CNB has gradually increased key interest rates since the third quarter of 2017.

Cost-at-Risk for 2018 to 2020

As part of the discussion of the State Budget Act of the Czech Republic for 2018 in the Chamber of Deputies of the Parliament of the Czech Republic, the expenditure of chapter 396 - State Debt was reduced by CZK 650 million compared to the Government's proposal. Compared to the approved budget for 2017 the budgeted expenditure on state debt service was reduced by CZK 1.1 billion, and compared to medium-term outlook for the state budget for 2018 and 2019, with which the Strategy operated, by CZK 6.0 billion in both years.

The net interest expenditure in 2018 expected by the model amounts to CZK 45.5 billion. Net interest expenditure at risk, i.e. CaR 99% amounts to CZK 53.5 billion (CaR 95% amounts to CZK 49.7 billion). The actual net interest expenditure in 2018 will not be more than CZK 8.0 billion higher compared to expected expenditure with 99% probability. The budgeted net interest expenditure of the state debt service in 2018 are CZK 44.8 billion and are thus CZK 0.7 billion below the expected net interest expenditure and CZK 4.9 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 2018 predicted by the model always at the end of the month. It also contains the respective critical values of CaR 95% and CaR 99%.

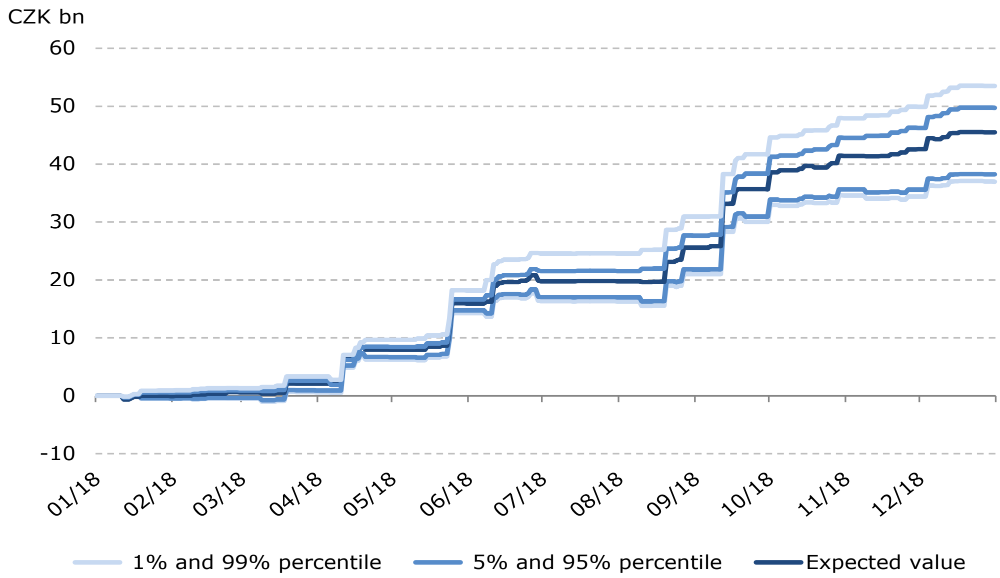
Table 19: Monthly Development of Cumulative Net Interest Expenditure in 2018

CZK bn	1	2	3	4	5	6	7	8	9	10	11	12
Expected expenditure	0.0	0.6	2.1	8.0	16.0	19.8	19.8	25.6	35.7	41.4	42.6	45.5
CaR 95%	0.6	0.9	2.6	8.4	16.6	21.5	21.6	27.7	38.3	44.5	46.2	49.7
CaR 99%	0.9	1.3	3.3	9.7	18.2	24.5	24.6	30.9	41.7	47.9	49.9	53.5

Source: MoF

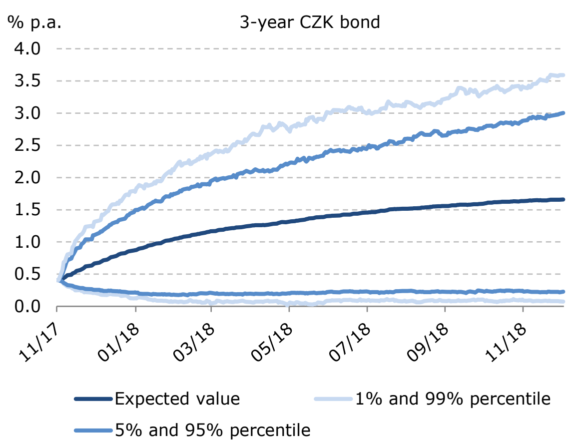
The graphic presentation of simulations of cumulative net interest expenditure on the state debt service in 2018 stipulated on a daily basis is shown in the following figure. The figure also shows the expected values of net interest expenditure and the respective 5% and 95%, 1% and 99% percentiles of simulated values.

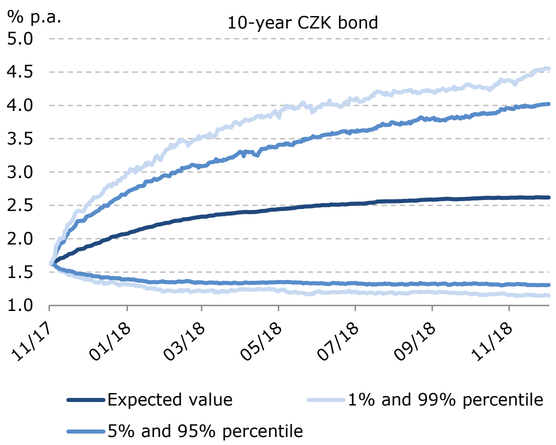
Figure 50: Simulation of Net Interest Expenditure of State Debt in 2018



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

Figure 51: Simulation of CZK-Denominated T-Bonds Yields in 2018





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 basic rate, sudden deterioration of the economic situation in the euro area, a sharp increase of the risk premium for the Czech Republic, 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 2018. 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 Hikes

CZK bn	Current model	Shift of rates at the short end of the yield curve		Shift of rates at the long end of the yield curve		Shift of the whole yield curve	
		by 1 p.p.	by 5 p.p.	by 1 p.p.	by 5 p.p.	by 1 p.p.	by 5 p.p.
Expected expenditure	45.5	46.2	50.0	53.9	78.7	54.6	83.2
CaR 95%	49.7	50.9	54.1	57.1	79.3	58.3	83.7
CaR 99%	53.5	54.7	57.8	60.5	81.5	61.7	85.8

Note:The shock in the form of a one-time shift in the yield curve will occur at the start of 2018.
Source: MoF

The shift of the yield curve for CZK-denominated government bonds at the short end by 1 p.p. upwards in 2018 would bring an increase in the expected net interest expenditure by CZK 0.7 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 8.4 billion. The shift of the entire yield curve of CZK-denominated government bonds by 1 p.p. upwards would result in an increase in expected net interest expenditure by approximately CZK 9.1 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 koruna. 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 2017, 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	0.085	0.851
CaR 95%	0.086	0.862
CaR 99%	0.094	0.941

Note: The shock in form of a one-off depreciation of CZK FX rate will occur in the beginning of 2018.
Source: MoF

If the EURCZK FX rate depreciated by 1% at the beginning of 2018 compared to the level as at the end of 2017, i.e. from 25.540 to 25.795 and remained unchanged during the whole 2018, then the expected net interest expenditure on state debt service would increase approx. by CZK 85 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 2018, 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 on domestic market 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 0.1 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 2019 and 2020. The expected value of net interest expenditure is CZK 45.8 billion in 2019 and CZK 47.9 billion in 2020, which is due primarily to the use of a less conservative model for the risk premium of government bonds and current low yields of government bonds.

In the medium-term outlook of the Czech Republic's budget for 2019 and 2020, the expenditure frameworks for the chapter 396 - State debt are under CaR 95% percentile. For 2019, the expenditure framework is CZK 46.1 billion and is CZK 7.6 billion below 95% percentile of interest expenditure. For 2020, the expenditure framework is CZK 48.0 billion and is CZK 12.3 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.

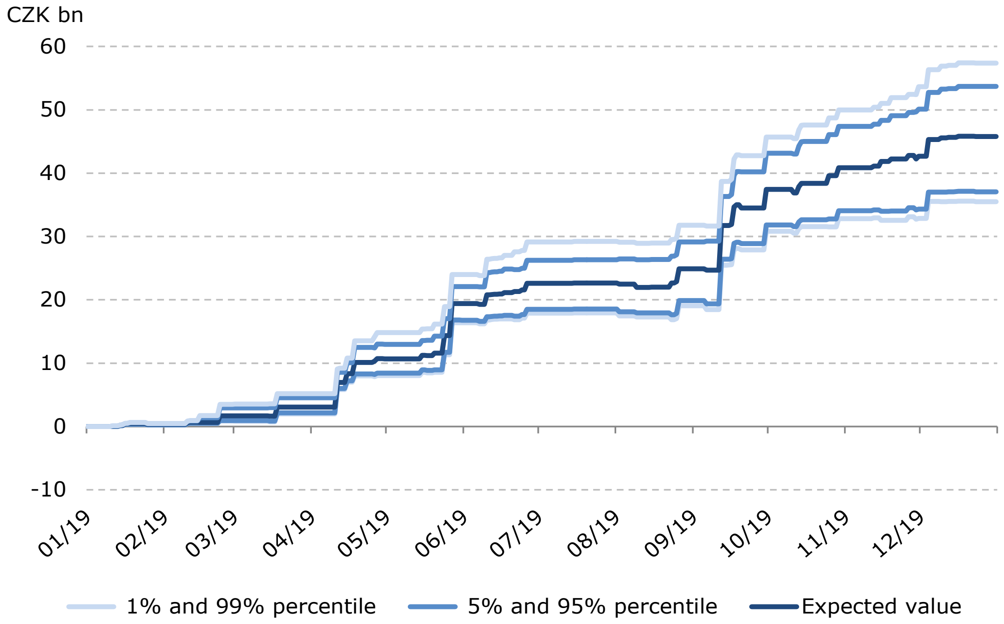
The expected net interest expenditure on state debt in 2019 predicted by the model amounts to CZK 45.8 billion. The following table shows in detail the development of cumulative net interest expenditure on state debt in 2019 predicted by the model always at the end of the month. It also contains the respective critical values of CaR 95% and CaR 99% indicators. The difference between the CaR 99% indicator and expected costs in 2019 is higher than the same difference in 2018. 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 2019

CZK bn	1	2	3	4	5	6	7	8	9	10	11	12
Expected expenditure	0.3	1.7	3.1	10.7	19.4	22.6	22.7	24.9	37.5	40.9	42.7	45.8
CaR 95%	0.4	2.9	4.5	13.0	22.1	26.2	26.3	29.1	43.2	47.4	50.1	53.7
CaR 99%	0.5	3.5	5.2	14.8	24.0	29.1	29.2	31.8	45.7	50.0	53.7	57.4

