

Debt and Financial Assets Management Department

..........

16th December 2013

The Czech Republic Funding and Debt Management Strategy

2014

Ministry of Finance

The Czech Republic Funding and Debt Management Strategy 2014

The Czech Republic Funding and Debt Management Strategy 2014

16th December 2013

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

ISSN 2336-226X (Print) ISSN 2336-2278 (On-line)

ISBN 978-80-85045-55-0 (Print) ISBN 978-80-85045-56-7 (On-line)

Issued annualy, free distribution

Electronic archive: www.mfcr.cz/statedebt

The Minister of finance decided on 12 December 2013 about the structure and method of financing the gross borrowing requirement of the central government in the budget year 2014 and in the medium term until 2016, and approved the basic absolute and relative limits for issuance activity on the domestic and foreign financial markets and for active management of the net debt portfolio and the liquidity of treasury single accounts in individual currencies (Ref. No. MF-121022/2013/20).

This defined operational framework in the form of the submitted Funding and Debt Management Strategy for 2014 (hereinafter the "Strategy") enables the Ministry of Finance (hereinafter the "Ministry" or "MoF") to be flexible on the domestic and foreign financial markets while actively obtaining resources for covering the financing needs of the central government and ensuring the daily solvent position of the state, i.e. creation of basic conditions for the smooth implementation of the budgetary and fiscal policy of the Government of the Czech Republic, which supports economic growth.

The Strategy is based on and conforms with the draft Act on the State Budget of the Czech Republic for 2014, including the Medium-term Outlook of the State Budget of the Czech Republic for 2015 to 2016, the Fiscal Outlook of the Czech Republic from November 2013 and the Macroeconomic Forecast for the Czech Republic from October 2013. The Strategy was updated in its partial parameters based on newly available data.

The Strategy is submitted via the Debt and Financial Assets Management Department (hereinafter the "Department"), which is responsible for operations related to the funding of the state, active management of the net debt portfolio, management of the liquidity of the treasury single accounts, and short-term and long-term investment of available cash resources originating from the state financial assets and the treasury single accounts.

Table of Contents

1 -	Fiscal Outlook and Macroeconomic Framework	12
	Economic Development	12
	General Government Sector Finances	14
2	Einansial Markets and State Dobt Service Costs	17
Z -	State Debt Service Costs	17
	State Debt Service Costs	1/
	Creek Depublic's coversign gradit rating	22
	czech Republic s sovereigh credit rating	23
3 -	Borrowing Requirement and Development of State Debt up to 2016	26
	Financing Needs and Sources of the Central Government	26
	Financing of the Gross Borrowing Requirement	27
	Net Borrowing Requirement and Change in State Debt	28
	Net Debt Portfolio	33
4.	Funding Program and Issuance Activity in 2014	36
-	Implementation of the Funding Program in 2013	36
	Funding Program and Issuance Activity in 2014	40
	running rrogram and issuance Activity in 2014	-10
5 -	State Treasury Liquidity Management	47
	Institutional and Legal Framework for the State Treasury Liquidity Management	47
	Cash Reserve in the State Treasury Refinancing System	47
	Development of the State Treasury and the State Budget in 2013 and 2014	50
6 -	Risk Management and Portfolio Strategy	55
	Refinancing risk	55
	Interest Rate Risk	63
	Benchmark Portfolio	67
	Cost-at-Risk of State Debt	68
	Efficient Frontier	77
	Currency Risk	79
7	Drimony and Secondary Market for Covernment Pende	01
/ -	Primary Deplers and Evaluation Methodology	01
	Secondary Market and MTS Czech Popublic	07
	Ministry's operations on the secondary market	96
	Ministry's operations on the secondary market	00
An	nex	88
	Alternative Approaches to the Central Government's Gross Borrowing Requirement .	88
	Calendar	90
	Highlights of the Strategy for 2014	91
	Contacts	91
	Debt and Financial Assets Management Department	91

List of Tables

Table 1: Main Macroeconomic Indicators of the Czech Republic	. 12
Table 2: General Government Finances of the Czech Republic in 2008 to 2016	. 16
Table 3: Budgeted and Actual Net Expenditure for State Debt Service	. 18
Table 4: Difference Between Cash Discounts and Premiums and Cash and Accrued Interest of CZGB	. 22
Table 5: Czech Republic's Sovereign Credit Rating in 2013	. 25
Table 6: Funding Needs and Sources	. 26
Table 7: Financing of the Gross Borrowing Requirement	. 28
Table 8: Net Borrowing Requirement of the Central Government	. 29
Table 9: Net Borrowing Requirement of the Central Government and Change in State Debt	. 32
Table 10: Balance and Structure of the Net Debt Portfolio	. 33
Table 11: Funding Program for 2013	. 36
Table 12: Early Redemption on Savings Government Bonds from 2011 to 2013	. 39
Table 13: Funding Program in 2014	.40
Table 14: Indicative Auction Schedule of Medium-term and Long-term Government Bonds in 2014	.41
Table 15: Framework Issuance Plan for CZGB for 2014	.42
Table 16: Expected Balance of CZGB Acquired by the Ministry as at 31 Dec 2013	.43
Table 17: Indicative Auction Schedule for State Treasury Bills in 2014.	.45
Table 18: Issuance Plan for State Treasury Bills in 2014	.45
Table 19: Alternative Issuance Plan for State Treasury Bills in 2014	.46
Table 20: Comparison of Balances on State Treasury Accounts	. 51
Table 21: Comparison of the Average Daily Balance on State Treasury Acounts	. 51
Table 22: Structure of Short-Term State Debt	. 56
Table 23: Average Time to Maturity of Individual Components of the State Debt	. 60
Table 24: Maturity Profile of CZK-Denominated CZGB by Time to Maturity and Coupon Rate.	. 65
Table 25: Risk Parameters and Yield of Investment Portfolios	.67
Table 26: Net Interest Costs and Costs at Risk	. 69
Table 27: Accrued Interest Costs of the Newly Issued State Debt	.71
Table 28: Development of Cumulative Gross Interest Costs	.75
Table 29: Development of cumulative net interest costs in 2014	.75
Table 30: Development of Net Interest Costs in Case of Sudden Interest Hikes	. 76
Table 31: Development of Cumulative Gross Interest Costs in 2015	.77
Table 32: Development of Cumulative Gross Interest Costs in 2016	.77
Table 33: Primary Dealers in Czech Government Bonds in 2013 and 2014.	.81
Table 34: Criteria for Evaluation of Primary Dealers valid as of 1 January 2013.	. 82
Table 35: Benchmark Issues of Government Bonds	.83
Table 37: Maturity Baskets Based on the Minimum Traded Volume on the MTS Czech Republic	.83
Table 38: Nominal Value of Ministry's Operations on the Secondary Market in 2013.	. 86
Table 39: Alternative methods of determining the gross borrowing requirement	. 89
Table 40: Roll-over and re-financing operations within the year	. 89

List of Figure

Figure 1: GDP and Unemployment in Selected EU countries in 2013	13
Figure 2: Loans to Deposits Ration by Households and Non-financial Enterprises in CZ vs. Eurozone	13
Figure 3: General Government Balance	14
Figure 5: General Government Debt and Balance in selected FU countries	15
Figure 6: Development of General Government Debt	16
Figure 7: Development of State Debt Service Costs	17
Figure 8: Development of Net Expenditure on State Debt Service	17
Figure 9: Development of State Debt and its Share in State Budget Revenue	18
Figure 10: Expected Revenue and Expenditure on State Debt Service in 2013	19
Figure 11: Sources of Savings in Net Experiation of State Debt Service in 2015	20
Figure 13: Shares of Accrued Interest Components of State Debt in Total Accrued Interest in 2013	21
Figure 14: Development of the Share of Accrued and Cash Interest	22
Figure 15: Development of Accrued and Cash Interest of Other State Debt Components	22
Figure 16: Development of Czech Government Bond Yields	23
Figure 17: Development of State Treasury Bill Auction Yields	23
Figure 10: Risk Premiums on Credit Default Swans – Selected Eurozone Countries	24
Figure 20: Premiums on Credit Default Swaps - Central Europe	24
Figure 21: Rating of the Eurozone and Czech Republic by Standard & Poor's	25
Figure 22: Rating of the Eurozone and Czech Republic by Fitch Ratings	25
Figure 23: Rating of the Eurozone and Czech Republic by Moody's	25
Figure 24: Financing Needs of the Central Government	27
Figure 25: Net Issuance of CZGB on the Domestic Market	29
Figure 27: Net Issuance of Savings Government Bonds	
Figure 28: Net Issuance of State Treasury Bills	31
Figure 29: Net Change in the Balance of loans and credits	31
Figure 30: Building and Tapping of the Cash Reserve	32
Figure 31: Structure of the Debt Portfolio	34
Figure 32: Interest Structure of CZGB Sold in Auctions	3/
Figure 33: Average Yield and Time to Maturity of CZGB in primary auctions	38
Figure 35: Primary Auctions of CZGB in 2013	
Figure 36: State Treasury Bills Outstanding in 2013	39
Figure 37: Auctions of State Treasury Bills in 2013	40
Figure 38: Issuance Structure and Average Time to Maturity of Savings Government issues and portfolio	44
Figure 39: Issuance and Redemption on State Treasury Bills, Inc. Roll-over, In 2013 and 2014	46
Figure 40. Average Monthly Balances of State Treasury Chefits in 2015	48
Figure 42: Cash Reserve and Other Liquidity in 2013	49
Figure 43: Ratio of the Cash Reserve to Total State Treasury Resources in 2013	50
Figure 44: Development of the State Budget and State Treasury Balance in 2013	50
Figure 45: State Treasury Balance and Cash Reserve	51
Figure 46: Katio of the Cash Reserve to Liabilities Due within One Year	52
Figure 47: Ratio of the fold Cash Reserve to Liabilities Due by End of the fed	52
Figure 49: Daily Prediction of the State Treasury and State Budget Balance for 2014	53
Figure 50: Daily Prediction of the Cash Reserve for 2014	54
Figure 51: Structure of Short-Term State Debt and State Financial Assets Available within 1 Year	56
Figure 52: Gross State Debt and State Debt Due within 1 Year	
Figure 53: Short-term state debt in EU	5/
Figure 54: State Debt by Maturity of State Debt and Declared Goals	50 59
Figure 56: Average Time to Maturity of CZGB and Savings Government Bonds on the Domestic Market	
Figure 57: Structure of Government Bonds by Time to Maturity	60
Figure 58: Maturity Profile of State Debt and Financial Asset as at the End of 2013	61
Figure 59: Structure of the State Debt by Instrument at the End of 2013 and 2014	62
Figure 60: Structure of CZK-Denominated CZGB by Holder Type	62
FIGURE 61: Structure of Non-Resident Holders of Domestic CZCB	63 62
Figure 63: Interest Re-fixing of State Debt and State Financial Assets	64
Figure 64: Interest Re-fixing of State Debt within 1 Year.	65
Figure 65: Structure of Interest Re-fixing of State Debt within 1 Year	65
Figure 66: Maturity Profile of CZK-Denominated CZGB by Time to Maturity and Coupon Rate	66
Figure 67: Redemption Profile of CZK-Denominated Fixed-Rate CZGB by Time to Maturity at the Moment of Sale a	ind
Figure 68: Time to Maturity of Medium-Term and Long-Term Government Bonds Sold in Auctions in 2013 and	66
	~ ¬
Figure 69: Yields of CZK-Denominated Medium-Term and Long-Term Government Bonds Achieved in Auctions in 2	67 013
Figure 69: Yields of CZK-Denominated Medium-Term and Long-Term Government Bonds Achieved in Auctions in 2 and Yields of Benchmark Bonds Figure 70: Net interest Costs and Costs at Risk	67 013 68 69

Figure 71: Simulations and Actual Development of Interest Rates in 2013	70
Figure 72: Net Accrued and Cash Interest Costs of Newly Issued Debt	72
Figure 73: Development of Rates: 6M PRIBOR, 6M EURIBOR and 2W Repo Rate	73
Figure 74: Yield Curve of CZK-Denominated Government Bonds	73
Figure 75: Yield to Maturity of CZK-denominated Government Bonds and Swap Rate	73
Figure 76: Simulation of Gross Interest Costs of State Debt over the course of 2014	75
Figure 77: Simulation of CZK-Denominated Interest Rates in 2014	75
Figure 78: Simulation of Gross Interest Costs of State Debt during 2015	77
Figure 79: Simulation of Gross Interest Costs of State Debt during 2016	77
Figure 80: Efficient Frontier and Alternative Debt Portfolios	79
Figure 81: Net Foreign-Currency Exposure and Foreign-Currency State Debt	80
Figure 82: Average Daily Compliance Ratio on MTS Czech Republic	
Figure 83: Traded Volumes on the MTS Czech Republic	85
Figure 84: Bid-offer Spreads of Selected Bonds Quoted on the MTS Czech Republic	

Summary

In the medium-term outlook the funding and debt management strategy focuses on the segments of the government financial balance which fall within the direct responsibility of the Minister of Finance and the structure of which has a direct impact on the revenue and expenditure of the state budget as a result of changes in economic and financial risk factors, in particular interest rates, foreign exchange rates, and inflation.