Source: MoF

Figure 52: Simulation of Net Interest Expenditure on State Debt in 2019



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

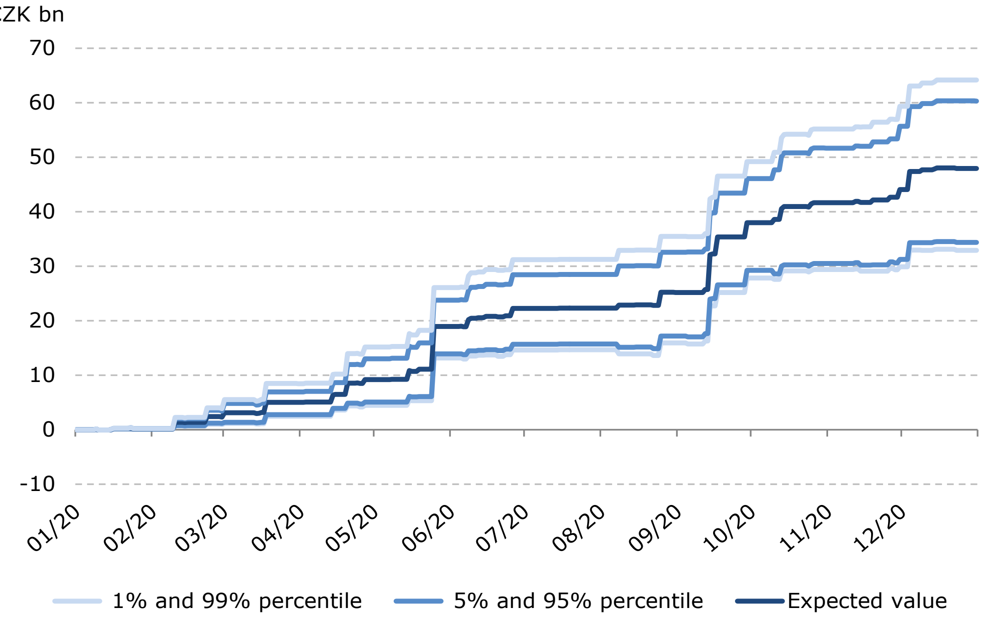
Expected net interest expenditure on state debt in 2020 predicted by the model amount to CZK 47.9 billion. The following table shows in detail the development of cumulative net interest expenditure on state debt in 2020 predicted by the model always at the end of the month. It also contains the respective critical values of CaR 95% and CaR 99%. The difference between the CaR 99% indicator and expected expenditure in 2020 is higher than the same difference in 2018 and 2019. 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 2020

CZK bn	1	2	3	4	5	6	7	8	9	10	11	12
Expected expenditure	0.1	2.3	5.0	9.2	19.0	22.3	22.3	25.2	38.0	41.6	44.1	47.9
CaR 95%	0.2	3.4	6.9	13.0	23.8	28.4	28.5	32.6	46.1	51.7	55.7	60.3
CaR 99%	0.2	3.9	8.5	15.2	26.1	31.2	31.3	35.5	49.2	55.2	59.4	64.2

Source: MoF

Figure 53: Simulation of Net Interest Expenditure on State Debt in 2020



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 2018 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.

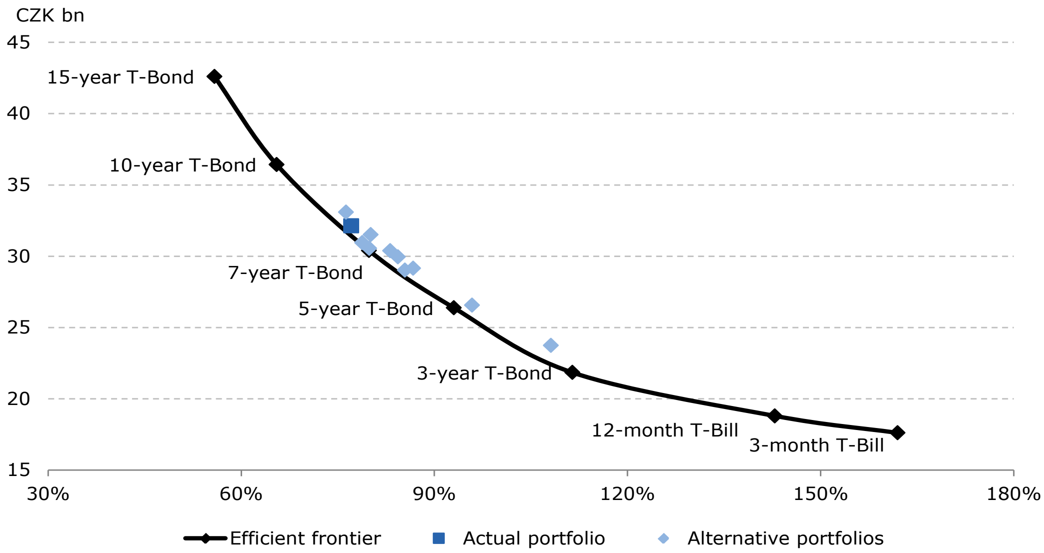
The efficient frontier depicts a curve that combines the risk and expected costs of alternative debt portfolios, which contain only bonds with one specific constant time to maturity. The bonds in this portfolio are issued always with a constant time to maturity, i.e. re-openings are not considered, and 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 increase of yields of government bonds in three-year simulation horizon, which is reflected in the increase of expected costs in coming years. Furthermore, very low yields at the short end of the yield curve are apparent, where the expected costs in the case of the issue of 3-year government bonds do not differ significantly from the expected costs in the case of state treasury bills.

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.

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 evenly always with two instruments; 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 are consider evenly issuing state treasury bills with a maturity of 3 and 12 months and 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 5.5 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 half consists of issuing state treasury bills and the other half of issuing medium-term and long-term government bonds, whereas the proportion of maturities within the individual groups is equal.

Figure 54: Efficient Frontier and Alternative Debt Portfolios



Source: MoF

The expected costs of the individual debt portfolios are represented by the cumulated expected costs of state debt service in 2018 to 2020. 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 2018 to 2020; 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 calculating with zero net issue of state treasury bills 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 32.1 billion with a risk of approximately 77%. There is therefore a risk that the actual realized costs for next three years will exceed the expected costs by 77%, or in absolute terms by CZK 24.8 billion. Compared to the previous year expected costs increased significantly and the risk 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 - Primary and Secondary Market for Government Bonds

Primary Dealers of Czech Government Bonds

The status of a primary dealer in Czech government securities was contractually formalised on 1 October 2011, when the Primary Dealer Agreement for Czech Republic 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. Only 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 18 December 2015 regarding 2nd version of the Primary Sale of Government Securities Organized by the Czech National Bank).

A Primary Dealer is granted exclusive access to primary auctions of government bonds and 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 2017 and the Ministry will continue to apply this practice.

The group of primary dealers of Czech government bonds is confirmed by the Ministry for every calendar year. In 2017, the Czech Republic had a total of 10 primary dealers. Compared to 2016 there are two primary dealers who left the group of primary dealers. All privileges and obligations of Deutsche Bank AG and Morgan Stanley & Co International PLC arising from the Agreement are not in force as of 1 January 2017. System of primary dealership ran smoothly in 2017 and Ministry did not receive any proposals to amend the current institutional arrangement of the market.

Table 24: List of Primary Dealers of Czech Government Bonds

Year 2017	
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.**	**71.9**
2.	KBC Bank NV / Československá obchodní banka, a. s.	70.1
3.	Société Générale / Komerční banka, a.s.	50.5
4.	Citibank Europe plc	50.3
5.	J.P. Morgan Securities plc	48.5
6.	Erste Group Bank AG / Česká spořitelna, a.s.	38.6
7.	UniCredit Bank Czech Republic and Slovakia, a.s.	32.3

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

Table 26: Primary Market

Ranking	Primary Dealer	Points
1.	**PPF banka a.s.**	**43.8**
2.	KBC Bank NV / Československá obchodní banka, a. s.	34.4
3.	Société Générale / Komerční banka, a.s.	32.9
4.	J.P. Morgan Securities plc	24.8
5.	Citibank Europe plc	20.2
6.	Erste Group Bank AG / Česká spořitelna, a.s.	20.0
7.	UniCredit Bank Czech Republic and Slovakia, a.s.	14.5

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.**	**35.7**
2.	Citibank Europe plc	30.2
3.	PPF banka a.s.	28.1
4.	J.P. Morgan Securities plc	23.7
5.	Erste Group Bank AG / Česká spořitelna, a.s.	18.7
6.	UniCredit Bank Czech Republic and Slovakia, a.s.	17.9
7.	HSBC Bank plc	17.7

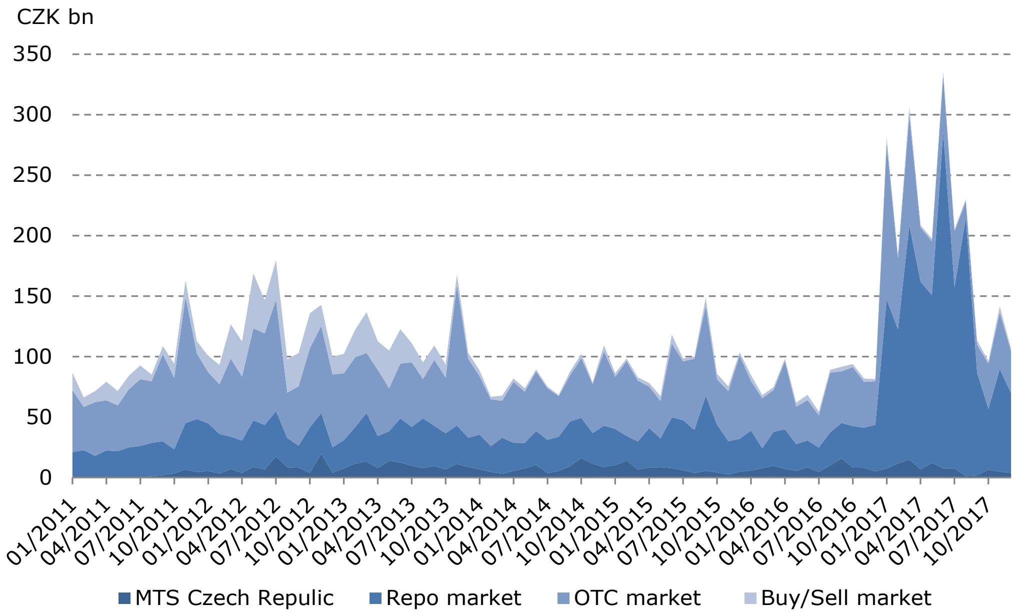
Note: Maximum possible number of points in this criterion is 45.
Source: MoF

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 bonds for benchmark bonds 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 55: 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.
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 CNB 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. In the next period, trading activity was standardized at the historical level.

An effective secondary market in terms of minimising 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 2018, 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 2017 with maturity in 2027, whose nominal value outstanding was sufficient to allow the fulfilment of quoting obligations of the market maker. Furthermore, the issue maturing in 2036 was repeatedly included into the benchmark list, based on the previous agreement with the primary dealers. Increased outstanding amount during 2017 allows primary dealers to fulfil quoting obligation effectively. In fact, due to persisting low outstanding amount and long term to maturity, the minimum nominal traded volume was reduced to CZK 10 million. The government bond with maturity in 2036 enables the Ministry to extend the long end of the yield curve of Czech Republic government bonds, what contrubites to more accurate estimates of benchmark curve.

From 1 January 2018, Czech Republic Treasury Bond, 2003-2018, 4.60 % and Czech Republic Treasury Bond, 2009-2019, 5.00 % were removed from the list of benchmark issues due to the time to maturity of less than 1.25 years in accordance with the Agreement. As a result of the changes in benchmark issues the total number of bonds subject to quoting obligation stayed unchanged at 12.

Table 28: Benchmark Issues of Government Bonds as at 1 January 2018

Issue No.	Issue	ISIN	Coupon	Maturity Date	Maturity Basket
76	ČR, 1.50 %, 19	CZ0001003834	1.50%	29/10/2019	A
91	ČR, VAR %, 20	CZ0001004113	VAR%	9/12/2020	A
61	ČR, 3.85 %, 21	CZ0001002851	3.75%	29/9/2021	B
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[1]	**ČR, 0.25 %, 27**	**CZ0001005037**	**0.25%**	**10/2/2027**	**C**
78	ČR, 2.50 %, 28	CZ0001003859	2.50%	25/8/2028	C
94	ČR, 0.95 %, 30	CZ0001004477	0.95%	15/5/2030	C
49[2]	**ČR, 4.20 %, 36**	**CZ0001001796**	**4.20%**	**4/12/2036**	**D**

[1] Issue was included among benchmark issues from 1 January 2018.
[2] Issue was reincluded among benchmark issues from 1 January 2018.
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.

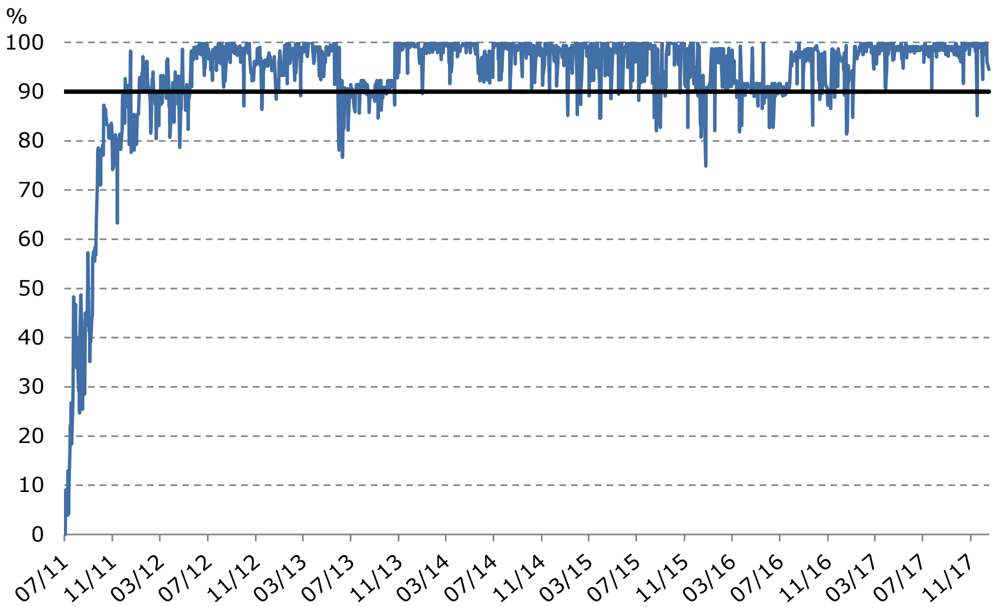
Table 29: Maturity Baskets Based on the Minimum Traded Volume on the MTS Czech Republic

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 2017, 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 2017, daily compliace ratio limit (90%) was met on average. Compared to year before, there was a significant improvement in quoting obligations. In fact, the main reason was reduction in the number of primary dealers for inactive market makers whose performance reduced the overall average daily complliance ratio. In 2017, average performance ratio was significantly stabilized.

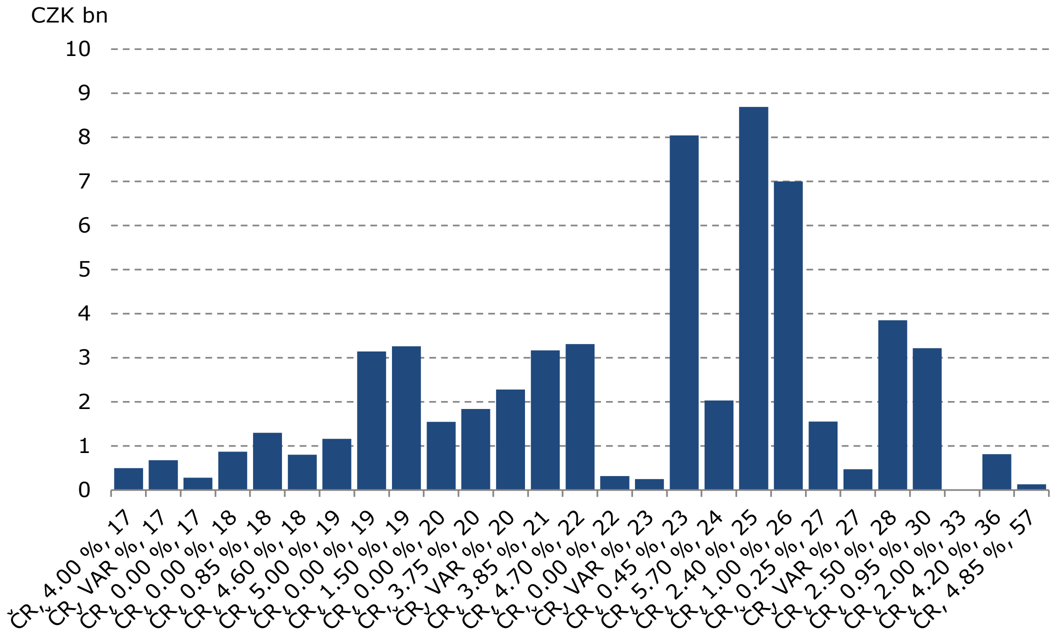
Figure 56: Average Daily Compliance Ratio on MTS Czech Republic



Source: MoF, MTS

In 2017, the average traded nominal value was CZK 5.0 billion. Total trading activity was unevenly distributed over the course of the year. In the first half of the year it reached an average of CZK 7.3 billion, in the second half of the year it was only CZK 2.8 billion. Historically low levels were recorded in August (CZK 0.4 billion), September (CZK 1.6 billion) and December (CZK 0.8 billion). According to particular issues of government bonds, the highest trading volume recorded: Czech Republic Government Bond, 2014-2025, 2.40% (CZK 8.7 billion), Government Bond of the Czech Republic, 2015-2023, 0.45% (CZK 8.0 billion) and Government Bond of the Czech Republic, 2015-2026, 1.00% (CZK 7.0 billion).

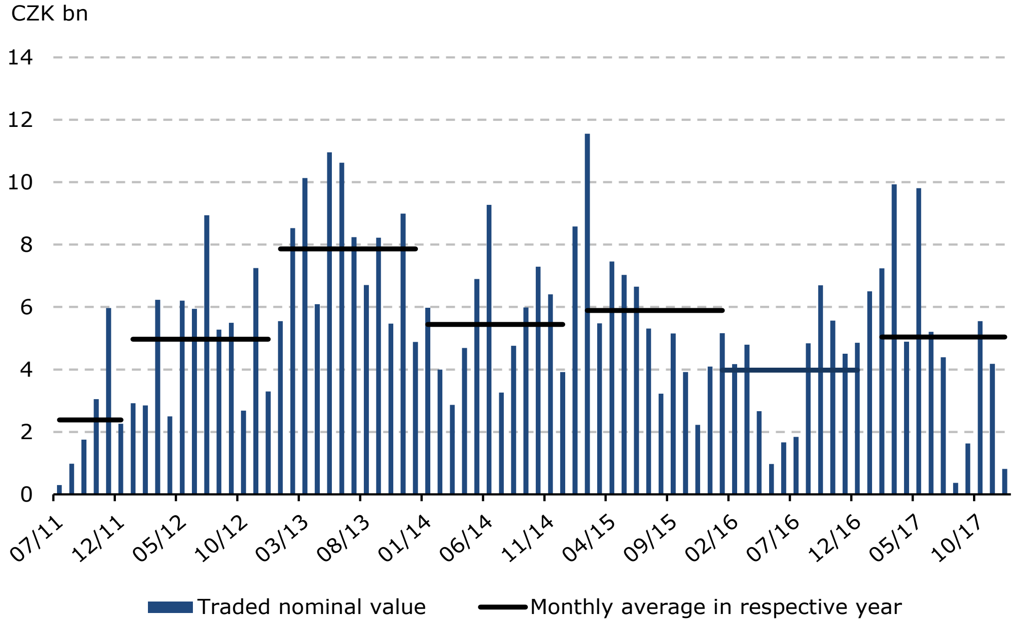
Figure 57: Traded Nominal Value on MTS Czech Republic by T-Bonds in 2017



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 2016, traded nominal value including Ministry's operations on the MTS Czech Republic reached monthly average of CZK 7.4 billion and in 2017 reached CZK 6.7 billion.

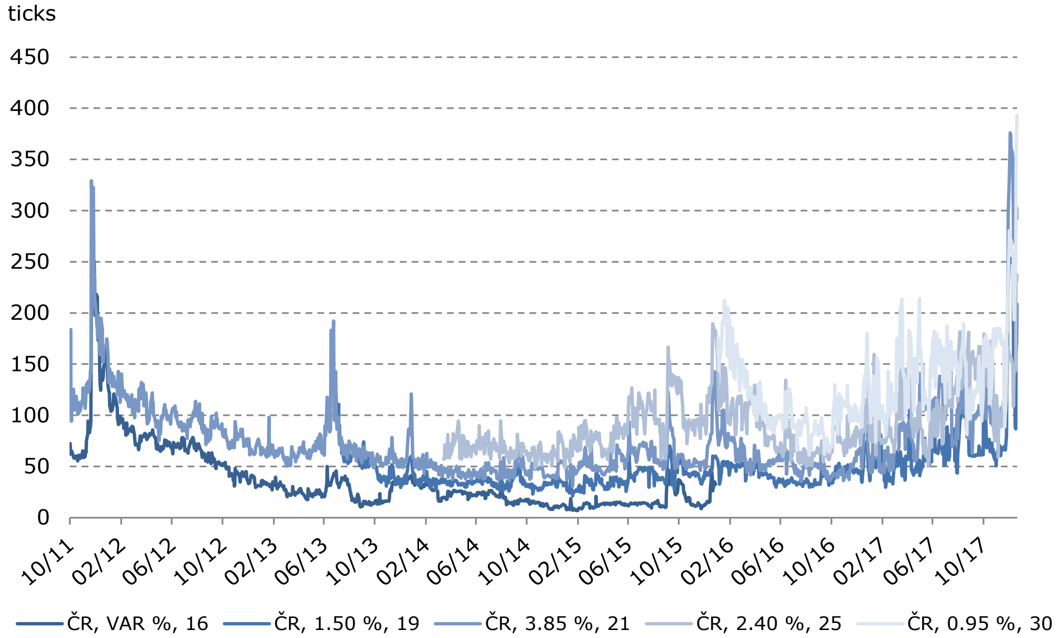
Figure 58: Traded Nominal Value on MTS Czech Republic