The main financial item of the general government balance is state debt, which represents more than 95% of the total gross indebtedness of the general government and will reach approx. 43.6% of GDP in 2013; the outlook for 2016 is 48.3% of GDP. Total general government debt is currently expected to reach 46.1% of GDP in 2013, increasing to 49.9% in 2016, which places the Czech Republic among the least indebted countries of the European Union.

The state funding strategy for 2014-2016 is based on the expectation of economic recovery in 2014 and acceleration of economic growth in 2015 and 2016, stability of the domestic banking sector, external macroeconomic balance, low inflation, low indebtedness of the private sector, and consolidated public budgets aimed at keeping the government deficit below 3% of GDP through to 2016. The government deficit is expected to reach 2.9% of GDP in 2013. The Czech Republic preserved the best credit rating of all the Central and Eastern European countries and of all new EU Member States. On 10 December 2013, Fitch Ratings confirmed its AA- and A+ rating for longterm liabilities in domestic and foreign currency, respectively, with stable outlook. Standard & Poor's and Moody's confirmed their ratings, including stable outlook, in July 2013.

Investors' positive perception of the Czech Republic, the country's high credit rating, and the ongoing easing of domestic monetary policy conditions contributed to the reduction in government bond yields, particularly in the shortand medium-term segments of the yield curve. The average yield of fixed rate medium- and long-term government bonds in primary auctions decreased to the lowest level in history, 1.7%, i.e. by 0.7 p.p. compared to 2012, while the average maturity of these bonds increased to 8.2 years, an increase by 1 year compared to 2012.

The Czech Republic's position on financial markets was substantially strengthened also by the new legislative framework for state treasury liquidity management, which came into force on

1 January 2013 and enabled a significant increase in CZK- and EUR-denominated cash resources available for debt management and state funding, amounting to CZK 100 billion in daily average. This enabled the Ministry to deploy approximately 70% of the cash reserve as a source of funding of the central government financing needs in 2013, thus reducing market risk, the risk of potential failed auctions of government bonds, as well as other risks related to the financing of the state budget deficit and the state debt. This resulted, amongst other things, in a reduction of the gross borrowing requirement by CZK 110.0 billion compared to the published plan, a drop in shortterm debt below 16% of total state debt, and a year-on-year increase in gross state debt of less than 1%.

In terms of funding programme, there was a revision of the target of net money market instruments issuance from zero to CZK –68.2 billion, and a decision not to issue any bonds on foreign markets. Despite the deployment of a significant part of the cash reserve the total available state treasury liquidity increased by approximately 20% in comparison to the end of 2012, to more than CZK 250 billion at the end of 2013, i.e. 6.5% of GDP, covering approximately 60% of the 2014 financing needs, provided that the state budget deficit reaches CZK 100 billion in 2013.

In 2014, the Ministry will switch to the internationally recommended and used methodology of gross borrowing requirement reporting, which - unlike the methodology used in the Czech Republic until 2013 - includes in the total gross borrowing requirement only money market and other instruments with original maturity of up to one year to be refinanced over the course of the following year (but not their potential roll-over within the year). The gross borrowing requirement in 2013 amounted to CZK 309.9 billion using the new methodology and CZK 120.7 billion according to the original methodology. The difference of CZK 189.2 billion represents the balance of state treasury bills at the end of 2012 which were redeemed over the course of 2013.

The funding needs for 2014 are planned to reach CZK 398.5 billion, CZK 9 billion and CZK 1.6 billion less compared to 2013 and 2012, respectively. Depending on the deployment of the cash reserve, the gross borrowing requirement for 2014 will amount to CZK 350.1 to 400.1 billion, and slightly increase to CZK 424.3 billion by 2016. Gross

issuance of medium- and long-term government bonds on the domestic and foreign markets is planned to total CZK 239.2 billion in the base case scenario for 2014. With regards to the expected redemption of government bonds, including buybacks and exchanges, amounting to CZK 152.4 billion the net issuance of medium- and long-term government bonds, excluding retail bonds, will reach CZK 86.8 billion in the base case scenario.

The funding programme and all the quantitative frameworks are based on the assumption that the state budget deficit reaches the budgeted amount of CZK 100 billion in 2013. There is a high probability that the deficit will be lower than budgeted, and in such a case the cash reserve will be increased by the respective amount at the end of 2013. All the respective resources will be part of the funding of government financing needs in 2014 and the gross borrowing requirement in the alternative funding program scenario will be decreased accordingly.

The Ministry will issue fixed rate and floating rate bonds on the domestic market in 2014. Whereas CZGB 0.50/16, CZGB 1.50/19, CZGB 3.85/21, CZGB 4.70/22, CZGB VAR/23, CZGB 4.20/36, and CZGB 4.85/57 will be offered for sale again two new fixed rate government bond issues due in 2018, 2025 or 2026 will be issued, as well as two new floating rate bond issues due in 2020 and 2026 or 2027. The Ministry will also analyse, in cooperation with Primary Dealers, the option to issue inflation-linked bonds on the domestic market. The issue will be offered to institutional investors provided that demand for at least CZK 10 billion of the bonds is confirmed.

Issuance on foreign markets will cover a maximum of 25% of the gross borrowing requirement for 2014, and in case of favourable market conditions the plan is to carry out at least one benchmark public eurobond issue in the amount of EUR 1 to 2 billion. Issuance in other foreign currencies, including the USD, is possible provided that it will result in lower interest costs (after exchange rate hedging costs). Given the Czech Republic's absence as an issuer on foreign markets and the redemption of two eurobond issues in the total nominal amount of EUR 3 billion, active marketing of the Czech Republic in order to achieve potential additional diversification of investors in Czech government bonds will play an important role in the state funding.

The absolute amount of issued treasury bills was decreased in the course of 2013 after the positive net issuance in 2009-2012. It will be stabilized on a level of CZK 100.0 to 120.9 billion in 2014 in order to preserve the proper functioning of the domestic money market as one of the main buffers, together with the modernized central state liquidity management system, against unexpected fluctuations in other segments of the bond markets or unforeseen increase in funding needs during the year.

Since 2012, the retail bond program has become an integral part of strategic state debt management planning, and retail bonds are considered a full-fledged and significant funding source. Their share in the funding of the annual gross borrowing requirement is approximately 10%. The share of these non-marketable government bonds in the balance of medium- and long-term government bonds and the total state debt at the end of 2013 is expected to be 7.5% and 5.2%, respectively. The sale of retail government bonds in the total amount of CZK 20.0 to 50.0 billion is planned in 2014, which will represent net issuance in the amount of CZK 8.4 to 38.4 billion. While in 2011 to 2013 the Ministry relied on banking intermediaries for the distribution and administration of these bonds, the priority for the future will be to develop and market the direct distribution channel, the secured electronic access for the bond owners to their asset accounts. The channel was successfully tested in November 2013 as part of the subscription of the "Christmas" series of retail bonds, and the pilot operation will take place in 2014 and 2015.

Furthermore, in 2014, the Ministry will launch the project of complex upgrade of information systems of state debt and state treasury liquidity management, including interfaces to all trading, payment, settlement and accounting systems used by the Debt and Financial Assets Management Department and all internal procedures and operational processes.

finder

Minister of Finance

1 - Fiscal Outlook and Macroeconomic Framework

Economic Development

Since the second half of 2011, the Czech economy has been going through a shallow recession, which was only broken by a growth of 0.6% in the second quarter of 2013. Gross domestic product cleaned of price, seasonal and calendar fluctuations dropped by 1.3% year-on-year in the third quarter of 2013 based on preliminary estimates, and by 0.1% compared to the previous guarter. For this year, a decline in real GDP by 1.0% is expected according to October predictions. The Ministry expects a gradual recovery of economic activity in the forthcoming years and real GDP should increase by 1.3% in 2014, by 2.2% in 2015 and by 2.7% in 2016, which represents a further improvement of the outlook for the development of the Czech economy, foreseen by the Ministry in the July prediction, where a decline in real GDP by 1.5% was foreseen for 2013 and a growth of only 0.8% for 2014.

On 7 November 2013, the Czech National Bank announced the launch of foreign exchange interventions with the aim to further ease the monetary policy through the alternative tool of exchange rate and to keep the inflation near the target of the Czech National Bank. With regard to the fact, that the macroeconomic framework of current Fiscal Outlook, published on 29 November 2013, works with the data excluding the potential impact of the interventions on the Czech economy, the steps of the Czech National Bank are not considered in the Strategy either, apart from the Cost-at-Risk chapter. In this chapter, the simulation of yield curves considers the drop in level and volatility of government bond yields on the short end of the yield curve after the announcement of the interventions.

	2011	2012	2013	2014F	2015F	2016F
Real growth of GDP (%)	1.7	-1.0	-1.0	1.3	2.2	2.7
Household consumption growth (%)	-0.6	-2.1	0.2	0.9	2.1	2.5
Government consumption growth (%)	-1.7	-1.9	0.8	0.2	-0.3	0.2
Growth of gross fixed capital formation (%)	-0.9	-4.5	-4.8	-0.8	2.6	3.1
Contribution of net exports to GDP growth (p.p.)	2.7	1.7	0.6	0.6	0.5	0.7
Average inflation rate (%)	1.9	3.3	1.4	0.7	1.9	0.9
Unemployment rate (%) ¹	6.7	7.0	7.1	7.3	7.1	6.6
Wages and salaries growth (%)	2.3	1.8	0.6	2.5	4.6	3.9
Current account to GDP (%)	-2.9	-2.4	-1.7	-1.4	-1.5	-1.7
CZK/EUR exchange rate	24.6	25.1	25.8	25.8	25.8	25.8
Real Eurozone GDP growth (%) ²	1.4	-0.6	-0.4	1.0	1.2	1.5

Table 1: Main Macroeconomic Indicators of the Czech Republic

¹ Figures for employment and unemployment rate based are based on the Labour Force Survey.

Source: Czech Statistical Office and MoF

The domestic and foreign demand risks for this macroeconomic prediction can be considered to be balanced. The most negative economic risk in external environment is the unsolved debt crisis in the Eurozone and continuing uncertainty concerning its possible escalation together with the political instability in certain countries. In the medium-term outlook, the ratio of the current account deficit to GDP, which should not exceed 2% in coming

years, positively impacts on the external economic balance.

The Czech Republic is among the countries with one of the lowest unemployment rates. Should there by slight recovery in western Europe, to which most Czech exporters export their goods and services, it is possible to expect the following of this trend while retaining a relatively low unemployment rate.



Figure 1: GDP and Unemployment in Selected EU countries in 2013

Source: Eurostat and MoF

Another benefit of the Czech Republic is the consistently resilient financial sector and reliable fiscal policy. Household debt remains relatively low in an international comparison due to the moderate tempo of taking on debt and the share of non-performing loans is also stable, somewhere slightly over the level of 5%. In 2012, household debt compared to gross disposable income reached 57.7%.

The loans to deposits ration also shows longterm stability and its value is among the lowest in an international comparison. The share of nonperforming loans in the entire Czech banking sector continued to decline and amounted to 5.7% in March 2013. Capital adequacy was 16.4% in 1Q2013.

Non-financial Enterprises



Figure 2: Loans to Deposits Ration by Households and Non-financial Enterprises in CZ vs. Eurozone

٥/۵

350 --

250

200

150

100

50 -0 -

2005

2006

2001

Czech Republic

2005

with a long-term declining trend. Compared to the yields of comparable government bonds in countries in the region, yields from Czech government bonds remained among the lowest in the region.

Source: Eurostat and MoF

2009

2020

2011

Eurozone

According to the October prediction, the average yield to maturity of 10-year government bonds will be 2.1% in 2013 and 2.4% in 2014. Yields of EUR-denominated government bonds with maturity in 2022 stayed on the same level in the past month,

2012

General Government Sector Finances

After three years of fiscal consolidation, the structural general government balance improved to -1.7% of GDP in 2012 and is expected to improve

to -1.5% of GDP. In the period 2014-2016 more expansive fiscal policy should be applied to support the recovering economy.



Figure 3: General Government Balance (ESA95)

In 2012, government sector funding resulted in a deficit of 4.4% of GDP. However, this result worsened compared to 2011 largely due to the financial compensation to churches and the non-validated EU expenditure worth a total of CZK 71 billion. The compensation to churches led to one-off rise in general government balance but it did not influence the general government debt. It caused by the definition of general government debt which does not include other liabilities that were recorded in national accounts against the imputed expenditure of other capital transfers. Cleared of these oneoff operations, the deficit was 2.6% of GDP. This development is due mainly to discretionary changes in the taxation system, cost-cutting policies for interim government consumption and a decline in capital expenditure due to reduced expenses for projects co-financed by the EU.