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

During 2017 the bid-offer spreads went through an unstable and volatile period. The growing trend of bid-offer spreads could be observed throughout 2017. After the increase in January, bid-offer spreads were gradually reduced until March. Subsequently, the bid-offer spreads started to increase significantly. The main reason was substantial mismatch between demand and supply of government bonds based on the expected termination of the CNB´s exchange rate commitment. This confirms historically large traded nominal value on the secondary markets in the first half of 2017 as well as the nominal value of the lending facilities provided. The bid-offer spreads were narrowing in May but another increase were recorded in July. An unprecedented increase in the bid-offer spreads occurred at the end of 2017, especially for regulatory reasons. 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 59: Bid-Offer Spreads of Selected Bonds Quoted on MTS Czech Republic



Source: MoF, MTS

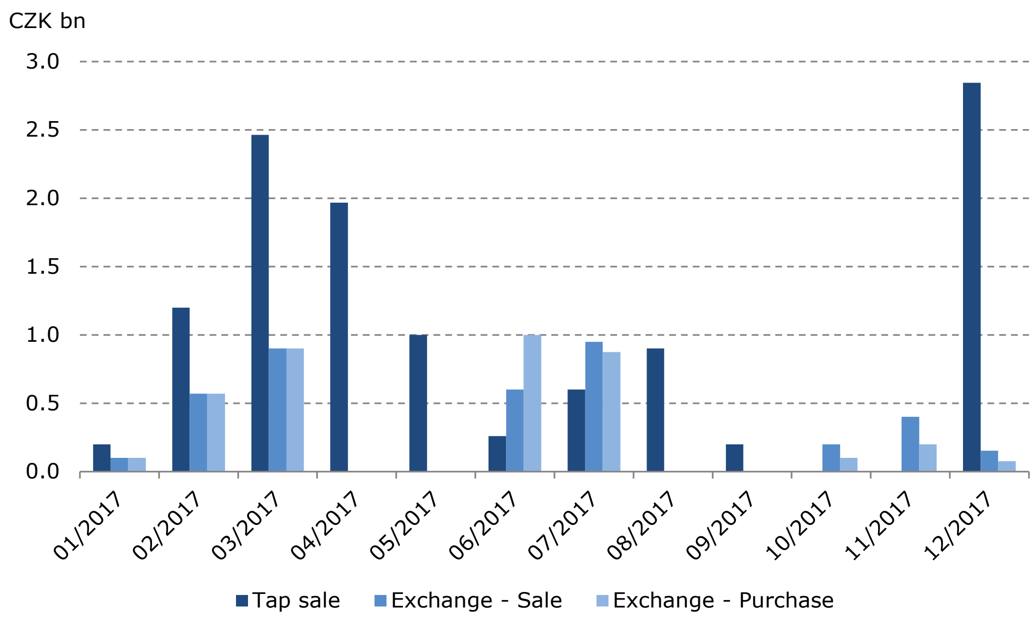
The strategy in relation to the development of the secondary market via MTS Czech Republic primarily focuses on the flexible use of all available MTS Czech Republic electronic platform instruments, smooth running of the system and achievement of consistency with the valid regulatory framework. The Ministry 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 2017. 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 2018.

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 or tap sale, number of transactions and weighted average price) 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 2017, 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 October and November. During this period the Ministry sold from the own asset account Czech Republic Government Bond, 2014-2018, 0.85 % in the total nominal value CZK 1.9 billion, Czech Republic Government Bond, 2013-2019, 1.50 % in total nominal value CZK 3.1 billion, Government Bond of the Czech Republic, 2017-2020, 0.00 % in total nominal value CZK 2.3 billion, Czech Republic Treasury Bond, 2010-2021, 3.85 % in total nominal value CZK 0.9 billion, Czech Republic Treasury Bond, 2007-2022, 4.70 % in total nominal value CZK 0.2 billion, Government Bond of the Czech Republic, 2017-2022, 0.00 % in total nominal value CZK 0.3 billion, Czech Republic Government Bond, 2014-2025, 2.40 % in total nominal value CZK 0.5 billion, Government Bond of the Czech Republic, 2017-2027, 0.25 % in total nominal value CZK 1.3 billion and Czech Republic Government Bond, 2013-2028, 2.50 % in total nominal value CZK 1.3 billion. Total nominal value of executed taps sales in 2017 was CZK 11.6 billion, which was by CZK 8.0 billion more than previous year.

Figure 60: Nominal Value of Tap Sales and Exchange Operations



Source: MoF, MTS

In 2017, nominal value of exchange operations decreased, the Ministry exchanged government bonds of a total nominal value of CZK 3.8 billion for governments bond of a total nominal value of CZK 3.9 billion. In exchanges the Ministry focused primarily on Czech Republic Treasury Bond, 2009-2019, 5.00 % and Czech Republic Treasury Bond, 2007-2017, 4.00 %. 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, 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

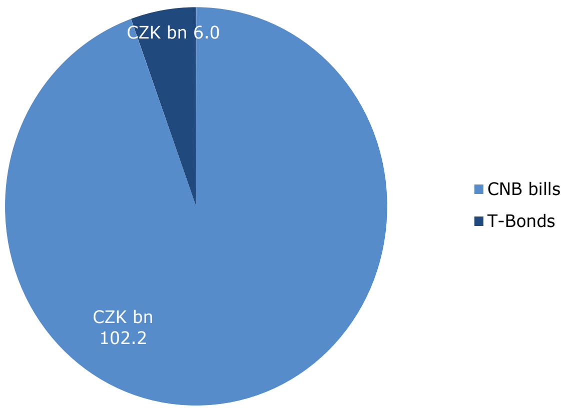
The Ministry continued executing extensively the short-term lending facilities of medium-term and long-term government bonds for primary dealers in the form of repo operations and also in the form of loans of securities. Loans of securities, which are standard financial instrument in the world, will 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. 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.

In January 2017, the total volume of the lending facility (in the form of repo operations) expressed as the nominal value of provided collateral reached CZK 18.7 billion. This is the highest monthly volume of government bonds in the form of repo operations since their introduction. Demand for lending facilities in the form of repo operations and in the form of loans of securities was strong mainly in the first quarter of 2017 when average nominal amount of lending facilities reached CZK 19.6 billion. That was the second highest volume of executed lending facilities.

In December 2017 total provided nominal value of lending facilities rose to a level of over CZK 28.0 billion. This was influenced by the strong demand of primary dealers, who accumulated significant short position during 2017. Due to limited supply of government bonds in primary auctions relative to overall demand, Ministry's lending facilities have allowed smooth operating of the secondary market without any price distortions. In December the Ministry provided bonds in the total nominal value of CZK 25.6 billion in the form of loans of securities. At the same time the Ministry accepted collateral in the nominal value of CZK 28.1 billion. The important change in collateral structure in favour of CNB bills occurred compared to last year, which became the dominant part of accepted collateral.

Figure 61: Received Collateral within Collateralized Loans of Securities in 2017



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

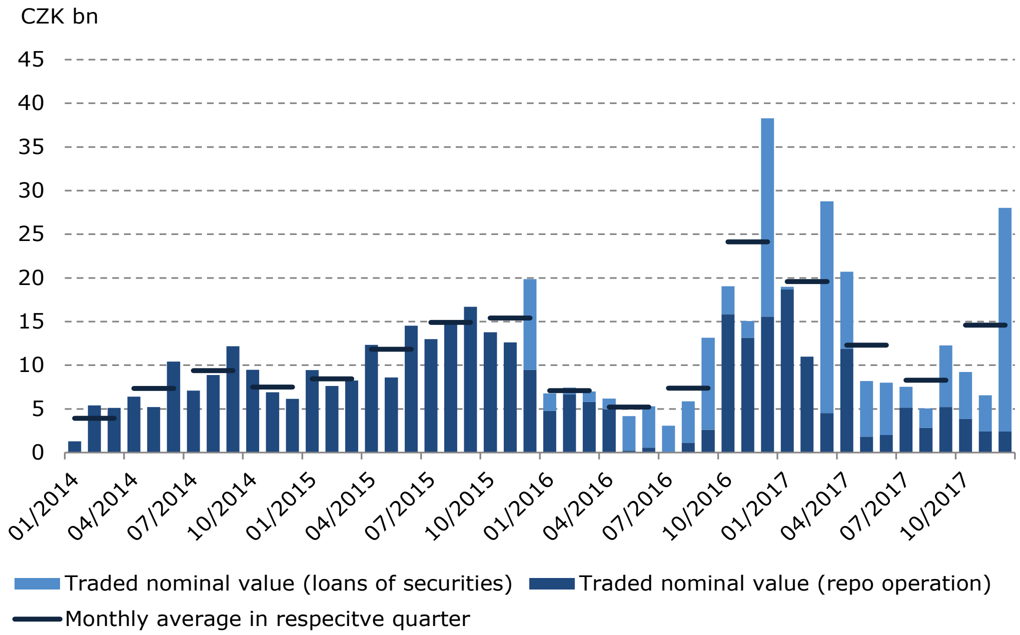
Interest in the short-term lending facilities in the form of repo operations in 2017 was high despite the considerable change in Czech government bond holders and volatility on financial markets. The total amount of received cash resources from short-term lending facilities in 2017 was CZK 78.7 billion, compared to 2016 decreased by CZK 2.0 billion. This was due to higher demand for loans of securities during the whole year, for which year-on-year increase in nominal value was CZK 32.5 billion and total nominal value was CZK 92.6 billion. Overall in 2017, Ministry executed 303 transactions in the form of repo operations and 176 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 2017, the contribution of the lending facilities to the total revenue from the investment activity amounted CZK 24.4 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 2017, the largest part of lending facilities in terms of nominal value of the provided bond was comprised of Czech Republic Treasury Bond, 2011-2023, VAR % (CZK 18.4 billion), Czech Republic Treasury Bond, 2007-2057, 4.85 % (CZK 17.4 billion), Government Bond of the Czech Republic, 2015-2030, 0.95 % (CZK 15.7 billion), Czech Republic Treasury Bond, 2007-2022, 4.70 % (CZK 13.0 billion) and Government Bond of the Czech Republic, 2017-2027, 0.25 % (CZK 11.9 billion). For other bonds, the demand was evenly distributed along the entire yield curve.

Figure 62: 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 2017

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 should that dealer be 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 2017 remains unchanged for 2018.