Based on the October notifications, the government sector deficit in 2013 should reach 2.9% of GDP. This rising deficit will be caused mainly by reduced tax revenues, which is again related to the cyclic deficit that has been increasing significantly since the global economic recession started and is linked to the overall decline of economic activity. In terms of expenditure, the greatest changes occurred in the area of social costs. These should increase by 4.3%. The current October prediction includes revenues from the sale of emission allowances, non-validated refunds from the EU. The prediction abstracts from the sale of LTE licenses.

Compared to previously published data, the Czech Statistical Office revised the government debt for 2009 to 2012. This revision increased the level of general government debt by CZK 13 to CZK 16 billion due to the use of a contractual exchange rate for foreign currency issues hedged by derivatives.

In accordance with the draft state budget and budget of state funds for 2014 and the updated values of the medium-term expenditure framework, the estimated government sector deficit for 2014 is 2.9% of GDP. The deficit should consist mainly of the state budget deficit and should be slightly stimulating in structural terms. Future development of the deficit is quite strongly influenced by the cyclic element, which consequently affects the entire general government deficit of the. The general government debt should increase by 1.9 p.p. to 47.9% of GDP.



Figure 4: General Governemnt Debt in Selected EU Countries (ESA 95)

Note: The Eurozone represent current 17 countries of Eurozone. Maastricht criterion is on of the conditions for EU members when entering Monetary Union. The share of general government debt to GDP should not exceed 60%. Source: Eurostat and MoF

The balance of public budgets and the dynamic structure of debt from a long-term perspective would be very disturbing without the government's active approach to fiscal consolidation, and would complicate smooth funding of the state debt in an environment of extreme instability on international financial markets. In an international comparison, the Czech Republic is still among the EU countries with one of the lowest levels of general government debt.



Figure 5: General Government Debt and Balance in selected EU countries (ESA95)

Source: Eurostat and MoF

From 2009 until 2012, the share of government debt to GDP grew at a faster rate due to the global economic recession. In forthcoming years, the

growth of the debt to GDP ratio should slow down with the gradual recovery of the Czech economy.

	2008	2009	2010	2011	2012	2013F	2014F	2015F	2016F
General government balance (ESA95)	-2.2	-5.8	-4.7	-3.2	-4.4	-2.9	-2.9	-2.9	-2.8
State budget balance	-0.5	-5.1	-4.1	-3.7	-2.6	-2.6	-2.9	-2.9	-2.8
General government debt (ESA95)	28.7	34.6	38.4	41.4	46.2	46.1	47.9	49.0	49.9
Unconsolidated state debt	26.0	31.3	35.5	39.2	43.4	43.6	45.7	47.1	48.3

Table 2: General Government Finances of the Czech Republic in 2008 to 2016 (% of GDP)

Note: State budget deficit and unconsolidated state debt according to national methodology Source: Czech Statistical Office, MoF

There was a very slight rise in state debt and a stabilisation of general government debt ratio to GDP, due largely to the involvement of the cash reserve generated by the issuance activity in the year as a source of covering the financing needs of the central government in 2013, related to the July revision of the funding program. In the medium-term outlook, renewed increase in the

general government debt is expected as of 2014, towards the limit of 50% of GDP in 2016. The main source of this increase will be the local government authorities' debt since the absolute stabilisation of the indebtedness of local government authorities, i.e. its gradual increase to 2.7% to GDP, is expected.



Figure 6: Development of General Government Debt (ESA95)

Source: Czech Statistical Office and MoF

2 - Financial Markets and State Debt Service Costs

State Debt Service Costs

Since 2005, the costs on state debt service are presented based on the difference of expenditure on state debt service and revenue, which represents the net expenditure on state debt service and is cash-based (like the entire state budget); hence, it is not accrued according to the ESA95 methodology, which takes place only while preparing data for the EDP notification.



Figure 7: Development of State Debt Service Costs

Expenditure on state debt management throughout the entire period from 2005 to 2016 substantially exceed the state debt revenue. The lowest share in expenditure on revenue was achieved in 2010 to 2012, due largely to significant incomes from premiums on issues of medium-term and longterm government bonds based on the declining interest rates. Given the fact that in the future, this source of revenue will be significantly restricted due to the expected growth of interest rates, and also considering the expected rise in state debt and related growth of expenditure on state debt, the share of the respective expenditure and revenue will increase again.



Figure 8: Development of Net Expenditure on State Debt Service

Note: The actual data for 2005 to 2012, the expected actual data for 2013 and predicted, i.e. budgeted data for 2014 to 2016. Source: MoF

Note: The actual data for 2008 to 2012, the expected actual data for 2013 and predicted, i.e. budgeted data for 2014 to 2016. The State debt chapter registers revenue only since 2008. Source: MoF

While net expenditure on state debt service has a clear rising trend in the reviewed period, the share of these expenditures in state debt declined until 2012, i.e. the state debt grew faster than the net expenditure, mainly in consequence of the reduced interest rate trend and optimisation of the debt

portfolio management. In coming years, this share is expected to increase given the expected rise in interest rates. The relative rise in the importance of net expenditure on state debt management is also demonstrated by the consistent growth of its share in both state budget revenue and in GDP.

CZK billion	2005	2006	2007	2008	2009	2010
State debt expenditure	33.7	34.2	38.1	45.5	48.2	63.7
State debt revenue	-	-	-	1.5	6.7	6.9
Budgeted net expenditure	33.7	34.2	38.1	44.0	41.5	56.8
Actual net expenditure	25.4	31.6	34.1	37.7	44.5	35.8
CZK billion	2011	2012	2013	2014	2015	2016
State debt expenditure	73.0	79.4	67.9	65.8	72.0	76.0
State debt revenue	5.6	6.5	3.8	7.4	7.2	5.0
Budgeted net expenditure	67.4	72.9	64.1	58.4	64.8	71.0
Actual net expenditure	45.1	41.4	51.1	-	-	-

Table 3: Budgeted and Actual Net Expenditure for State Debt Service

Note: The expected actual net expenditure for 2013. Source: MoF

The difference between the volume of actual and budgeted expenditure for state debt service depends largely on how actual interest rates and the government's gross borrowing requirement develop compared to the scenario used for the budget estimation. If in a certain period the state budget deficit worsens due to financial and economic crisis and interest rates grow simultaneously, as was the case for instance in 2009, the budget chapter will be under major pressure. Unlike the budgeting process in past years, the State Debt budget chapter for 2014 is conceived rather without an expenditure reserve for materialised crisis scenarios, which is enabled particularly by the relative stabilisation

of financial markets in Eurozone countries and expected ongoing accomodative monetary policy of FED, CEB and Czech National Bank. The gradual reduction of the cash reserve in the chapter budget can be demonstrated by the fact that since the beginning of the budgeting process in 2012 until the discussion on the government draft Act on State Budget in 2014 in the Chamber of Deputies, proposed chapter expenditure declined by CZK 33.5 billion, whereas the proposed revenue for the same period increased by CZK 3.5 billion. The growth of net expenditure on state debt service is inevitable even when the interets rates decline, since it depends on the growth trend of the state debt.



Figure 9: Development of State Debt and its Share in State Budget Revenue

Note: The actual data for 2005 to 2012, the actual expected data for 2013 and predicted, i.e. budgeted data for 2014 to 2016. Source: MoF The development of the share of state debt in state budget revenue shows that in the course of the entire reviewed period, the state debt grew faster than state budget revenue.

In 2013, net expenditure on state debt service is expected to be CZK 12.9 billion lower compared to the budgeted net expenditure of CZK 64.1 billion. The expenditure will reach an expected amount of CZK 51.1 billion, i.e. about 1.3% of GDP and 4.7% of the expected total budget revenue. These savings contributed to the better than expected general government balance. Compared to 2012, the net expenditure grew by about 23.5%. In the course of 2013, a total of CZK 5.7 billion were transferred to other budget chapters from the State Debt chapter expenditure via budgetary transfers. The State Budget Act for 2013 is also expected to be amended, which should reduce the expenditure of the State Debt chapter by CZK 3.5 billion while simultaneously increasing this chapter's revenue by CZK 3.0 billion. Compared to the final budget and after including the impact of the expected amendment to the State Budget Act, the achieved net expenditure is expected to be only CZK 0.7 billion lower than the final budgeted amount.

The lower than expected budgeted expenditure is due largely to the prevailing low level of shortterm and long-term interest rates, which is in contrast to the conservative forecast of interest rate growth in the approved budget of the State Debt chapter for 2013. The risk premiums on Czech government bonds compared to the majority of EU member countries remained stabilised in 2013. In consequence of the relative stabilisation of the financial and economic situation in the Eurozone and European Union countries, the fiscal austerity policies of the government and zero interest rate policy of the Czech National Bank, it was possible to reduce expenditure on state debt service in the draft state budget for 2014 by CZK 2.1 billion compared to the approved budget for 2013, by CZK 9.3 billion compared to the Medium-term Outlook of the State Budget of the Czech Republic for 2014 and 2015 used in the Strategy for 2013, and the current outlook of expenditure on state debt service for 2015 was reduced by CZK 8.1 billion compared to the output from last year.

In 2013, the Integrated Information System of the State Treasury was used to prepare the draft state budget of the Czech Republic for 2014 and also in processes related to implementation of the approved budget, which allows the chapter managers to react flexibly to changes in the input parameters and the Ministry to monitor in detail the progress of preparation and implementation of the state budget. From a long-term perspective, this should lead to savings arising from the higher efficiency in obtaining and allocating state budget resources.

The expected savings in realised net expenditure on state debt service in 2013 compared to the approved chapter budget of CZK 12.9 billion result from an increase in revenue by CZK 3.1 billion and a reduction in expenditure by CZK 9.8 billion. The decrease in net expenditure compared to the final budget and after including the expected amendment to the State Budget Act by CZK 0.7 billion is reduced by the decrease in budget expenditure by CZK 9.2 billion to CZK 58.6 billion and in consequence of increasing budget revenue by CZK 3.0 billion to CZK 6.8 billion.



Figure 10: Expected Revenue and Expenditure on State Debt Service in 2013

The distribution of expected savings compared to the approved budget based on sources of savings is

documented by the following figure. It is apparent that most savings were achieved in the area of

lower expenditure on discounts and higher revenue from premiums on domestic medium-term and long-term government bond issues, which together amount to more than half of the expected savings in interest costs. This fact is logical, since the auctions of the bonds are carried out as reopening of existing issues and the impact of the declining interest costs is achieved via the net prices of bonds and not via coupons, which are largely fixed. An important decrease in more than one guarter of the total expected reduction in interest rates was also achieved in net expenditure on money market instruments, although lower than budgeted revenue was achieved from the investment of the treasury single account balances, due both to the substantial net decline in money market instruments and the extremely low interest rates.

Figure 11: Sources of Savings in Net Expenditure on State Debt Service in 2013



Note: Premiums from buy-backs constitute budget expenditure and are involved in the expenditure on CZGB discounts Source: MoF Considerable savings were also achieved with respect to loans from the European Investment Bank, mostly floating-rate, and also with respect to the floating legs of currency swaps, via which bonds issued on foreign markets were hedged against currency risk, and thus synthetically transformed to floating-rate CZK-denominated instruments.

Of the total expected savings on expenditure for state debt service in the amount of CZK 12.9 billion, CZK 11.1 billion results from net expenditure savings on internal debt and CZK 1.9 billion from net expenditure savings on external debt.

Monitoring of the development of cash revenue and expenditure, does not always provide entirely accurate information on which economic costs are really linked to state debt in the given period. This purpose is better served by the accrued interest indicator, which is based on the gradual accumulation of interest costs on a daily basis. The development of accrued interest rates has a tendency to show much lower volatility than interest development on a cash basis, because it is not affected by time disproportions between the time of accrual of the respective net interest cost and the cash expenditure or revenue related to it.

With the exception of 2013, there is an evident gradual growth of accrued interest and the share of accrued interest in GDP developed accordingly. The decline in accrued interest in 2013 is due to the concurrence of a slight increase in state debt and decline in interest rates, whereas the net cash interest increased, largely due to the decline in revenue from medium-term and long-term government bonds premiums, and also because the impact of the significant increase in state debt in 2012 was only fully projected in the budget in 2013.



Figure 12: Development of Accrued Interest on State Debt

Source: MoF

Among the factors affecting the relation between cash and accrued interest is the development of the balance of individual debt instruments; when it increases the interest payments paid at the end of the calculation period, i.e. particularly CZK and foreign currency denominated medium-term and long-term bond coupons, interest from EIB loans and swap interest, are first reflected as accrued and then as cash at the end of the said period. When the state debt rises, the accrued interest in the given period outweighs cash interest for this reason. On the contrary, for discounted instruments (state treasury bills and savings government bonds discounts), interest is settled with the state budget on the issue date, i.e. discounts are first fully reflected as cash and then gradually as accrued throughout the term of the instrument. A similar principle applies to discounts and premiums from medium-term and long-term government bonds. In this case, the increase in state debt under otherwise identical conditions leads to a prevalence of cash interest over accrued interest.