Table 30: Criteria for Evaluation of Primary Dealers Valid for 2017 and 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

	31/12/2016	31/3/2017	30/6/2017	30/9/2017	31/12/2017
Total state debt (CZK bn)	**1,613.4**	**1,788.6**	**1,788.8**	**1,610.1**	**1,624.7**
Market value of state debt (CZK bn)	1,831.1	1,987.3	1,969.2	1,767.7	1,751.0
Short-term state debt (%)	14.3	22.8	25.0	20.4	18.5
Medium-term state debt (%)	60.3	62.2	65.5	65.5	62.3
State treasury bills (%)	0.3	3.9	8.3	0.0	2.7
Other money market instruments (%)	0.0	0.0	0.0	0.2	0.0
Average time to maturity (years)	5.1	4.7	4.6	4.9	5.0
Interest rate re-fixing up to 1 year (%)	29.6	36.6	38.7	35.5	33.5
Average time to re-fixing (years)	4.0	3.8	3.7	4.0	4.1
Variable-rate state debt (%)	15.9	14.4	14.3	12.8	12.7
Modified duration (years)	3.9	3.6	3.5	3.7	3.7
State debt level net foreign currency exposure (%)	11.5	10.5	10.2	11.2	10.9
Interest expenditure on state debt net foreign currency exposure (%)	11.5	10.5	10.2	11.3	11.0
Foreign currency state debt (%)	13.4	12.1	11.7	12.9	12.5
Share of € in state debt level net foreign currency exposure (%)	96.5	96.4	96.6	96.8	96.8
Share of € in interest expenditure on state debt net foreign currency exposure (%)	100.0	100.0	100.0	100.0	100.0
Non-marketable state debt (%)[1]	3.4	3.2	3.1	3.2	3.2
Share of savings government bonds in state debt (%)	3.6	2.1	1.7	1.9	1.3
Marketable state debt (CZK bn)	**1,519.3**	**1,694.4**	**1,702.6**	**1,527.7**	**1,552.0**
Market value of marketable state debt (CZK bn)	1,733.9	1,890.4	1,881.2	1,683.8	1,677.8
Short-term marketable state debt (%)	14.0	22.8	25.1	20.2	18.0
Medium-term marketable state debt (%)	60.3	62.2	65.8	65.7	62.6
State treasury bills (%)	0.3	4.2	8.7	0.0	2.8
Other money market instruments (%)	0.0	0.0	0.0	0.2	0.0
Average time to maturity (years)	5.0	4.6	4.5	4.9	4.9
Interest rate re-fixing up to 1 year (%)	27.1	34.7	36.9	33.4	31.1
Average time to re-fixing (years)	4.2	3.9	3.8	4.1	4.2
Variable-rate marketable state debt (%)	13.6	12.3	12.2	10.6	10.4
Modified duration (years)	4.0	3.7	3.6	3.8	3.8
Marketable state debt level net foreign currency exposure (%)	12.2	11.1	10.7	11.8	11.5
Interest expenditure on marketable state debt net foreign currency exposure (%)	12.2	11.1	10.7	11.9	11.5
Foreign-currency marketable state debt (%)	14.2	12.8	12.3	13.6	13.1
Share of € in marketable state debt level net foreign currency exposure (%)	96.5	96.4	96.6	96.8	96.8
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]	**48.6**	**49.0**	**49.9**	**50.2**	**50.3**
Share of assets up to one year on total state debt (%)	2.7	2.5	2.5	2.8	2.8
Average yield (%)	0.7	0.7	0.4	0.5	0.8
Average time to maturity (years)	0.5	0.5	0.4	0.4	0.4
Modified duration (years)	0.4	0.3	0.3	0.3	0.3

[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 31/12/2017

Issue name	Issue no.	ISIN	Maturity date	Nominal value outstanding	Nominal value booked on MoF's asset accounts
ČR, 0.00 %, 18	99	CZ0001004709	22/1/2018	60,000,000,000	0
ČR, 0.85 %, 18	88	CZ0001004246	17/3/2018	50,000,000,000	0
ČR, 4.60 %, 18	41	CZ0001000822	18/8/2018	74,400,000,000	0
ČR, 5.00 %, 19	56	CZ0001002471	11/4/2019	86,109,000,000	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	85,153,200,000	0
ČR, 0.00 %, 20	101	CZ0001005011	10/2/2020	42,513,880,000	7,540,000,000
ČR, 3.75 %, 20	46	CZ0001001317	12/9/2020	75,000,000,000	0
ČR, VAR %, 20	91	CZ0001004113	9/12/2020	33,773,370,000	2,200,000,000
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	75,466,740,000	1,650,000,000
ČR, VAR %, 23	63	CZ0001003123	18/4/2023	81,207,870,000	5,792,130,000
ČR, 0.45 %, 23	97	CZ0001004600	25/10/2023	39,929,100,000	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	64,805,140,000	0
ČR, 1.00 %, 26	95	CZ0001004469	26/6/2026	49,541,680,000	2,633,000,000
ČR, 0.25 %, 27	100	CZ0001005037	10/2/2027	24,733,950,000	1,900,000,000
ČR, VAR %, 27	90	CZ0001004105	19/11/2027	46,742,420,000	1,000,000,000
ČR, 2.50 %, 28	78	CZ0001003859	25/8/2028	81,866,150,000	525,000,000
ČR, 0.95 %, 30	94	CZ0001004477	15/5/2030	46,863,090,000	2,681,000,000
ČR, 2.00 %, 33	103	CZ0001005243	13/10/2033	5,397,980,000	2,000,000,000
ČR, 4.20 %, 36	49	CZ0001001796	4/12/2036	35,343,370,000	1,698,000,000
ČR, 4.85 %, 57	53	CZ0001002059	26/11/2057	11,170,000,000	6,830,000,000
		Total		**1,305,397,720,000**	**48,529,130,000**

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 31/12/2017

ISIN	Currency	Maturity date	Nominal value outstanding	Nominal value booked on MoF's asset accounts
XS0368800073	EUR	11/6/2018	2,000,000,000	0
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		**7,750,000,000**	**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 31/12/2017

Issue no.	Maturity (weeks)	ISIN	Maturity date	Nominal value outstanding	Nominal value booked on MoF's asset accounts
774	19	CZ0001005300	6/4/2018	20,965,000,000	0
775	19	CZ0001005318	20/4/2018	23,049,000,000	0
Total				**44,014,000,000**	**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 31/12/2017

Bond	Issue no.	ISIN	Maturity date	Nominal value outstanding	Nominal value booked on MoF's asset accounts
Coupon savings government bond	81	CZ0001004014	12/6/2018	815,726,434	0
Reinvestment savings government bond	82	CZ0001004006	12/6/2018	6,130,049,463	0
Coupon savings government bond	85	CZ0001004188	12/12/2018	1,355,351,518	0
Reinvestment savings government bond	86	CZ0001004196	12/12/2018	8,053,193,227	0
Inflation-linked savings government bond	70	CZ0001003586	12/6/2019	1,900,012,289	0
Reinvestment savings government bond	92	CZ0001004303	12/6/2019	734,662,650	0
Inflation-linked savings government bond	83	CZ0001003990	12/6/2020	385,167,345	0
Inflation-linked savings government bond	87	CZ0001004204	12/12/2020	2,072,921,557	0
Variable-rate savings government bond	93	CZ0001004311	12/12/2020	30,464,481	0
Total				**21,477,548,964**	**0**

Source: MoF

Table 36a: Medium-Term and Long-Term Government Bonds Issued in 2017

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, 0.00 %, 18	99	6	11/1	13/1	22/1/2018	CZK	8,000,000,000	12,706,600,000
ČR, VAR %, 20	91	7	11/1	13/1	9/12/2020	CZK	4,000,000,000	974,600,000
ČR, 0.95 %, 30	94	8	11/1	13/1	15/5/2030	CZK	4,000,000,000	4,678,850,000
ČR, 0.00 %, 18	99	7	25/1	27/1	22/1/2018	CZK	6,000,000,000	6,494,350,000
ČR, 0.00 %, 19	98	12	25/1	27/1	17/7/2019	CZK	9,000,000,000	1,100,000,000
ČR, 0.95 %, 30	94	9	25/1	27/1	15/5/2030	CZK	4,000,000,000	3,601,550,000
ČR, 0.00 %, 20	101	1	8/2	10/2	10/2/2020	CZK	5,000,000,000	6,031,550,000
ČR, 0.45 %, 23	97	11	8/2	10/2	25/10/2023	CZK	4,000,000,000	3,824,130,000
ČR, 0.25 %, 27	100	1	8/2	10/2	10/2/2027	CZK	5,000,000,000	4,156,040,000
ČR, 0.00 %, 19	98	13	22/2	24/2	17/7/2019	CZK	8,000,000,000	8,069,800,000
ČR, 0.00 %, 22	102	1	22/2	24/2	24/2/2022	CZK	1,000,000,000	0
ČR, 1.00 %, 26	95	8	22/2	24/2	26/6/2026	CZK	5,000,000,000	3,394,390,000
ČR, 0.00 %, 20	101	2	1/3	3/3	10/2/2020	CZK	5,000,000,000	3,275,820,000
ČR, 2.40 %, 25	89	12	1/3	3/3	17/9/2025	CZK	4,000,000,000	3,516,480,000
ČR, 0.00 %, 20	101	3	8/3	10/3	10/2/2020	CZK	5,000,000,000	11,080,000,000
ČR, 2.50 %, 28	78	17	8/3	10/3	25/8/2028	CZK	4,000,000,000	3,221,000,000
ČR, 0.00 %, 20	101	4	15/3	17/3	10/2/2020	CZK	5,000,000,000	5,035,810,000
ČR, 2.40 %, 25	89	13	15/3	17/3	17/9/2025	CZK	4,000,000,000	2,218,300,000
ČR, 0.00 %, 20	101	5	22/3	24/3	10/2/2020	CZK	5,000,000,000	4,894,930,000
ČR, 1.00 %, 26	95	9	22/3	24/3	26/6/2026	CZK	4,000,000,000	4,781,370,000
ČR, 0.00 %, 20	101	6	29/3	31/3	10/2/2020	CZK	4,000,000,000	9,735,770,000
ČR, 0.95 %, 30	94	10	29/3	31/3	15/5/2030	CZK	2,000,000,000	2,041,210,000
ČR, 1.50 %, 19	76	15	12/4	18/4	29/10/2019	CZK	5,000,000,000	2,281,430,000
ČR, 0.45 %, 23	97	12	12/4	18/4	25/10/2023	CZK	2,000,000,000	2,150,550,000
ČR, 2.40 %, 25	89	14	12/4	18/4	17/9/2025	CZK	4,000,000,000	1,920,490,000
ČR, 1.50 %, 19	76	16	26/4	28/4	29/10/2019	CZK	5,000,000,000	2,871,770,000
ČR, 2.50 %, 28	78	18	26/4	28/4	25/8/2028	CZK	4,000,000,000	2,620,560,000
ČR, 4.20 %, 36	49	8	26/4	28/4	4/12/2036	CZK	2,000,000,000	1,341,100,000
ČR, 0.00 %, 22	102	2	17/5	19/5	24/2/2022	CZK	2,000,000,000	845,780,000
ČR, 0.25 %, 27	100	2	17/5	19/5	10/2/2027	CZK	4,000,000,000	3,049,210,000
ČR, 0.00 %, 22	102	3	14/6	16/6	24/2/2022	CZK	2,000,000,000	100,000,000
ČR, 2.50 %, 28	78	19	14/6	16/6	25/8/2028	CZK	3,000,000,000	2,847,360,000
ČR, 4.20 %, 36	49	9	14/6	16/6	4/12/2036	CZK	2,000,000,000	2,772,190,000
ČR, 0.45 %, 23	97	13	2/8	4/8	25/10/2023	CZK	4,000,000,000	4,643,170,000
ČR, 1.00 %, 26	95	10	2/8	4/8	26/6/2026	CZK	4,000,000,000	3,884,320,000
ČR, 0.95 %, 30	94	11	2/8	4/8	15/5/2030	CZK	4,000,000,000	3,413,850,000
ČR, 0.25 %, 27	100	3	13/9	15/9	10/2/2027	CZK	3,000,000,000	2,940,720,000
ČR, 4.20 %, 36	49	10	13/9	15/9	4/12/2036	CZK	1,000,000,000	1,967,780,000
ČR, 0.00 %, 20	101	7	27/9	2/10	10/2/2020	CZK	4,000,000,000	200,000,000
ČR, 1.00 %, 26	95	11	27/9	2/10	26/6/2026	CZK	4,000,000,000	2,819,350,000
ČR, 0.95 %, 30	94	12	27/9	2/10	15/5/2030	CZK	4,000,000,000	3,384,000,000
ČR, 0.45 %, 23	97	14	11/10	13/10	25/10/2023	CZK	4,000,000,000	4,303,500,000
ČR, 0.25 %, 27	100	4	11/10	13/10	10/2/2027	CZK	4,000,000,000	4,652,620,000
ČR, 2.00 %, 33	103	1	11/10	13/10	13/10/2033	CZK	4,000,000,000	2,163,000,000