A key role in the ratio between cash and accrued interest is also played by the development of interest rates, where their growth for payments made at the end of the calculation period leads to a prevalence of accrued interest over cash, and in the case of interest paid at the beginning of the instrument term, cash interest prevails over accrued interest. The opposite principles apply if interest rates decline.

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

The basic development trends of cash and accrued interest expenditure 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 2013 accounted for more than two thirds of the total accrued interest costs of the state debt. The ratio between accrued and cash interest on medium-term and long-term government bonds issued on the domestic market may be characterised by the fact that while in 2008, there was a significant prevalence of cash interest over accrued interest, in 2010 to 2012 there was a substantial surplus of accrued interest over cash interest, and in 2009 and 2013 the balance is quite even. The situation in 2008 may be ascribed primarily to the strong prevalence of cash discounts

over premiums. The greatest surplus of accrued interest over cash interest in 2010 is due not only to the fact that premiums significantly outweighed discounts, but also to the fact that the due 45th issue of medium-term and long-term government bonds worth 57.0 CZK billion with a relatively low coupon rate was replaced with issues with a significantly higher interest rate on average. In 2011 to 2013 premiums also outweighed discounts, but the surplus of accrued interest is subdued by the fact that the due issues were replaced with new ones with approximately the same or lower interest rates.

Figure 13: Shares of Accrued Interest Components of State Debt in Total Accrued Interest in 2013



The significant contribution of premiums and discounts from medium-term and long-term government bonds issued on the domestic market to the disproportion between cash and accrued interest expenditure is due to the fact that they are projected into cash interest in full, whereas given their extensive term, only a small part is reflected in accrual terms in the given year. If premiums outweigh discounts in cash terms, the accrued interest is usually significantly higher than cash interest (by more than CZK 13 billion in 2010), whereas the opposite applies if cash discounts outweigh premiums. The ratio between accrued and cash interest shows relatively strong volatility for state treasury bills, due to the high fluctuations in the development of their value outstanding and yields to maturity. While the prevalence of cash interest over accrued interest in 2008 was caused by a significant growth of interest rates during a relative stagnation in the value of state treasury bills outstanding, in 2011 this prevalence was caused by a major growth of value of state treasury bills outstanding, which compensated the decline of interest rates. In 2009, 2012 and 2013, when accrued interest significantly outweighed cash interest, there was a decline in yields to maturity in all cases. While this decline was compensated by the rising value of state treasury bills outstanding in 2009 and 2012, in 2013 the difference was augmented by the strong decline in state treasury bills balance.

Table 4: Difference Between Cash Discounts and Premiums and Cash and Accrued Interest of CZ	ZGB
---	-----

CZK billion	2008	2009	2010	2011	2012	2013
CZGB cash premiums	0.0	2.0	9.4	7.4	11.8	5.8
CZGB cash discounts	4.3	6.3	0.0	0.7	0.8	1.4
Difference between CZGB cash discounts and premiums	4.3	4.3	-9.3	-6.8	-11.0	-4.4
Difference between CZGB cash and accrued interest	3.2	0.4	-13.1	-5.7	-9.7	-0.3

Note: Government bonds issued on the domestic market. Source: MoF

As for medium-term and long-term government bonds issued on the foreign market, which account for almost one quarter of total accrued costs in 2013, there has been a consistent growth of their value outstanding since 2008, which under otherwise identical conditions leads to a prevalence of accrued interest over cash interest in all years except 2013. In 2008 to 2010, this fact is compensated by the impact of discounts registered in the period. Accrued interest outweighs cash interest most significantly in 2012, when there was a concurrent strong increase in the value of these bonds outstanding and significant premiums.

While in 2011 the cash interest from savings government bonds reached lower values than accrued interest due to the relatively high discount on discounted savings government bonds, in 2012 and particularly 2013 the

Figure 14: Development of the Share of Accrued and Cash Interest



accrued interest strongly outweighs cash interest. This is due largely to the manner of accruing interest for instruments with a step-up coupon (coupon, reinvestment and premium savings government bonds), where the value of the effective interest rate is calculated for the purpose of accrualization, which is used throughout the entire term of the respective instruments and which is initially significantly higher than the coupon interest rate. The prevalence of accrued interest over cash interest is also supported by the relatively strong growth of value of issued saving government bonds outstanding.

With regard to the short maturity of most provided loans, the differences between cash and accrued interest are not very significant. The same applies to short-term received loans and, given the relatively short fixation term, also to loans received from the EIB.

Figure 15: Development of Accrued and Cash Interest of Other State Debt Components



Financial Markets

The declining trend of yields from Czech government bonds since the beginning of 2012 fluctuated in May 2013 due to the uncertainty on

the European bond market, which resulted largely from uncertainty regarding the continued policy of quantitative easing by the American central bank and the banking crisis in Cyprus. Yields from CZK-denominated medium-term and long-term government bonds reached their peak values in July, and then started dropping. While yields for shorter maturity segments (3- and 5-year bonds) returned approximately to the same value as at the beginning of 2013, yields for 10-year CZKdenominated bonds saw a growth of 0.41 p.p. in 2013, compared to the end of 2012. Despite the said fluctuations in yields from CZK-denominated medium-term and long-term government bonds in the given maturity segments, the Ministry was able to achieve an average yield of 1.73% on fixed-rate CZK-denominated medium-term and long-term government bonds in domestic auctions in 2013, which is about 0.69 p.p. less than in 2012.



Figure 16: Development of Czech Government Bond Yields

Source: Thomson Reuters

In segments with a maturity of up to 1 year, auction yields for state treasury bills in 2013 were below the level of 0.2%. In the course of 2013, there were situations where the yield from state treasury bill with a longer maturity period was lower than from state treasury bills with a shorter maturity period. The average auction yield of state treasury bills in 2013 was 0.13%, which is 0.48 p.p. less than in 2012.



Figure 17: Development of State Treasury Bill Auction Yields

The development of the risk premiums measured through the asset swap spread also indicates the reduced aversion to risk related to the gradual calming down of the situation in the Eurozone, apart from a slight correction in the middle of 2013. The perception

of the Czech Republic on the international market as a reliable issuer of government bonds is illustrated by the situation on the credit default swaps (CDS) markets, where the Czech Republic has a position comparable with core countries of the Eurozone. A

Source: Czech National Bank and MoF

comparison with other countries in the CEE region ranks the Czech Republic closer to Germany or Austria that to the Central and European countries in terms of credit default.



Figure 18: Risk Premium of Czech Government Bonds





Source: Thomson Reuters





Czech Republic's Sovereign Credit Rating

The Czech Republic counts among the very reliable issuers and enjoys considerable interest not only from domestic and foreign investors, but is also rewarded for its credible fiscal consolidation program by major credit rating agencies. Since the last change on 24 August 2011, when Standard & Poor's upgraded the Czech Republic's credit rating by two notches, the Czech Republic has maintained its strong credit rating and stable outlook, while other countries' ratings were downgraded.

Rating agency	Domestic long- term liabilities	Outlook	Foreign long-term liabilities	Outlook
Moody's	A1	Stable	A1	Stable
Standard & Poor's	AA	Stable	AA-	Stable
Fitch Ratings	AA-	Stable	A+	Stable
JCR	A+	Stable	А	Stable
R&I	AA-	Stable	A+	Stable

Table 5: Czech Republic's Sovereign Credit Rating in 2013

Source: Moody's; Standard & Poor's; Fitch Ratings; JCR; R&I

The excellent sovereign credit rating position of the Czech Republic is documented by the following figures, based on which the Czech Republic's rating by the three most respected rating agencies is above the average rating of Eurozone countries weighted by the gross general government debt of the individual member states. Only the group of countries in Europe with elite AAA (Aaa) rating, such as Germany, Luxembourg, Finland, Sweden, Great Britain, rank better than the Czech Republic,

as well as a few others, whose rating is being downgraded by some agencies, for example France and the Netherlands. Belgium has a comparable rating as the Czech Republic. The Czech Republic has the highest rating of all Central and Eastern European countries and all of the new EU Member State. Moreover, it is among the smaller share of EU countries that do not have a rating with a negative outlook.

Figure 21: Rating of the Eurozone and Czech Republic by Standard & Poor's



Source: Standard & Poor's, Eurostat, European Commission, Ministry's calculations





Source: Fitch Ratings, Eurostat, European Commission, Ministry's calculations

Figure 23: Rating of the Eurozone and Czech Republic by Moody's



Source: Moody's, Eurostat, European Commission, Ministry's calculations

3 - Borrowing Requirement and Development of State Debt up to 2016

The quantification of borrowing requirement is a key parameter in government funding management, which definitely determines the value of financial sources that the central government needs to acquire over the course of the respective calendar year through borrowing operations primarily on financial markets, in order to ensure coverage of the total planned annual government financing needs. Apart from borrowing operations, the funding requirement may also be covered by operations with state financial assets, or management of other state assets within extra-budgetary balance operations, or the involvement of available cash resources of the state treasury through the refinancing mechanism of treasury single accounts.

Financing Needs and Sources of the Central Government

The financing needs of the central government is determined by the items that must be financed in the given year, i.e. the budgeted state budget deficit, potential extra-budgetary financing requirement and all redemptions and early redemptions on nominal values (principal) of state debt, including the related derivatives. Operations on the side of state financial assets, including net changes in the cash reserve, or the provision and repayment of extra-budgetary loans and credits to other states and domestic legal entities, are funding sources. For 2013, the considered budgeted cash deficit of the state budget is CZK 100.0 billion. Any potential deficit that is lower than the budgeted deficit will be directly projected into the value of the available cash reserve at the end of 2013, which will then be fully used to cover the funding of the financing needs of the central government in 2014.

Table 6: Funding Needs and Sources (CZK billion)¹

Financing needs	2011 2012		2013	2014	2015	2016
	Act	ual	Predicted	Planned (Base case	scenario)
Primary balance of state budget	97.6	59.6	48.9	53.6	55.2	49.0
Net expenditure on state debt	45.1	41.4	51.1	58.4	64.8	71.0
Extra-budgetary financing needs	0.0	0.0	0.0	0.0	0.0	0.0
Redemption on government bonds in the respective year	102.1	115.6	108.6	136.4	138.5	151.6
Buy-backs and exchanges of government bonds from prior years	0.0	-2.0	-8.1	-4.0	-23.5	-20.0
Buy-backs and exchanges of government bonds due in coming years ²	2.0	8.1	7.5	20.0	20.0	20.0
Redemption and early redemptions on savings government bonds in given year	0.0	9.6	7.7	11.6	11.5	29.3
Redemption on state treasury bills excl. roll-over	113.3	162.6	189.1	120.9	120.9	120.9
Other money market instruments	0.0	0.0	0.0	0.0	0.0	0.0
Repayments on EIB loans	1.1	5.3	2.8	1.7	2.1	1.7
Total financing needs	361.3	400.2	407.5	398.5	389.5	423.5
Gross money market instruments issuance (excl. roll-over)	162.6	189.1	120.9	120.9	120.9	120.9
Gross CZGB issuance	180.3	164.6	145.6	185.2	176.0	209.4
Gross issuance of government bonds on foreign markets	0.9	69.0	0.0	54.0	54.0	54.0
Gross issuance of retail bonds	20.4	45.4	39.1	40.0	40.0	40.0
EIB loans	5.3	4.0	4.3	0.0	0.0	0.0
Net change in cash reserve	-5.7	-69.4	97.9	0.0	0.0	0.0
Net change in on-lending	0.0	0.0	1.7	0.0	0.0	0.0
State financial asset operations	-2.5	-2.4	-1.9	-1.6	-1.4	-0.8
Re-financing from the state treasury	0.0	0.0	0.0	0.0	0.0	0.0
Total financing sources	361.3	400.2	407.5	398.5	389.5	423.5
Non-debt financing sources	8.2	71.8	-97.7	1.6	1.4	0.8
Gross borrowing requirement	369.5	472.0	309.9	400.1	390.9	424.3

¹ Data concerns the base case scenario, in which a zero change in the cash reserve in 2014 is considered. ² Excluding operations with medium- and long-term government bonds during current budgetary year. Source: MoF The net change in financial assets does not affect the total financing needs using this methodology, but has a key impact on the value of the gross borrowing requirement which increases in the case of accumulation of assets and decreases if, on the contrary, financial assets accumulated in previous years are involved as a source of financing in the current year. The total financing needs are corrected according to the recommended international OECD methodology by roll-over operations with state treasury bills, and by re-financing operations with other cash and money market instruments, which take place in the calendar year and thus do not affect the net change of these items in the course of the year. The total annual financing needs in the given year thus only take into account the balances of these short-term instruments at the end of the previous year.

The following figure depicts the share of the financing needs and their components in GDP, including the balance of state treasury bills outstanding at the end of the previous period, which must also be refinanced in the current year, and the share of the gross borrowing requirement in GDP.



Figure 24: Financing Needs of the Central Government

Note: Non-debt funding sources include the net change in cash reserve incl. the balance of the State Financial Assets Operations budget chapter and net on-lending changes and the net change in possible re-financing from the state treasury. The alternative scenario for gross borrowing requirement takes into consideration a decline of CZK 50.0 billion in the cash reserve in 2014, which would be involved as a source of covering the financing needs of the central government in the given year. Source: MoF

Financing of the Gross Borrowing Requirement

The gross borrowing requirement determines the part of the sources for the government's financing needs secured through borrowing operations, i.e. it stipulates the value of cash resources that the government must obtain primarily by issuing and selling government bonds and drawing credits and loans. The gross borrowing requirement may be lower than the annual financing needs, if state financial assets are involved or short-term refinancing from the state budget is involved as a source of financing; on the contrary, it may be higher if assets are accumulated through borrowing operations e.g. for the purpose of pre-financing and building of cash reserve, or for the purpose of providing extra-budgetary credit and loans.

The gross borrowing requirement is financed using various financial instruments. The gross issuance of state treasury bills (excl. roll-over instruments issued and simultaneously due within the same period) in 2014 to 2016 ranges between CZK 100.0 and 120.9 billion per year, with the aim of attaining the relative stabilisation of these instruments outstanding. This plan corresponds particularly to the objective of stabilising the level of re-financing risk. The share of these instruments is planned so as not to exceed the threshold for the share of state debt due within one year in the total state debt, which was revised to 20% for 2014.

The gross issuance of medium-term and longterm government bonds on the domestic market in 2014 to 2016 ranges between CZK 112.0 and 304.0 billion. However, the Ministry will analyse the conditions on foreign financial markets with the option to carry out foreign issues.

The issuance plans do not include the planned sale of savings government bonds, which have become a standardised and important source of financing of the gross borrowing requirement. The gross issuance of savings government bonds in 2014 to 2016 is planned at CZK 10.0 billion to CZK 50.0 billion per year, depending on the demand of subjects authorised to subscribe them. The value of the planned issue is based on the realised demand for savings government bond issues to date, and on the Ministry's effort to increase the share of retail state debt and its subsequent stabilisation in the long-term horizon.

The gross issuance of medium-term and long-term government bonds on foreign markets in 2014 to 2016 is planned at maximally 25% of the total planned annual gross borrowing requirement.

The tapping of loans from the European Investment bank is closely tied to the implementation of

the respective investment programs of the state budget. With the exception of the loan for co-financing projects within the Operational Programme Transport, all of the loans were already fully tapped. In 2014, tapping of the said loan is not expected but it cannot be entirely excluded, given that the loan contract allows requesting for tranches from the loan until 31 December 2014. As for the outlook for accepting new loans in 2014 to 2016, this will depend largely on the economic program of the newly appointed political government and the spending priorities arising from it, as well as the potential expected role of the European Investment bank, which could be reflected in a revision of the financing program in this area, most likely starting with the preparation of the state budget for 2015.

Table 7: Financing of the Gross Borrowing Requirement (CZK billion)

	2011	2012	2013	2014	2015	2016		
	Act	Actual		ual Predicted		Planned (Base case		scenario)
Gross borrowing requirement	369.5	472.0	309.9	400.1	390.9	424.3		
Gross issuance of state treasury bills excl. roll-over	162.6	189.1	120.9	120.9	120.9	120.9		
Other money market instruments	0.0	0.0	0.0	0.0	0.0	0.0		
Received collateral in cash	0.0	0.0	0.0	0.0	0.0	0.0		
Gross issuance of CZGB on the domestic market up to 5 years $^{\rm 1}$	45.3	31.4	37.7	37.4	39.5	40.0		
Gross issuance of CZGB on the domestic market 5 to 10 years $^{\rm 1}$	73.6	93.3	79.7	66.5	72.5	80.0		
Gross issuance of CZGB on the domestic market more than 10 years ¹	61.4	39.9	28.3	81.3	64.0	89.4		
Gross issue of government bonds on foreign markets $^{\scriptscriptstyle 1}$	0.9	69.0	0.0	54.0	54.0	54.0		
Gross issuance of retail bonds ²	20.4	45.4	39.1	40.0	40.0	40.0		
EIB loans	5.3	4.0	4.3	0.0	0.0	0.0		
Other financing sources	0.0	0.0	0.0	0.0	0.0	0.0		
Total financing of gross borrowing requirement	369.5	472.0	309.9	400.1	390.9	424.3		

¹ Nominal value; premiums and discounts are included in net costs on state debt service, i.e. they are included in the net borrowing requirement.

² Including reinvestment of yields. Source: MoF

Net Borrowing Requirement and Change in State Debt

The net borrowing requirement of the central government is a key factor in the change in the nominal CZK value of the gross state debt, and is determined by the difference between the gross borrowing requirement and total redemption on the nominal values (principal) of state debt, including the related derivatives. In the case of a zero net change in state financial assets, including the cash reserve, the net borrowing requirement corresponds to the sum of the state budget deficit and potential extra-budgetary financing needs. Hence, the net

borrowing requirement represents the value of cash resources that the central government must borrow in the current year beyond the resources already borrowed in previous years. If the resources for covering the financing needs do not simultaneously include the refinancing mechanism of treasury single accounts and there was no change in exchange rates, the net borrowing requirement as per the current national methodology corresponds to the year-on-year change in the balance of the gross state debt in the domestic currency.

Table 8: Net Borrowing	Requirement of th	e Central Gover	mment (CZK billion)
------------------------	-------------------	-----------------	---------------------

	2011	2012	2013	2014	2015	2016
	Actual		Predicted	Planned (Base case		scenario)
Gross borrowing requirement	369.5	472.0	309.9	400.1	390.9	424.3
Redemption on government bonds in given year	102.1	115.6	108.6	136.4	138.5	151.6
Buy-backs and exchanges government bonds from previous years	0.0	-2.0	-8.1	-4.0	-23.5	-20.0
Buy-backs and exchanges government bonds due in coming years ¹	2.0	8.1	7.5	20.0	20.0	20.0
Redemption and early redemptions on savings government bonds in the given year	0.0	9.6	7.7	11.6	11.5	29.3
Redemption on state treasury billds excl. roll-over	113.3	162.6	189.1	120.9	120.9	120.9
Other money market instruments	0.0	0.0	0.0	0.0	0.0	0.0
Repayments of EIB loans	1.1	5.3	2.8	1.7	2.1	1.7
Net borrowing requirement	151.0	172.8	2.3	113.6	121.4	120.8

¹ Excluding operations with medium- and long-term government bonds during current budgetary year. Source: MoF

The net borrowing requirement is financed using the same instruments as the gross borrowing requirement. In financing the net borrowing requirement, however, it is necessary to take into account the value of total redemption on the nominal values (principal) of the given debt portfolio instruments, including the impact of derivatives. The net issuance of medium-term and long-term government bonds on the domestic market in 2014 to 2016 will depend on the conditions for financing via issuesance on the domestic financial market. The Ministry will also assess the situation on foreign markets for potential issues in a foreign currency.



Figure 25: Net Issuance of CZGB on the Domestic Market

Note: ; Redemption on CZGB includes realised and planned buy-backs Source: MoF

In 2014, the first redemptions on two EURdenominated government bonds issued under foreign law with a total nominal value of CZK 86.4 billion will be carried out. Both principles of the due foreign issues are hedge by currency swaps, thus, potential continuing depreciation of the exchange rate will not affect the value of redemption expressed in CZK.





The gross issue of savings government bonds in 2014 to 2016 is planned at a total nominal value ranging between CZK 10.0 to 50.0 billion per

year, meaning that the net issuance of savings government bonds will range between CZK -20.0 to 39.0 billion.



Figure 27: Net Issuance of Savings Government Bonds

Note: Savings government bonds first issued in 2011 Source: MoF

With regard to the Ministry's plan to maintain the stable balance of money market instruments (particularly state treasury bills) outstanding, the medium-term outlook anticipates the refinancing of state treasury bills outstanding at the end of 2013 via new issues of state treasury bills at the same nominal value and with a similar time structure, so that the net issuance of state treasury bills in relation to market holders ranges around zero, while simultaneously maintaining the current market liquidity of this segment of the Czech money market. In 2014 to 2016, the Ministry plans to draw on loans and credit from international financial institutions in the range of CZK 0.0 to 10.0 billion. Repayments on loans from the EIB in these years will range from CZK 1.7 to 2.1 billion. The Ministry will continue to assess the option of re-fixing the interest rate of loan tranches and obtaining a better rate than the current yield from Czech government bonds. In the opposite case, the Ministry is ready to repay the loan tranches before their original maturity, which would lead to a higher negative net change in loans and credits in the given years.



Figure 28: Net Issuance of State Treasury Bills





Source: MoF

Refinancing from the state treasury may gradually become an important component for covering the financing needs, due to the amendment of Budgetary Rules Act, which was a necessary legislative condition for involving resources from the accounts of multiple government sector organisations in the state treasury and in the shortterm financing of the state. In 2013, the number of entities whose accounts are subordinated to the state treasury was expanded based on this legislative change, making the balances on these accounts a source of additional liquidity within the system of treasury single account, which allowed for the reduction in the cash reserve over the course of the year. In connection to the development of the technical mechanism for short-term involvement of state treasury client resources into state financing, it is possible to expect further benefits from the development of the state treasury liquidity management system in the medium term, particularly in the form of savings on interest costs on state debt service.

For 2013, the planned state budget cash deficit is forecasted at CZK 100.00 billion. Any potential deficit lower than budgeted will be reflected in the value of the available cash reserve at the end of 2013, which will be fully used to cover the financing needs of the central government in 2014.

Table 9: Net Borrowing Requirement of the Central Government and Change in State Debt (CZK billion, % of GDP)¹

	2011	2012	2013	2014	2015	2016
	Actual		Predicted	Planned (Base case sc		scenario)
Gross state debt as at 1 Jan	1,344.1	1,499.4	1,667.6	1,681.1	1,794.7	1,916.1
Primary state budget balance	97.6	59.6	48.9	53.6	55.2	49.0
Net expenditures on state debt service $^{\rm 2}$	45.1	41.4	51.1	58.4	64.8	71.0
Extra-budgetary financing needs	0.0	0.0	0.0	0.0	0.0	0.0
Net borrowing requirement excl. asset operations	142.8	101.0	100.0	112.0	120.0	120.0
State financial asset operations ³	2.5	2.4	1.9	1.6	1.4	0.8
On-lending over 1 year (net change) ⁴	0.0	0.0	-1.7	0.0	0.0	0.0
Cash reserve (net change) ⁵	5.7	69.4	-97.9	0.0	0.0	0.0
State budget surplus	0.0	0.0	0.0	0.0	0.0	0.0
Net borrowing requirement	151.0	172.8	2.3	113.6	121.4	120.8
Net issuance of money market instruments	49.3	26.5	-68.2	0.0	0.0	0.0
Net issuance of government bonds on domestic market	76.2	42.9	37.7	119.2	52.1	68.9
Net issuance of government bonds on foreign market	0.9	69.0	0.0	-32.4	42.9	42.9
Net issuance of savings government bonds	20.4	35.8	31.4	28.4	28.5	10.7
Net change in balance of provided loans and credit	4.1	-1.3	1.5	-1.7	-2.1	-1.7
Financing of net borrowing requirement	151.0	172.8	2.3	113.6	121.4	120.8
Revaluation of state debt ⁶	4.5	-4.4	11.1	0.0	0.0	0.0
Promissory notes repayments 7	-0.2	-0.1	0.0	0.0	0.0	0.0
Gross state debt change	155.3	168.3	13.5	113.6	121.4	120.8
Gross state debt as at 31 Dec	1,499.4	1,667.6	1,681.1	1,794.7	1,916.1	2,036.9
Share of GDP (%)	39.2	43.4	43.6	45.7	47.1	48.3

¹ Data concerns the base case scenario, in which a zero change in the cash reserve in 2014 is considered.

¹ Data concerns the Dase case scenario, in which a zero change in the cash reserve in 2014 is considered.
² Balance of budgetary chapter 396 – State debt.
³ Balance of budgetary chapter 397 – State debt.
⁴ Extra-budgetary loans with maturity of over 1 year granted to other countries and domestic legal entities.
⁵ Cash reserve generated by bonds issues according to Section 35(4) of Act No. 218/2000 Coll, excl. revaluation of the part denominated in foreign currencies due to the exchange rate changes.
⁶ Exchange rate changes.
⁶ Exchange rate changes.
⁶ Exchange rate changes due to revaluation of debt denominated in foreign currencies.
⁶ Exchange rate changes act of the Cash Reserve in interactional financial institutions.