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, 0.00 %, 20	101	8	18/10	20/10	10/2/2020	CZK	4,000,000,000	0
ČR, 1.00 %, 26	95	12	18/10	20/10	26/6/2026	CZK	4,000,000,000	3,027,100,000
ČR, 0.95 %, 30	94	13	18/10	20/10	15/5/2030	CZK	4,000,000,000	3,049,100,000
ČR, 0.25 %, 27	100	5	25/10	27/10	10/2/2027	CZK	2,000,000,000	2,421,110,000
ČR, 2.00 %, 33	103	2	25/10	27/10	13/10/2033	CZK	2,000,000,000	984,980,000
ČR, 4.85 %, 57	53	2	25/10	27/10	26/11/2057	CZK	500,000,000	150,000,000
ČR, 0.45 %, 23	97	15	8/11	10/11	25/10/2023	CZK	4,000,000,000	4,000,000,000
ČR, 2.50 %, 28	78	20	8/11	10/11	25/8/2028	CZK	4,000,000,000	2,540,100,000
ČR, 2.00 %, 33	103	3	8/11	10/11	13/10/2033	CZK	4,000,000,000	2,250,000,000
ČR, 0.25 %, 27	100	6	15/11	20/11	10/2/2027	CZK	2,000,000,000	2,540,310,000
ČR, 2.50 %, 28	78	21	15/11	20/11	25/8/2028	CZK	4,000,000,000	4,343,550,000
ČR, 0.25 %, 27	100	7	22/11	24/11	10/2/2027	CZK	4,000,000,000	3,673,940,000
ČR, 2.50 %, 28	78	22	22/11	24/11	25/8/2028	CZK	4,000,000,000	6,108,940,000
ČR, 4.20 %, 36	49	11	22/11	24/11	4/12/2036	CZK	2,000,000,000	531,330,000
				Total				**197,625,760,000**

Source: MoF, CNB

Table 36b: Medium-Term and Long-Term Government Bonds Issued in 2017

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, 0.00 %, 18	99	6	0.00%	101.796	-1.722	2.69	150.13	8.71
ČR, VAR %, 20	91	7	VAR%	102.412	-90.071[1]	1.99	24.00	0.37
ČR, 0.95 %, 30	94	8	0.95%	102.525	0.750	1.83	100.00	16.97
ČR, 0.00 %, 18	99	7	0.00%	101.268	-1.270	2.19	108.24	0.00
ČR, 0.00 %, 19	98	12	0.00%	100.910	-0.366	1.00	12.22	0.00
ČR, 0.95 %, 30	94	9	0.95%	102.591	0.745	1.00	90.04	0.00
ČR, 0.00 %, 20	101	1	0.00%	100.243	-0.081	1.29	105.70	14.93
ČR, 0.45 %, 23	97	11	0.45%	100.981	0.302	1.08	85.00	10.60
ČR, 0.25 %, 27	100	1	0.25%	96.806	0.580	1.36	77.00	6.12
ČR, 0.00 %, 19	98	13	0.00%	100.681	-0.283	1.27	100.87	0.00
ČR, 0.00 %, 22	102	1	0.00%	-	-	-	-	-
ČR, 1.00 %, 26	95	8	1.00%	103.185	0.647	1.00	48.40	19.49
ČR, 0.00 %, 20	101	2	0.00%	100.164	-0.056	1.98	56.30	9.21
ČR, 2.40 %, 25	89	12	2.40%	115.291	0.562	1.18	84.55	3.36
ČR, 0.00 %, 20	101	3	0.00%	100.259	-0.088	1.25	221.60	0.00
ČR, 2.50 %, 28	78	17	2.50%	117.121	0.919	1.37	80.53	0.00
ČR, 0.00 %, 20	101	4	0.00%	100.060	-0.021	1.62	97.30	3.41
ČR, 2.40 %, 25	89	13	2.40%	113.562	0.748	1.05	55.46	0.00
ČR, 0.00 %, 20	101	5	0.00%	100.063	-0.022	1.94	81.80	16.09
ČR, 1.00 %, 26	95	9	1.00%	100.233	0.973	1.70	100.00	19.53
ČR, 0.00 %, 20	101	6	0.00%	100.159	-0.055	1.01	236.25	7.14
ČR, 0.95 %, 30	94	10	0.95%	96.015	1.282	1.57	98.00	4.06
ČR, 1.50 %, 19	76	15	1.50%	103.831	-0.014	1.93	41.00	4.63
ČR, 0.45 %, 23	97	12	0.45%	99.607	0.511	1.79	99.10	8.43
ČR, 2.40 %, 25	89	14	2.40%	112.553	0.848	1.06	43.15	4.86
ČR, 1.50 %, 19	76	16	1.50%	103.852	-0.038	3.48	46.89	10.54
ČR, 2.50 %, 28	78	18	2.50%	114.648	1.116	1.89	49.35	16.17
ČR, 4.20 %, 36	49	8	4.20%	145.392	1.507	1.14	61.00	6.06
ČR, 0.00 %, 22	102	2	0.00%	100.010	-0.002	2.63	40.00	2.29
ČR, 0.25 %, 27	100	2	0.25%	94.736	0.815	1.28	61.63	14.61
ČR, 0.00 %, 22	102	3	0.00%	100.010	-0.002	1.00	5.00	0.00
ČR, 2.50 %, 28	78	19	2.50%	117.066	0.891	1.17	87.75	7.17
ČR, 4.20 %, 36	49	9	4.20%	145.858	1.473	1.37	119.00	19.61
ČR, 0.45 %, 23	97	13	0.45%	101.148	0.264	1.57	100.00	16.08
ČR, 1.00 %, 26	95	10	1.00%	102.231	0.740	1.19	89.75	7.36
ČR, 0.95 %, 30	94	11	0.95%	97.810	1.135	1.05	83.25	2.10
ČR, 0.25 %, 27	100	3	0.25%	93.825	0.939	1.70	94.50	3.52
ČR, 4.20 %, 36	49	10	4.20%	144.680	1.505	1.12	189.71	7.07
ČR, 0.00 %, 20	101	7	0.00%	100.250	-0.106	4.25	5.00	0.00
ČR, 1.00 %, 26	95	11	1.00%	99.919	1.010	1.29	64.75	5.73
ČR, 0.95 %, 30	94	12	0.95%	94.239	1.453	1.28	84.60	0.00
ČR, 0.45 %, 23	97	14	0.45%	97.897	0.809	1.81	100.00	7.59
ČR, 0.25 %, 27	100	4	0.25%	90.661	1.321	2.14	100.00	16.32
ČR, 2.00 %, 33	103	1	2.00%	102.483	1.820	1.10	51.80	2.28

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, 0.00 %, 20	101	8	0.00%	-	-	-	-	-
ČR, 1.00 %, 26	95	12	1.00%	97.659	1.287	1.16	74.00	1.68
ČR, 0.95 %, 30	94	13	0.95%	91.433	1.713	1.33	74.53	1.70
ČR, 0.25 %, 27	100	5	0.25%	88.100	1.642	2.25	100.00	21.06
ČR, 2.00 %, 33	103	2	2.00%	97.886	2.158	1.67	45.01	4.24
ČR, 4.85 %, 57	53	2	4.85%	155.570	2.601	1.57	30.00	0.00
ČR, 0.45 %, 23	97	15	0.45%	97.178	0.939	1.81	100.00	0.00
ČR, 2.50 %, 28	78	20	2.50%	108.119	1.671	1.06	63.50	0.00
ČR, 2.00 %, 33	103	3	2.00%	99.156	2.063	1.09	56.25	0.00
ČR, 0.25 %, 27	100	6	0.25%	88.184	1.641	3.99	114.20	12.82
ČR, 2.50 %, 28	78	21	2.50%	106.410	1.838	1.69	100.75	7.84
ČR, 0.25 %, 27	100	7	0.25%	87.733	1.700	2.54	76.25	15.60
ČR, 2.50 %, 28	78	22	2.50%	105.786	1.900	1.47	128.13	24.60
ČR, 4.20 %, 36	49	11	4.20%	127.610	2.379	1.26	25.00	1.57
Average						**1.63**	**82.47**	**7.03**

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

Table 37: State Treasury Bills Issued in 2017

Issue No.	Maturity (Weeks)	Auction Date	Issue Date	Maturity Date	Max. Offered Nominal Amount	Total Placed Nominal Amount	Yield to Maturity (% p.a.)
747	38	5/1	6/1	29/9/2017	5,000,000,000	7,001,000,000	-1.00
748	24	12/1	13/1	30/6/2017	5,000,000,000	7,001,000,000	-1.85
749	36	19/1	20/1	29/9/2017	5,000,000,000	2,001,000,000	-1.60
750	22	26/1	27/1	30/6/2017	5,000,000,000	7,400,000,000	-1.51
751	13	2/2	3/2	5/5/2017	5,000,000,000	201,000,000	-1.20
752	26	9/2	10/2	11/8/2017	5,000,000,000	2,000,000,000	-1.00
753	13	16/2	17/2	19/5/2017	5,000,000,000	6,400,000,000	-0.80
754	26	23/2	24/2	25/8/2017	5,000,000,000	5,200,000,000	-1.04
755	29	9/3	10/3	29/9/2017	5,000,000,000	5,448,000,000	-0.87
756	28	16/3	17/3	29/9/2017	5,000,000,000	12,000,000,000	-0.55
757	27	23/3	24/3	29/9/2017	5,000,000,000	15,692,000,000	-0.56
758	17	6/4	7/4	4/8/2017	5,000,000,000	30,671,000,000	-1.25
759	16	13/4	18/4	11/8/2017	5,000,000,000	16,300,000,000	-0.50
760	17	20/4	21/4	18/8/2017	5,000,000,000	20,390,000,000	-0.35
761	17	27/4	28/4	25/8/2017	5,000,000,000	13,275,000,000	-0.35
762	17	4/5	5/5	1/9/2017	5,000,000,000	17,920,000,000	-0.35
763	5	25/5	26/5	30/6/2017	5,000,000,000	5,800,000,000	-0.30
764	4	1/6	2/6	30/6/2017	5,000,000,000	1,196,000,000	-0.25
765	8	13/7	14/7	8/9/2017	5,000,000,000	26,055,000,000	-0.40
766	8	27/7	28/7	22/9/2017	5,000,000,000	31,366,000,000	-0.37
767	5	10/8	11/8	15/9/2017	5,000,000,000	43,350,000,000	-0.25
768	4	24/8	25/8	22/9/2017	5,000,000,000	34,824,000,000	-0.25
769	4	29/9	2/10	3/11/2017	5,000,000,000	11,131,000,000	-0.20
770	8	5/10	6/10	1/12/2017	5,000,000,000	23,106,000,000	-0.20
771	8	26/10	27/10	22/12/2017	5,000,000,000	6,305,000,000	-0.10
772	5	2/11	3/11	8/12/2017	5,000,000,000	4,756,000,000	-0.20
773	5	16/11	20/11	29/12/2017	5,000,000,000	9,100,000,000	-0.05
774	19	23/11	24/11	6/4/2018	5,000,000,000	20,965,000,000	-0.30
775	19	7/12	8/12	20/4/2018	5,000,000,000	23,049,000,000	-0.80
			Total			**409,903,000,000**	**-0.51**[1]