⁷ Promissory notes covering part of the Czech Republic ownership interests in international financial institutions. Source: MoF

Figure 30: Building and Tapping of the Cash Reserve



In 2013, the resulting net borrowing requirement compared to the plan from the Strategy for 2013 is expected to be CZK 99.3 billion lower, which is due to the approval the Budgetary Rules Act, which led to an increase in the available liquidity of the state. The Ministry reacted to this change by reducing the cash reserve through gradual limitation of issues of state treasury bills. In recent years, a change in the value of the cash reserve was directly related to the development of the state budget. Reduction in the state budget deficit compared to the originally planned development while preserving the issuance plan caused an increase in the cash reserve without affecting the planned net borrowing requirement. Uncertainty regarding the final state budget deficit at the end of 2013 would lead to a change in the value of the cash reserve.

By reducing the issuance plan for state treasury bills, the Ministry simultaneously expected to stabilise the nominal value of gross state debt at the end of 2013 compared to the end of 2012. Since part of the state debt is denominated in foreign currencies, its change is also influenced by fluctuations in the exchange rate of CZK against these currencies. Thus, the change in the nominal value of the gross state debt is affected by currency interventions

Net Debt Portfolio

Monetary flows originating from net borrowing requirements and from the chosen financing instruments of the central government are reflected in the amount and structure of the balance of state debt and state financial assets, i.e. the net debt portfolio.

The calculation of the net debt portfolio for the purposes of this Strategy is based on international practice in developed countries, and counters the for depreciation of the EUR/CZK exchange rate to approximately 27 CZK/EUR. The Ministry expects this step to raise the nominal value of the gross state debt by CZK 11.1 billion. In 2013, an extrabudgetary loan of CZK 1.7 billion was repaid before its original maturity based on a request from the borrowing counter-party.

gross debt portfolio with those financial assets that are closely connected with financial operations of the debt management and budget operations involving state financial assets. Financial assets based on this definition do not include other state financial assets such as shares, other ownership interests and receivables of the state towards foreign entities or originating from provided refundable financial assistance or implemented state guarantees.

Table 10: Balance and Structure of the Net Debt Portfolio (CZK billion)¹

	2011	2012	2013	2014	2015	2016
	Actual		Predicted	Planned (Base case		scenario)
Gross state debt	1,499.4	1,667.6	1,681.1	1,794.7	1,916.1	2,036.9
Money market instruments	162.6	189.1	120.9	120.9	120.9	120.9
Government bonds lending facility	0.0	0.0	0.0	0.0	0.0	0.0
Received collateral in cash	0.0	0.0	0.0	0.0	0.0	0.0
Government bonds issued on domestic market	999.1	1,042.0	1,079.7	1,198.9	1,251.0	1,319.9
Government issued on foreign markets	245.9	310.3	321.4	289.1	332.0	374.9
Retail bonds	20.4	56.2	87.6	116.0	144.5	155.2
EIB loans	71.3	70.0	71.5	69.8	67.8	66.1
Promissory notes ²	0.0	0.0	0.0	0.0	0.0	0.0
Liquid state financial assets	121.4	193.2	98.3	99.8	101.0	101.7
Nuclear investment portfolio	16.6	18.5	20.7	22.4	23.9	25.4
Pension investment portfolio	22.0	22.4	22.6	22.8	23.0	23.2
Special-purpose state financial assets accounts	10.5	10.6	11.0	10.6	10.1	9.1
On-lending over 1 year ³	1.7	1.7	0.0	0.0	0.0	0.0
Cash reserve ^₄	70.6	139.9	44.0	44.0	44.0	44.0
State budget surplus	0.0	0.0	0.0	0.0	0.0	0.0
Net debt portfolio	1,378.0	1,474.4	1,582.8	1,694.9	1,815.1	1,935.2

¹ Data concerns the base case scenario, in which a zero change in the cash reserve in 2014 is considered. ² Promissory notes covering part of the Czech Republic ownership interests in international financial institutions.

³ Extra-budgetary loans with maturity of over 1 year granted to other countries and domestic legal entities.
⁴ 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.

Source: MoF

The methodology of the net debt portfolio provides a more realistic overview of the financial position of the state and related risk parameters. Financial assets and their structure reduce the refinancing, liquidity and interest risk of state debt, and therefore they are monitored within the risk management system.

These financial assets also include investment portfolios, which are administered by the Ministry

and represent portfolios held until maturity.

The investment of balances of the nuclear account, the nuclear portfolio, is carried out by the Ministry within state financial assets based on the provisions of Section 27 of Act No. 18/1997 Coll., Nuclear Act. The balance of this account is invested conservatively exclusively into domestic government bonds through direct purchases or reverse repo operations, where the collateral consists of state treasury bills or Czech National Bank bills. In 2013, the medium-term and long-term government bonds in the nuclear portfolio were also used as collateral within the lending facility to support secondary market liquidity. Yields from investments constitute the revenue of the budget chapter State Financial Assets Operations. In the future, the cumulative resources from this portfolio will cover part of the special-purpose state budget expenditure on radioactive waste treatment. The Ministry decided to refrain from investing the balances on the special reserve account for the pension reform, pension portfolio, based on the provision of Section 36 of the Budgetary Rules Act. Starting from 2012, the resources from the pension portfolio were involved in the state treasury liquidity management and investment of available funds on the treasury single account, which contributed to reduction of risks and further stabilisation of state financing.



Figure 31: Structure of the Debt Portfolio

In the medium term, the Ministry expects a relatively stable ratio of CZK-denominated medium-term and long-term government bonds outstanding to the state debt, which will be around 66% in 2014 to 2016. With regard to the planned gross issuance of medium-term and long-term government bonds on foreign markets in coming years, the Ministry expects an increasing share of foreign bonds outstanding (including hedging instruments) in the total state debt.

In 2014 to 2016, the Ministry predicts a rise in the share of savings government bonds outstanding in the total state debt in the range from 6.5% to 7.6%, assuming a positive net issuance of savings government bonds is attained.

Due to the planned net issuance of money market instruments in 2014 to 2016, which should be around zero, the ratio of these instruments outstanding to the total state debt is expected to decline below 6% of the gross state debt in 2014 to 2016.

Assuming that no loans are received from the European Investment Bank in 2014 to 2016, the Ministry expects a decrease in the share of EIB loans in the total state debt to 3.2% in 2016.

The balances on special-purpose accounts of state financial assets are not actively invested directly on the financial market, but in the future could also cover part of the ring-fenced expenditure from the state budget. However, these balances are part of the treasury single account and are invested over the short term via indirect operations on the money market. Although the balances of these accounts are financial assets of the Ministry, from the point of view of financing of the borrowing requirement, they are external resources, and this portion of state financial assets holds the role of a quasi-client of the state treasury. However, in the event of an unexpected crisis development, these resources can be activated via a decision by the Chamber of Deputies, and therefore their position against the current gross debt position is economically justifiable.

Lending and on-lending is provided from issuance activity and effectively does not increase the value of the net debt portfolio, under the assumption that the respective borrowers fulfil their obligations stemming from loans.

The cash reserve is created by the correlative issuance of government bonds, or other sources of government financing, for pre-funding the future

borrowing requirement of the state and by the particular date logically reduces the nominal value of the gross state debt. Over the short term, it is invested on the money market as part of the treasury single account.

The central liquidity position of the state is further stabilized by short-term external sources of the state treasury, which are not part of the state financial assets of the Ministry. The balances on these accounts are a part of the treasury single account at the Czech National Bank and therefore can be involved over the short term in covering the government's financing needs or invested on the money market, which brings savings in interest costs on the state debt service and contributes to the reduction in the refinancing and liquidity risk of the central government.

4 - Funding Program and Issuance Activity in 2014

The funding program for the given year defines the space for borrowing operations and quantifies the value of cash resources acquired via borrowing operations on the financial market or from the international financial institutions in order to cover the financing needs of the central government. Its structure consists of debt sources of the financing needs of the central government, which are used for financing of the gross borrowing requirement of the central government, i.e. issuance and sale of government bonds on domestic and foreign markets and acceptance of loans and credit.

Implementation of the Funding Program in 2013

The approval of the amendment to the Budgetary Rules Act entailed a significant expansion of the CZK-denominated treasury single account and the possibility to manage treasury single accounts in foreign currencies, leading to an increment in the state's available liquidity. The Ministry reacted to this situation in its July revision of the funding program for 2013, which was reflected primarily in the reduction of the total nominal value of gross issuance of money market instruments and in the decision to not conduct any borrowing operations in foreign currencies on foreign markets in 2013.

Table 11: Funding Program for 2013 (CZK billion)

	Strategy for 2013	Revision of the Strategy for 2013	Strategy for 2014
Gross borrowing requirement	419.8	279.8 to 309.8	309.9
Gross borrowing requirement (original methodology used until 2013)	230.7	90.7 to 120.7	120.7
Gross issuance of government bonds	219.1 to 239.1	136.7 to 200.7	184.7
Gross issuance of government bonds on the domestic market $^{\scriptscriptstyle 1}$	87.1 to 219.1	96.7 to 170.7	145.6
Gross issuance of government bonds on foreign markets	0.0 to 92.0	0.0 to 48.3	0.0
Gross issuance of retail bonds	20.0 to 40.0	30.0 to 40.0	39.1
Loans from international financial institutions	1.6	0.0 to 4.0	4.3
Loans from the EIB	1.6	0.0 to 4.0	4.3
Other international financial institutions	0.0	0.0	0.0
Gross issuance of money market instruments ²	179.1 to 199.1	109.1 to 139.1	120.9
Gross issuance of state treasury bills	179.1 to 199.1	109.1 to 139.1	120.9
Other money market instruments	0.0	0.0	0.0
Received collateral in money market instruments	0.0	0.0	0.0
Redemption on money market instruments excl. roll-over	189.1	189.1	189.1
Net issuance of money market instruments	-10.0 to 10.0	-80.0 to -50.0	-68.2

¹ Including tap sales from own portfolio on the secondary market and purchases to the investment portfolios. ² Excl. roll-over transactions within the given year. Source: MoF

63.1% of the originally planned, respectively 120.6% of the maximum revised gross borrowing requirement of the central government using the reporting methodology valid until 2013, was secured through the gross issuance of mediumterm and long-term government bonds on the domestic market in a total nominal value of the CZK

145.6 billion. As per the methodology introduced starting with this Strategy, 47.0% of the actual gross borrowing requirement for 2013, respectively 34.7% of the originally planned value, was secured via these means. This resulted in the use of 85.3% of the annual maximum issue limit for this type of funding within the revised funding program for 2013,
which represents 66.5% of the maximum nominal value of the originally planned gross issuance of medium-term and long-term government bonds on the domestic market.

In 2013, a total of 40 primary auctions of two different instruments offered in one auction day were conducted on the domestic market of medium-term and long-term government bonds.

Medium-term and long-term government bonds in a total nominal value of CZK 136.1 billion were sold through primary auctions. According to the Strategy, fixed- and floating-rate medium-term and long-term government bonds were issued in the primary auctions. The shares of both types of instruments sold through primary auctions over the course of 2013 are 79% fixed-rate bonds and 21% floating-rate notes.



Figure 32: Interest Structure of CZGB Sold in Auctions

In compliance with the declared limits for refinancing risk, medium-term and long-term government bonds were issued in primary auctions in various segments of remaining time to maturity, whereas according to the issuance plan three new benchmark issues of fixed-rate government bonds due in 2016, 2019 and 2028 were issued. The share of the total nominal value of sold government bonds in the segment of 6 to 10 years to maturity in the total nominal value of all government bonds sold in primary auctions is 53.8%, which is the highest share in the monitored segments. This share increased by 19.5 p.p. compared to the end of 2012, when it was equal to 34.3%. Compared to the end of 2012, there was also a significant rise by 9.8 p.p. in the total nominal value of sold government bonds in the segment of more than 15 years to maturity to the total nominal value of all government bonds issued in primary auctions.



Figure 33: Redemption Structure of CZGB Sold in Auctions

The average yield from fixed-rate medium-term and long-term government bonds sold in primary auctions in 2013 is 1.7%, declining by 0.7 p.p. compared to the average yield achieved in primary auctions in 2012. The declining trend of yields in primary auctions continued.

On the contrary, the average time to maturity of mediumterm and long-term government bonds sold in primary auctions increased by 1.0 year in 2013 to 8.2 years compared to 2012.



Figure 34: Average Yield and Time to Maturity of CZGB in primary auctions

Note: Average yield to maturity includes fixed-rate CZGB. Source: MoF

The stable demand for CZK-denominated mediumterm and long-term government bonds persisted in 2013, which is illustrated by the total Bid-to-Cover Ratio. The average Bid-to-Cover Ratio at a value of 2.20 signalises a very high demand in auctions for medium-term and long-term government bonds on the domestic market.



Figure 35: Primary Auctions of CZGB in 2013

Source: Czech National Bank and MoF

Medium-term and long-term government bonds in a total nominal value of CZK 5.0 billion were sold through tap sales on the secondary market via the MTS Czech Republic electronic platform. In accordance with the the Strategy for 2013, no sales to the EIB portfolio were carried out. In 2013, sales in the nuclear portfolio were carried out within investment operations of financial asset management worth a total nominal value of CZK 4.5 billion. The total nominal value of sales on the secondary market thus amounts to CZK 9.5 billion in 2013. In 2013, the Ministry did not conduct any operations in the area of foreign issuance activity due to the development of financing conditions on foreign markets and the increment in available state liquidity.