[1] *Average weighted yield to maturity of state treasury bills issued in 2017.*
Source: MoF, CNB

Table 38: Savings Government Bonds Issued in 2017

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	34,963,331
Reinvestment savings government bond[1]	82	12/6	12/06/2018	5	206,609,153
Inflation-linked savings government bond[1]	83	12/6	12/06/2020	7	6,883,682
Inflation-linked savings government bond[1]	87	12/6	12/12/2020	7	37,261,905
Reinvestment savings government bond[1]	92	12/6	12/06/2019	5	3,117,950
Variable-rate savings government bond[1]	93	12/6	12/12/2020	6.5	40,983
Inflation-linked savings government bond[1]	70	12/12	12/06/2019	7	18,323,849
Inflation-linked savings government bond[1]	83	12/12	12/6/2020	7.0	4,002,811
Reinvestment savings government bond[1]	86	12/12	12/12/2018	5.0	265,951,172
Inflation-linked savings government bond[1]	87	12/12	12/12/2020	7.0	21,711,873
Variable-rate savings government bond[1]	93	12/12	12/12/2020	6.5	49,257
		Total			**598,915,966**

[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 2017

Issue name	ISIN	Collateral amount	Financial resources received	Financial resources paid[1]
ČR, 4.00 %, 17	CZ0001001903	1,270,000,000	1,322,780,666.67	1,322,735,472.95
ČR, VAR %, 17	CZ0001003438	67,000,000	67,945,941.94	67,943,002.01
ČR, 0.00 %, 18	CZ0001004709	2,560,000,000	2,593,536,000.00	2,593,490,583.56
ČR, 0.85 %, 18	CZ0001004246	1,910,000,000	1,964,939,439.72	1,964,885,655.70
ČR, 5.00 %, 19	CZ0001002471	2,600,000,000	2,946,138,888.89	2,945,830,129.90
ČR, 0.00 %, 19	CZ0001004717	2,390,000,000	2,414,690,000.00	2,414,650,383.32
ČR, 1.50 %, 19	CZ0001003834	2,205,000,000	2,337,472,708.34	2,337,389,831.31
ČR, 0.00 %, 20	CZ0001005011	3,100,000,000	3,083,662,700.00	3,083,593,622.22
ČR, VAR %, 20	CZ0001004113	2,309,000,000	2,360,391,166.40	2,360,205,113.18
ČR, 3.85 %, 21	CZ0001002851	7,476,000,000	8,731,724,004.14	8,731,464,405.00
ČR, 4.70 %, 22	CZ0001001945	5,761,000,000	7,260,302,811.67	7,259,971,044.15
ČR, VAR %, 23	CZ0001003123	5,953,000,000	6,439,097,441.67	6,438,519,301.01
ČR, 0.45 %, 23	CZ0001004600	3,842,000,000	3,891,582,057.53	3,891,433,072.82
ČR, 5.70 %, 24	CZ0001002547	3,556,000,000	5,007,294,666.66	5,007,023,302.85
ČR, 2.40 %, 25	CZ0001004253	800,000,000	936,641,123.29	936,623,780.09
ČR, 1.00 %, 26	CZ0001004469	4,763,000,000	4,959,744,041.09	4,959,530,537.75
ČR, 0.25 %, 27	CZ0001005037	3,030,000,000	2,782,820,513.71	2,782,738,774.89
ČR, VAR %, 27	CZ0001004105	5,460,000,000	5,700,394,597.78	5,700,220,475.91
ČR, 2.50 %, 28	CZ0001003859	10,000,000	12,041,666.67	12,040,663.20
ČR, 0.95 %, 30	CZ0001004477	10,694,000,000	10,598,732,991.76	10,598,372,887.79
ČR, 4.20 %, 36	CZ0001001796	1,003,000,000	1,571,909,850.00	1,571,815,424.59
ČR, 4.85 %, 57	CZ0001002059	1,030,000,000	1,717,254,097.22	1,717,116,936.12
Total		**71,789,000,000**	**78,701,097,375.15**	**78,697,594,400.32**

[1] Incl. financial resources from lending facilities realized in 2017, which has not been paid during this period.
Note: The average interest rate achieved under lending facilities during 2017 amounted to -0.06% p.a
Source: MoF

Table 39b: Realized Lending Facilities of Government Bonds in the Form of Collateralized Loans of Securities in 2017

Issue name	ISIN	Nominal value	Revenue[1]
ČR, 0.00 %, 20	CZ0001005011	8,424,000,000	577,458.84
ČR, VAR %, 20	CZ0001004113	2,690,000,000	506,831.57
ČR, 3.85 %, 21	CZ0001002851	3,674,000,000	764,066.45
ČR, 0.00 %, 22	CZ0001005029	3,337,670,000	973,002.35
ČR, 4.70 %, 22	CZ0001001945	7,196,000,000	2,160,170.35
ČR, VAR %, 23	CZ0001003123	12,469,650,000	2,400,726.46
ČR, 0.45 %, 23	CZ0001004600	2,768,000,000	641,775.32
ČR, 5.70 %, 24	CZ0001002547	3,774,000,000	839,695.64
ČR, 2.40 %, 25	CZ0001004253	800,000,000	137,130.74
ČR, 1.00 %, 26	CZ0001004469	4,100,000,000	237,597.23
ČR, 0.25 %, 27	CZ0001005037	8,909,000,000	1,283,040.19
ČR, VAR %, 27	CZ0001004105	5,364,000,000	1,111,183.03
ČR, 2.50 %, 28	CZ0001003859	6,120,000,000	1,314,826.17
ČR, 0.95 %, 30	CZ0001004477	5,026,000,000	904,788.38
ČR, 2.00 %, 33	CZ0001005243	223,000,000	77,093.10
ČR, 4.20 %, 36	CZ0001001796	1,330,000,000	214,341.69
ČR, 4.85 %, 57	CZ0001002059	16,350,000,000	7,702,698.04
Total		**92,555,320,000**	**21,846,425.55**

[1] Incl. financial resources from lending facilities realized in 2017, which has not been terminated during this period.
Source: MoF

Table 40: Realized Exchange Operations of Government Bonds in 2017

Settlement date	Sale			Purchase		
	Issue name	Nominal value	Average price	Issue name	Nominal value	Average price
18/1/2017	ČR, 0.95 %, 30	100,000,000	102.790	ČR, 4.00 %, 17	100,000,000	100.911
22/2/2017	ČR, VAR %, 27	200,000,000	103.000	ČR, 4.00 %, 17	200,000,000	100.537
23/2/2017	ČR, VAR %, 27	370,000,000	103.000	ČR, 4.00 %, 17	370,000,000	100.526
2/3/2017	ČR, VAR %, 27	300,000,000	103.130	ČR, 4.00 %, 17	300,000,000	100.427
6/3/2017	ČR, VAR %, 27	600,000,000	103.150	ČR, 4.00 %, 17	600,000,000	100.384
8/6/2017	ČR, 1.00 %, 26	200,000,000	104.410	ČR, VAR %, 17	400,000,000	100.140
14/6/2017	ČR, VAR %, 27	200,000,000	103.720	ČR, VAR %, 17	400,000,000	100.120
15/6/2017	ČR, VAR %, 27	200,000,000	103.310	ČR, 4.60 %, 18	200,000,000	105.345
13/7/2017	ČR, 2.40 %, 25	200,000,000	112.600	ČR, 5.00 %, 19	200,000,000	108.630
13/7/2017	ČR, 1.00 %, 26	200,000,000	100.450	ČR, 5.00 %, 19	200,000,000	108.630
13/7/2017	ČR, 2.40 %, 25	200,000,000	112.600	ČR, 4.60 %, 18	200,000,000	104.990
13/7/2017	ČR, 1.00 %, 26	200,000,000	100.450	ČR, 4.60 %, 18	200,000,000	104.990
21/7/2017	ČR, 0.95 %, 30	50,000,000	97.820	ČR, 5.00 %, 19	25,000,000	108.520
24/7/2017	ČR, 0.95 %, 30	100,000,000	97.820	ČR, 5.00 %, 19	50,000,000	108.480
31/10/2017	ČR, 4.20 %, 36	100,000,000	130.75	ČR, 5.00 %, 19	50,000,000	106.852
31/10/2017	ČR, 2.50 %, 28	100,000,000	107.300	ČR, 5.00 %, 19	50,000,000	106.852
2/11/2017	ČR, 4.70 %, 22	150,000,000	119.115	ČR, 5.00 %, 19	75,000,000	106.825
2/11/2017	ČR, 4.20 %, 36	50,000,000	132.150	ČR, 5.00 %, 19	25,000,000	106.825
7/11/2017	ČR, 2.50 %, 28	200,000,000	108.610	ČR, 5.00 %, 19	100,000,000	106.383
4/12/2017	ČR, 4.20 %, 36	100,000,000	129.670	ČR, 5.00 %, 19	50,000,000	106.049
5/12/2017	ČR, 4.20 %, 36	52,000,000	131.132	ČR, 5.00 %, 19	26,000,000	106.037
Total		**3,872,000,000**			**3,821,000,000**	