In 2013, Primary Dealers in Czech government securities continued to make use of the medium-term

and long-term government bonds lending facility, which aims to increase the liquidity of government bonds on the secondary market. In 2013, medium-term and long-term government bonds in a total nominal value of CZK 23.1 billion were provided from the Ministry's portfolio and the nuclear investment portfolio through the lending facility, compared to received cash resources in the amount of CZK 27.5 billion, which were invested on the money market within the framework of state treasury liquidity management and within the framework of financial assets operations in the nuclear portfolio.

12.6% of the actual gross borrowing requirement of the central government for 2013 and 9.3% of the maximum originally planned gross borrowing requirement according to the new reporting methodology used in this Strategy was financed through the gross issuance of savings government bonds in a total nominal value of CZK 39.1 billion, including CZK 0.3 billion via tranches issued in the form of reinvestment of yields. This resulted in 97.7% use of the annual maximum issuance limit for this type of financing within the revised and original funding program for 2013. Within the Christmas series of 2013 issues, the Ministry presented a new distribution channel for savings government bonds, electronic access to asset account management administered in separate government bond register. The Ministry expects the launch of this new channel, which enables the acquisition and administration of savings government bonds, to support the sale of these bonds, while also substantially reducing operating costs for their distribution and service on the part of the state and simultaneously improving user comfort for the bond holders.

The issue conditions of savings government bonds allow the owners to request their redemption before the stipulated maturity date. However, the actual development in 2013 indicates that the share of early redemption is not significant and the bond owners rarely request this service. In 2013 within five periods for submission of requests for early redemption, the redemption on bonds worth a total nominal value of CZK 209.5 million was requested, 0.2% of the total nominal value of savings government bonds in outstanding at the end of 2013.

Table 12: Early Redemption on Savings Government Bonds from 2011 to 2013

	2011	2012	2013F
Savings government bonds outstanding (CZK billion)	20.4	56.2	87.6
Nominal value of early redemption (CZK million)	-	85.6	209.5
Early redemption (% of bonds outstanding)	0.0%	0.2%	0.2%

Source: MoF

Figure 36: State Treasury Bills Outstanding in 2013



In 2013, the total nominal value of the gross issuance of state treasury bills was reduced from the original maximum planned total nominal value of CZK 199.1 billion by CZK 78.2 billion at the end of 2013. The Ministry took this step in connection to the amendment to the Budgetary Rules Act, which came into force on 1 January 2013 and in consequence of which the state treasury liquidity increased. The total nominal value of the gross issue of state treasury bills excl. roll-over in 2013 amounts to CZK 120.9 billion (CZK 172.2 billion with roll-over). The average auction yield of state treasury bills in 2013 was 0.13%.

Because the approval of the amendment was not certain at the end of 2012, it was not possible to project its estimated impact into the funding program for 2013. Therefore, zero net issue of money market instruments was originally expected in 2013. With regard to the expansion of the number of entities whose accounts are subordinated to the treasury single account, the Ministry acquired adequate liquidity resources and thus proceeded to gradually reduce the cash reserve and significantly revise the issuance plan for state treasury bills. Likewise in 2013, there is a relatively stable demand for these instruments among Primary Dealers of Czech government securities, where the average share of the requested and sold nominal value of state treasury bills in auctions in 2013 was 1.7.

In 2013, funds totalling CZK 4.3 billion were received from the loans from the European Investment Bank. The increase compared to the revised plan is due to the approved overrun of expenditure in the chapter of the Ministry of Agriculture. Drawing of the EIB loans financed 3.5% of the maximum revised gross borrowing requirement of the central government for 2013 and 1.9% of the maximum originally planned gross borrowing requirement. As per the methodology

introduced starting with this Strategy, 1.4% of the actual gross borrowing requirement for 2013, respectively 1.0% of the originally planned value, was secured via these means.



Figure 37: Auctions of State Treasury Bills in 2013

Source: Czech National Bank and MoF

Funding Program and Issuance Activity in 2014

The funding program for 2014 is based on the planned gross borrowing requirement of the central government in the amount of **CZK 350.1 billion** to **CZK 400.1 billion**, whereas the final amount will depend mainly on the decision to involve the remaining cash reserve as a source of covering the financing needs of the central government. This

decision will depend on the behaviour of clients in the new state treasury system in the course of 2014 and also on the final financial result of the state budget in 2013. Any potential deficit lower than that budgeted will be reflected in the value of the available cash reserve at the end of 2013, which can be used for funding in 2014.

Table 13: Funding Program in 2014 (CZK billion)

	Base case	Alternative reduction in
	scenario	cash reserve by CZK 50 bn
Gross borrowing requirement	400.1	350.1
Gross borrowing requirement (original methodology used until 2013)	279.2	229.2
Gross issuance of government bonds	269.2 to 300.1	219.2 to 250.1
Gross issuance of government bonds on the domestic market	119.2 to 280.1	119.2 to 230.1
Gross issuance government bonds on foreign markets	0.0 to 100.0	0.0 to 80.0
Gross issuance of retail bonds	20.0 to 50.0	20.0 to 50.0
Loans from international financial institutions	0.0 to 10.0	0.0 to 10.0
Loans from the EIB	0.0 to 10.0	0.0 to 10.0
Other international financial institutions	0.0	0.0
Gross issuance of money market instruments	100.0 to 120.9	100.0 to 120.9
Gross issuance of state treasury bills	100.0 to 120.9	100.0 to 120.9
Other money market instruments	0.0	0.0
Collateral received in cash	0.0	0.0
Redemption on money market instruments excl. roll-over	120.9	120.9
Net issue of money market instruments	-20.9 to 0.0	-20.9 to 0.0

Source: MoF

Also in 2014 the funding of the gross borrowing requirement will be carried out using all the available instruments, with a view to maximally satisfying the demand on the domestic bond market and continued development of the retail bond program.

The gross issuance of CZK-denominated medium-term and long-term government bonds will not exceed CZK 281 billion.

The maximal nominal value of medium-term and long-term government bond issues is based on the theoretical variant, within which no foreign issue of government bonds is realised, the retail bond program is significantly reduced as well as the state treasury bills outstanding, simultaneously with zero involvement of the cash reserve as a source of covering financing needs.

The time schedule for auctions of medium-term and long-term government bonds on the domestic market will be governed by the indicative plan of auctions with such maturity segments so the target span of the weighted average maturity period of the debt portfolio between 5.0 and 6.0 years is maintained. The Ministry may also consider the inclusion of instruments with a maturity period of more than 15 years, provided there is demand for such instruments on the market.

In 2014, the issuance calendars of medium-term and long-term government bonds and specific bonds offered to individual auctions will be published on a monthly basis always on the second or third working Monday of the month preceding the respective month, unless the Ministry in justified cases decides and announces otherwise. Likewise, the offered total nominal value will be published only for the competitive part of the auction in the predefined range. However, the Ministry reserves the right to change the specific total nominal value offered in the competitive part of the auction, respectively the stipulated range for the given auction. according to current needs and the market situation. On the second or third working Monday of the month preceding the start of the given quarter, the Ministry will also publish maximum expected total nominal value of government bonds to be sold in the competitive parts of the auction for the coming quarter in the issuance calendar of medium-term and long-term government bonds.

2014	Auction date	Issue date	2014	Auction date	Issue date
	15.01.2014	20.01.2014		09.07.2014	14.07.2014
	22.01.2014	27.01.2014		23.07.2014	28.07.2014
1 st quarter 29.01.2014 03.02.2014 12.02.2014 17.02.2014 19.02.2014 24.02.2014 26.02.2014 03.03.2014 12.03.2014 17.03.2014		06.08.2014	11.08.2014		
		13.08.2014	18.08.2014		
	3 rd quarter	20.08.2014	25.08.2014		
		03.09.2014	08.09.2014		
		10.09.2014	15.09.2014		
	26.03.2014	31.03.2014		17.09.2014	22.09.2014
	02.04.2014	07.04.2014		24.09.2014	29.09.2014
09.0 16.0	09.04.2014	14.04.2014		01.10.2014	06.10.2014
	16.04.2014	22.04.2014		08.10.2014	13.10.2014
	23.04.2014	28.04.2013		15.10.2014	20.10.2014
	14.05.2014	19.05.2014		22.10.2014	27.10.2014
2 nd quarter	21.05.2014	26.05.2014	Ath quarter	29.10.2014	03.11.2014
	28.05.2014	02.06.2014	4 ^m quaitei	12.11.2014	18.11.2014
	04.06.2014	09.06.2014		19.11.2014	24.11.2014
	11.06.2014	16.06.2014		26.11.2014	01.12.2014
	18.06.2014	23.06.2014		03.12.2014	08.12.2014
	25.06.2014	30.06.2014		10.12.2014	15.12.2014

Table 14: Indicative Auction Schedule of Medium-term and Long-term Government Bonds in 2014

Note: Current auction plan will be published always on the second or third working Monday of the month preceding the respective month. Source: MoF

The Ministry will offer more government bonds in one auction day.

As a part of the process of increasing the flexibility of financing the state and owing to the positive response from investors, it became common practice starting in 2012 to offer at least two government bonds with various characteristics (e.g. a fixed- and floating-rate or medium-term and long-term bond) in one auction day. This type of auction strategy provides investors with a wider selection of offered instruments and the option of flexible reaction to a changing market environment.

In 2014, the Ministry will maintain the method of publishing the offered total nominal value for the competitive part of the auction in the predefined scope, and will maintain a transparent means of informing the Primary Dealers through issue calendars on a monthly basis. However, in the future it will retain the option of changing the offered total nominal value or entirely changing the instrument offered for sale, especially in the case of nonstandard conditions on the financial markets and under other extraordinary circumstances. In case of agreement with the Primary Dealers the Ministry will consider the option to offer up to three mediumterm and long-term government bonds with the aim to support the regular offer of the bonds with longer remaining time to maturity, demand for which is the most uncertain. This innovation in auction strategy would enable to set a stable offer of these bonds in lower nominal values without negative impact on quantitative performance of the funding program over the course of the year.

Table 15: Framework Issuance Plan for CZGB for 2014 (CZK billion)

	Outstanding as at	Issuance	Framework
	31 Dec 2013 ¹	limit ²	scope of sale
Auctions of new issues on the domestic market			60 to 130
Issue XX, CZGB x.xx/18	0	50	20 to 30
Issue XX, CZGB VAR/20	0	50	10 to 30
Issue XX ,CZGB x.xx/25 or 26	0	100	20 to 40
Issue XX, CZGB VAR/26 or 27	0	100	10 to 30
Issue XX, CZGB CPI/24 to 36	0	50	0 to 10
Auctions of re-opened issues on the domestic market			50 to 130
Issue 77, CZGB 0.50/16	20	80	2 to 10
Issue 76, CZGB 1.50/19	48	140	15 to 25
Issue 61,, CZGB 3.85/21	66	120	10 to 20
Issue 52, CZGB 4.70/22	64	95	10 to 20
Issue 63, CZGB VAR/23	77	100	0 to 15
Issue 78, CZGB 2.50/28	19	160	10 to 30
Issue 49, CZGB 4.20/36	26	80	2 to 10
Tap sales and exchanges on the domestic market			0 to 35
Issue 77, CZGB 0.50/16	20	80	0 to 20 ³
Issue 55, CZGB VAR/16	79	80	0 to 1
Issue 67, CZGB VAR/17	48	50	0 to 2
Issue 46, CZGB 3.75/20	72	75	0 to 2
Issue 63 CZGB VAR/23	77	100	0 to 10
Issue 49, CZGB 4.20/36	26	80	0 to 10
Issue 53, CZGB 4.85/57	11	95	0 to 7
Domestic retail bond program			20 to 50
Savings government bonds	-	-	10 to 50
Other non-marketable government bonds	-	-	0 to 10
Issues on foreign markets			0 to 100
Public issues 5 to 30 years	-	-	0 to 80
Private placements 5 to 100 years	-	-	0 to 30

¹ Excluding CZGB held in the Ministry's portfolio ² In the case of approval of the amendment to the Bonds Act and its coming into force in 2014 before the issue date of the respective bond issue, it will no longer be necessary to stipulate the expected total nominal value of the bond issue in the issue conditions for government bonds. ³ Including potential CZGB exchange transactions.

Source: Mol

The Ministry will offer for sale both fixed- and floating-rate bonds on the domestic market and will consider the issue of an inflationindexed bond.

In 2014, the Ministry plans to issue two new benchmark issues of fixed-rate government bond with maturity in 2018 and a 2025 or 2026. It also intends to issue two new issues of floating-rate notes

with maturity in 2020 and 2026 or 2027. In 2014, the Ministry will analyse the option of introducing a pilot issue of an inflation-indexed government bond designated primarily for financial institutions in compliance with market standards on foreign developed markets for these types of instruments. If a demand of at least CZK 10 billion for this type of bond is registered among the Primary Dealers in 2014, the Ministry will follow up with this pilot issue on the inflation-linked government savings bond in the offer of the retail bond program, starting with the spring issues in 2012. The maturity of this bond will be stipulated primarily based on demand from investors, in cooperation between the Primary Dealers and the Ministry.