Source: MoF

Table 41: Tap Sales of Government Bonds in 2017

Issue name	Issue no.	Settlement date	Maturity date	Original maturity (years)	Average price	Nominal value
ČR, 0.85 %, 18	88	6/1/2017	17/3/2018	4.0	102.270	200,000,000
ČR, 0.85 %, 18	88	20/2/2017	17/3/2018	4.0	101.610	500,000,000
ČR, 0.85 %, 18	88	21/2/2017	17/3/2018	4.0	101.700	200,000,000
ČR, 0.85 %, 18	88	28/2/2017	17/3/2018	4.0	101.800	500,000,000
ČR, 1.50 %, 19	76	1/3/2017	29/10/2019	6.8	104.630	500,000,000
ČR, 1.50 %, 19	76	7/3/2017	29/10/2019	6.8	104.860	1,000,000,000
ČR, 0.85 %, 18	88	22/3/2017	17/3/2018	4.0	101.520	150,000,000
ČR, 0.85 %, 18	88	27/3/2017	17/3/2018	4.0	101.520	100,000,000
ČR, 0.85 %, 18	88	30/3/2017	17/3/2018	4.0	101.650	213,780,000
ČR, 1.50 %, 19	76	30/3/2017	29/10/2019	6.8	104.140	500,000,000
ČR, 1.50 %, 19	76	4/4/2017	29/10/2019	6.8	104.210	568,630,000
ČR, 1.50 %, 19	76	5/4/2017	29/10/2019	6.8	104.260	500,000,000
ČR, 0.00 %, 20	101	6/4/2017	10/2/2020	3.0	100.300	200,000,000
ČR, 0.00 %, 20	101	7/4/2017	10/2/2020	3.0	100.300	500,000,000
ČR, 0.00 %, 20	101	19/4/2017	10/2/2020	3.0	100.020	200,000,000
ČR, 0.00 %, 20	101	4/5/2017	10/2/2020	3.0	100.020	200,000,000
ČR, 0.00 %, 20	101	5/5/2017	10/2/2020	3.0	100.050	500,000,000
ČR, 4.70 %, 22	52	30/5/2017	12/9/2022	15.2	125.800	200,000,000
ČR, 0.00 %, 22	102	31/5/2017	24/2/2022	5.0	100.030	100,000,000
ČR, 0.00 %, 22	102	5/6/2017	24/2/2022	5.0	100.050	200,000,000
ČR, 0.00 %, 20	101	9/6/2017	10/2/2020	3.0	100.540	60,000,000
ČR, 0.00 %, 20	101	20/7/2017	10/2/2020	3.0	100.500	200,000,000
ČR, 3.85 %, 21	61	24/7/2017	29/9/2021	10.8	116.150	200,000,000
ČR, 0.25 %, 27	100	26/7/2017	10/2/2027	10.0	94.900	200,000,000
ČR, 3.85 %, 21	61	9/8/2017	29/9/2021	10.8	115.950	200,000,000
ČR, 0.00 %, 20	101	9/8/2017	10/2/2020	3.0	100.300	200,000,000
ČR, 3.85 %, 21	61	10/8/2017	29/9/2021	10.8	115.950	100,000,000
ČR, 0.00 %, 20	101	10/8/2017	10/2/2020	3.0	100.300	200,000,000
ČR, 3.85 %, 21	61	11/8/2017	29/9/2021	10.8	116.000	200,000,000
ČR, 3.85 %, 21	61	27/9/2017	29/9/2021	10.8	115.450	200,000,000
ČR, 2.40 %, 25	89	7/12/2017	17/9/2025	11.5	109.650	450,000,000
ČR, 0.25 %, 27	100	7/12/2017	10/2/2027	10.0	90.500	600,000,000
ČR, 2.50 %, 28	78	7/12/2017	25/8/2028	15.5	108.730	730,000,000
ČR, 0.25 %, 27	100	8/12/2017	10/2/2027	10.0	90.510	500,000,000
ČR, 2.50 %, 28	78	8/12/2017	25/8/2028	15.5	108.800	565,000,000
			Total			**11,637,410,000**

Source: MoF

Table 42: Detailed Overview of Budgetary Transfers from the State Debt Chapter Realized in 2017

Chapter number	Chapter	Fund allocation	Amount (CZK)
314	Ministry of Interior	Increase in scale of basic salary rates by 10% for members of security forces of the Ministry of Interior effective as from 1/7/2017	600,398,074
336	Ministry of Justice	Increase in scale of basic salary rates by 10% for members of security forces of the Prison service effective as from 1/7/2017	147,574,000
312	Ministry of Finance	Increase in scale of basic salary rates by 10% for members of security forces of the Custom administration effective as from 1/7/2017	110,113,488
305	Security Information Service	Enforcement of operational expenditure	28,750,000
313	Ministry of Labour and Social Affairs	Additional financing of social service	462,305,856
301	Office of the President of the Republic	Merging of tariff scales effective as from 1/7/2017	3,264,768
306	Ministry of Foreign Affairs	Merging of tariff scales effective as from 1/7/2017	1,454,275
313	Ministry of Labour and Social Affairs	Merging of tariff scales effective as from 1/7/2017	14,711,411
314	Ministry of Interior	Merging of tariff scales effective as from 1/7/2017	37,315,371
315	Ministry of Environment	Merging of tariff scales effective as from 1/7/2017	21,688,872
317	Ministry of Regional Development	Merging of tariff scales effective as from 1/7/2017	1,721,372
322	Ministry of Industry and Trade	Merging of tariff scales effective as from 1/7/2017	5,436,355
327	Ministry of Transport	Merging of tariff scales effective as from 1/7/2017	1,707,970
329	Ministry of Agriculture	Merging of tariff scales effective as from 1/7/2017	13,060,978
333	Ministry of Education, Youth and Sports	Merging of tariff scales effective as from 1/7/2017	300,000,000
334	Ministry of Culture	Merging of tariff scales effective as from 1/7/2017	129,262,450
335	Ministry of Health	Merging of tariff scales effective as from 1/7/2017	4,604,606
336	Ministry of Justice	Merging of tariff scales effective as from 1/7/2017	7,243,304
304	The Office of the Government of the Czech Republic	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	6,756,936
306	Ministry of Foreign Affairs	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	17,445,975
307	Ministry of Defence	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	257,426,795
308	National Security Authority	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	2,623,178
312	Ministry of Finance	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	217,665,042
313	Ministry of Labour and Social Affairs	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	141,975,412
314	Ministry of Interior	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	561,817,217
315	Ministry of Environment	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	24,135,755
317	Ministry of Regional Development	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	5,884,667
321	Grant Agency of the Czech Republic	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	432,672
322	Ministry of Industry and Trade	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	17,552,179
327	Ministry of Transport	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	8,942,039
328	Czech Telecommunication Office	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	5,122,807
329	Ministry of Agriculture	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	49,752,166

Chapter number	Chapter	Fund allocation	Amount (CZK)
333	Ministry of Education, Youth and Sports	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	1,991,467,626
334	Ministry of Culture	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	44,160,135
335	Ministry of Health	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	27,914,123
336	Ministry of Justice	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	161,990,050
343	The Office for Personal Data Protection	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	910,890
344	Industrial Property Office	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	1,869,101
345	Czech Statistical Office	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	10,953,308
346	Czech Office for Surveying, Mapping and Cadastre	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	34,245,944
348	The State Mining Administration	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	1,865,811
349	Energy Regulatory Office	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	3,023,965
353	Office for the Protection of Competition	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	2,375,383
355	The Institute for the Study of Totalitarian Regimes	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	1,869,793
361	Czech Academy of Sciences	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	867,951
372	Council for Radio and Television Broadcasting	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	370,129
374	Administration of State Material Reserves	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	2,931,184
375	State Office for Nuclear Safety	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	2,598,000
376	The General Inspection of Security Forces	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	3,477,619
377	Technology Agency of the Czech Republic	Increase in salaries in the state´s organizational units and contributory organizations effective as from 1/11/2017	682,573
301	Office of the President of the Republic	Increase in salaries in separate chapters effective as from 1/11/2017	2,887,127
302	The Chamber of Deputies of the Parliament of the Czech Republic	Increase in salaries in separate chapters effective as from 1/11/2017	3,683,163
303	Senate of the Parliament of the Czech Republic	Increase in salaries in separate chapters effective as from 1/11/2017	2,021,171
309	Office of the Public Defender of Rights	Increase in salaries in separate chapters effective as from 1/11/2017	1,181,041
381	Supreme Audit Office	Increase in salaries in separate chapters effective as from 1/11/2017	5,329,456
305	Security Information Service	Enforcement of expenditure, which are part of the classiefied section of the budget	13,402,000
307	Ministry of Defence	Enforcement of expenditure, which are part of the classiefied section of the budget	15,172,940
314	Ministry of Interior	Enforcement of expenditure, which are part of the classiefied section of the budget	14,422,000
327	Ministry of Transport	Covering of the budget deficit of The State Fund for Transport Infrastructure	200,000,000
		Total	**5,759,818,473**

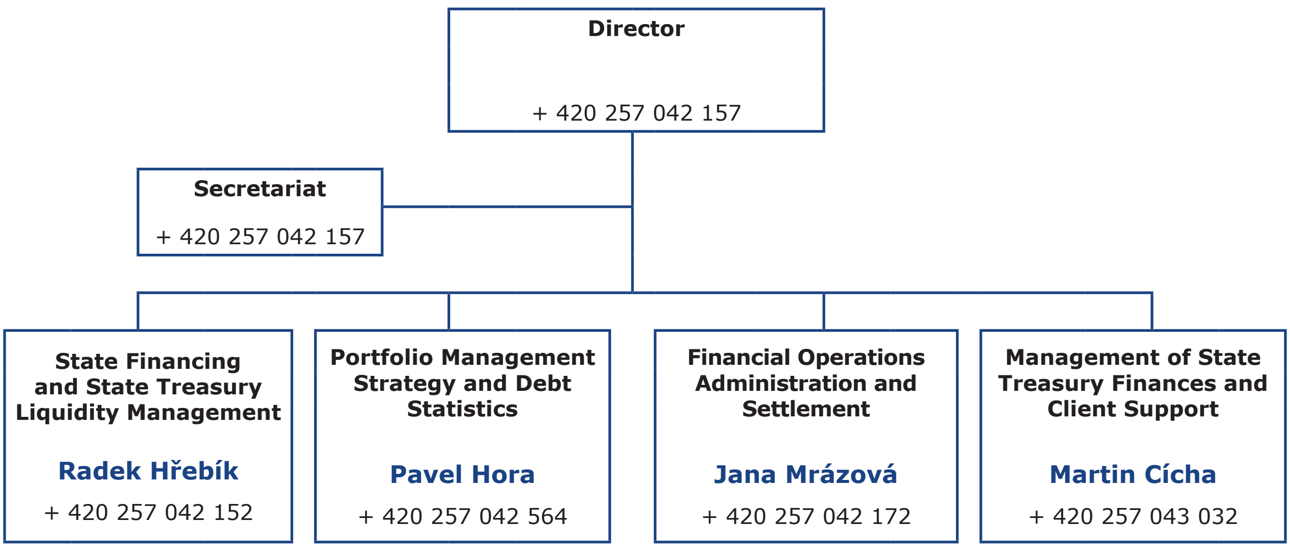
Source: MoF

Key Information 2017

- State debt at the level of CZK 1,624.7 bn
- Year-on-year state debt to GDP decrease by 1.6 p.p. to 32.2%
- Share of the state debt, which is not connected to any net interest expenditure: 15.2%
- Financing needs: CZK 241.7 bn
- Gross borrowing requirement: CZK 257.7 bn
- Gross issue of T-Bonds on domestic market: CZK 213.1 bn
- Gross issue of T-Bonds on foreign markets: CZK 0.0
- Gross issue of T-Bills incl. roll-over: CZK 409.9 bn
- Gross issue of savings government bonds: CZK 0.6 bn
- CZK-denominated T-Bonds and savings government bonds redemptions: CZK 226.2 bn
- Year-on-year decrease in net cash interest expenditure on state debt service: CZK 1.0 bn
- Average time to maturity of CZK-denominated T-Bonds sold on primary and secondary market: 7.3 years
- Average yield to maturity of CZK-denominated T-Bonds sold on primary and secondary market: 0.50% p.a.
- Average weighted yield to maturity of T-Bills sold on primary market: -0.51% p.a.
- Gross issue of T-Bonds and T-Bills incl. roll-over for zero or negative yield: CZK 493.2 bn
- Net revenue of state budget from operations within state tresaury liquidity management: CZK 336.7 mil.
- Net revenue of state budget from issuance with negative yield: CZK 1,204.7 mil.
- Average time to maturity of state debt: 5.0 years
- Short-term state debt: 18.5%
- Average time to re-fixing of state debt: 4.1 years
- Interest re-fixing of the debt portfolio within 1 year: 33.5%

Contacts

Debt and Financial Assets Management Department



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www.mfcr.cz/statedebt

Debt and Financial Assets Management Department
Ministry of Finance
Letenská 15, 118 10 Praha 1 – Malá Strana
Czech Republic
E-mail: pd@mfcr.cz, Reuters <MFCR>