For re-opened benchmark issues, the Ministry will offer all three issues of fixed-rate government bonds issued in 2013 in primary auctions. Of the fixed-rate government bonds, CZGB 3.85/21, CZGB 4.70/22 and CZGB 4.20/36 will be offered. Of the floating-rate notes, only the limited selling off of CZGB VAR/23, will be offered of the previously issued bonds. The issuance of medium-term and long-term bonds on the primary market will be supplemented by the sale of bonds from the Ministry's portfolio on the secondary market. Within the framework of tap sales of government bonds on the secondary market, the Ministry will offer in particular bonds with a longer time to maturity, i.e. CZGB VAR/23, CZGB 4.20/36, and CZGB 4.85/57. Minor final sell-off can also be expected for CZGB VAR/16, CZGB VAR/17, and CZGB 3.75/20. Bonds held in the Ministry's portfolio and in the nuclear investment portfolio will continue to be used as collateral when providing medium-term and long-term government bond lending facilities.

The Ministry may adjust the offer of bonds over the course of 2014, depending on developments on the domestic and foreign financial markets.

Due to the active use of the medium-term and longterm government bond lending facility by the Primary Dealers in Czech government bonds over the course of 2013, the Ministry increased the balance held in its own portfolio by CZK 7.2 billion compared to the end of 2012.

Issue	ISIN	Ministry's portfolio ¹	Investment portfolios
Issue 62, CZGB 2.75/14	CZ0001002869	4.0 ²	3.1
Issue 44, CZGB 3.80/15	CZ0001001143	3.5 ²	4.9
Issue 60, CZGB 3.40/15	CZ0001002737	0.0	2.4
Issue 55, CZGB VAR/16	CZ0001002331	1.0	0.0
Issue 77, CZGB 0.50/16	CZ0001003842	2.0	0.0
Issue 51, CZGB 4.00/17	CZ0001001903	1.0	3.6
Issue 67, CZGB VAR/17	CZ0001003438	2.4	0.0
Issue 41, CZGB 4.60/18	CZ0001000822	1.0	0.0
Issue 56, CZGB 5.00/19	CZ0001002471	0.0	2.0
Issue 76, CZGB 1.50/19	CZ0001003834	3.0	0.0
Issue 46, CZGB 3.75/20	CZ0001001317	3.2	0.0
Issue 61, CZGB 3.85/21	CZ0001002851	1.0	0.0
Issue 52, CZGB 4.70/22	CZ0001001945	2.0	0.0
Issue 63, CZGB VAR/23	CZ0001003123	4.0	0.9
Issue 58, CZGB 5.70/24	CZ0001002547	1.0	1.4
Issue 78, CZGB 2.50/28	CZ0001003859	3.0	0.0
Issue 49, CZGB 4.20/36	CZ0001001796	3.0	0.0
Issue 53, CZGB 4.85/57	CZ0001002059	7.0	0.0
Total		41.9	18.3

Table 16: Expected Balance of CZGB Acquired by the Ministry as at 31 Dec 2013 (CZK billion)

¹ CZGB held in the portfolio, excluding CZGB in active reverse repo operations and lending facilities. ² CZGB purchased to the Ministry's portfolio via buy-backs, which are no longer designated for sale.

Source: MoF

The program for medium-term and long-term governance bonds buy-backs and exchanges is stipulated in the amount of CZK 10 billion to CZK 30 billion.

The Ministry supplement the expects to implementation of standard buy-backs in 2014 with

the offer of an exchange program, which was not available to the Primary Dealers within the range of active state debt management instruments to date. This program would enable e.g. the withdrawal of the non-liquid CZGB 6.95/16 by replacement with the more liquid benchmark CZGB 0.50/16, whose further issuance in primary auctions beyond the stipulated

framework would otherwise be contrary to the limits of refinancing risk management. If investors are interested in this exchange, the total nominal value of this issue can automatically be increased reciprocally for the withdrawn government bond.

Apart from the relatively time-neutral exchanges described above, transactions of a similar character may be considered, provided they contribute to fulfilling the goals in management of the financial risks of the state debt and to supporting the liquidity of the secondary market of government bonds. The final value of the implemented exchanges will depend on the actual development of the gross borrowing requirement, the implementation of buybacks and the demand among the Primary Dealers and investors.

The share of funding on the foreign market will equal maximally 25% of the planned annual gross borrowing requirement.

Financing the gross borrowing requirement of the central government may also be secured through the issuance of medium-term and long-term government bonds on foreign markets, with the Ministry continuing to evaluate the current development of conditions. The Ministry's aim in 2014 is to issue a new publicly syndicated issue on the foreign market, if allowed by market conditions. The Ministry may also evaluate the option of funding through private placement in foreign currencies, should such issues bring the savings in interest costs and/or contribute to stabilising the debt portfolio risks, e.g. by achieving a longer average time to maturity of the state debt or provable expansion of the range of investors into Czech state debt. The conditions for potential issuance of government bonds on foreign markets will depend primarily on the development of conditions on financial markets in 2014.

The retail bond program in 2014 is stipulated for a total amount of CZK 20 billion to CZK 50 billion.

Figure 38: Issuance Structure and Average Time to Maturity of Savings Government issues and portfolio





Within the framework of the retail bond program in 2014, the Ministry plans to follow up on the highly successful issue series of savings government bonds in previous years. Given the very high demand, one to two large series of issues of these government bonds will again be offered in 2014 through the contractual distributors. At the same time, the Ministry will strive for further development and promotion of the direct electronic distribution channel between the owners of savings government bonds, which would allow to offer these bonds much more flexibly without intermediaries, and more often over the course of the calendar year than to date. The testing operation of the electronic access to the asset account management,

which was tested successfully in November 2013, in 2014 and 2015 will focus on improving the service for current bond owners. The planned total nominal value of retail issues is CZK 20.0 to 50.0 billion in total for 2014. In addition to savings government bonds, the Ministry may also offer other untradeable issues of government bonds within the retail bond program, for instance in order to settle parts of the annual financial compensations between the state and churches (church government bonds), or other special-purpose issues of government bonds. The Ministry does not expect the total nominal value of these special issues to exceed CZK 10 billion in 2014, if implemented.

In relation to management of refinancing risk, the Ministry will continue to issue savings government bonds with a longer time to maturity. With this step, the Ministry expects to increase the average time to maturity of the savings government bond issue as at the issue date in 2014 to 4.2 years.

The balance of state treasury bills in circulation will be maintained at minimally CZK 100 billion.

For 2014, the Ministry intends to maintain the total nominal value of treasury bills outstanding, i.e. zero net issuance of money market instruments is expected. If a decision is made to involve a part of the cash reserve into funding in 2014, the Ministry may decide to reduce the gross issuance of state treasury bills, given that the total nominal value outstanding will not drop below CZK 100 billion, i.e. below 5% to 6% of the gross state debt.

2014	Auction date	Issue date	2014	Auction date	Issue date
	16.01.2014	17.01.2014		10.07.2014	11.07.2014
	30.01.2014	31.01.2014		24.07.2014	25.07.2014
13.02.2014 14.02.2014 3 rd		07.08.2014	08.08.2014		
1 st quarter	27.02.2014	28.02.2014	3 ^{re} quarter	21.08.2014	22.08.2014
	13.03.2014	14.03.2014		04.09.2014	05.09.2014
	20.03.2014	21.03.2014		18.09.2014	19.09.2014
	03.04.2014	04.04.2014		02.10.2014	03.10.2014
	17.04.2014	18.04.2014	Ath and they	16.10.2014	17.10.2014
	24.04.2014	25.04.2014	4" quarter	30.10.2014	31.10.2014
2 nd quarter	15.05.2014	16.05.2014		13.11.2014	14.11.2014
	22.05.2014	23.05.2014			
	19.06.2014	20.06.2014			
	26.06.2014	27.06.2014			

Table 17: Indicative Auction Schedule for State Treasury Bills in 2014

Source:MoF

The indicative issuance plan is stipulated in accordance with the assumptions, standard maturities of 3, 6, 9 and 12 months will be maintained.

The total nominal value of state treasury bills in the individual auctions will be in a similar range as

in 2013, so as to create space for the inclusion of additional auctions into the issue plan in the case of increased requirements for funding through money market instruments. In the case of negative market developments or unexpected fluctuations in the state treasury balance, the Ministry can also implement 1-month tenor.

Table 18: Issuance Plan for State Treasury Bills in 2014 (CZK billion)

Issue	3-month	6-month	9-month	12-month	Total
Maturity in 2014	0	9	16	0	25
Maturity in 2015	0	8	47	66	121
Gross issuance in 2014	0	17	63	66	146
Redemption on issues from 2013	0	20.6	34.6	65.7	120.9
Net issuance in 2014	0	-12.6	12.4	0.3	0.01

¹ Planned target for net state treasury bills issuance in 2014 Source: MoF

Table 19:	Alternative	Issuance P	Plan for	r State	Treasury	Bills in	2014	(CZK	billion)

Issue	3-month	6-month	9-month	12-month	Total
Maturity in 2014	0	7	15	0	22
Maturity in 2015	0	6	38	56	100
Gross issuance in 2014	0	13	53	56	122
Redemption on issues from 2013	0	20.6	34.6	65.7	120.9
Net issuance in 2014	0	-14.6	3.4	-9.7	-20.9

Source: MoF

The planned total nominal value of net issuance of state treasury bills should be evenly distributed into

the individual quarters over the course of 2014.

Figure 39: Issuance and Redemption on State Treasury Bills, inc. Roll-over, in 2013 and 2014



Source: MoF

5 - State Treasury Liquidity Management

The state treasury deals with significant fluctuations in daily income and expenditures during the year. In order to ensure the smooth financing in terms of normal functioning of the state including troublefree and smooth functioning of the debt component, a treasury single accounts opened with the Czech National Bank was established pursuant to Section 33 of the Budgetary Rules Act, which serves as the basic technical instruments for effective state liquidity management and financing the state budget balance over the course of the calendar year.

Institutional and Legal Framework for the State Treasury Liquidity Management

In 2001, the CZK-denominated treasury single account included the income and expenditure accounts of the state budget, state financial asset current accounts, current accounts of tax and customs authorities and the state treasury liquidity management account. On 3 October 2005, the treasury single account was expanded to include the accounts of reserve funds and funds of cultural and social needs of state organizational units. As of 1 February 2012, this also includes the extra-budgetary privatization account of the former National Property Fund.

On 1 January 2013, the key amendment to the Budgetary Rules Act come into force, which significantly expanded the CZK-denominated treasury single account and allowed the administration of treasury single account in foreign currencies, whereas this year the Czech National Bank technically established an account in the EUR on 2 April 2013. Based on the amendment to the Budgetary Rules Act, it is possible to distinguish two types of clients, whose accounts are subordinated to the treasury single account, depending on the options available to these clients in managing their cash resources and their payment accounts opened with the Czech National Bank.

"Mandatory clients" are not authorised to keep accounts at commercial banks and all of their cash resources must be transferred to accounts opened at the Czech National Bank, which entirely disables the transferring of these cash resources outside of the state treasury, and thus creates a relatively stable source of central state liquidity, which can be involved in funding of state. The second group of clients consists of "non-mandatory clients", who open mandatory payment accounts at the CNB designated only for receiving cash resources from the state budget, state funds of the National Fund, whereas they are not limited in terms of transferring the acquired cash resources from the accounts subordinated to the treasury single accounts to any other bank.

As at 1 January 2013, the single treasury accounts (hereinafter also the "TSA") was expanded to include all cash resources on the accounts of mandatory clients, i.e. state funds and the Czech Republic Land Fund, the National Fund, state contributory organisations with a five-year transition period and external funds of state organisational units, as well as cash resources on the accounts of nonmandatory clients designated for receiving cash resources from the state budget, state funds and the National Fund for local government units and voluntary associations of municipalities, regional councils of the cohesion regions, public research institutes, public universities, the Railway Infrastructure Administration and other legal entities, opened with the Ministry's consent.

Cash Reserve in the State Treasury Refinancing System

Since the amendment to the Budgetary Rules Act represented a fundamental innovation to the state treasury system, it was not possible to implement all the changes into practice immediately after its approval at the end of 2012; therefore, the law stipulated deadlines for the establishment of client accounts at the Czech National Bank, and for transfer of the account balances of mandatory clients from commercial banks to the Czech National Bank. Since the second quarter of 2013, the share of account balances of non-mandatory clients of the state treasury became apparent, whereas over the course of the year the share of account balance of new mandatory clients increased gradually, which is also related to the inclusion of National Fund accounts denominated in EUR under the respective treasury single account, which was technically opened with the Czech National Bank and put into operation on 2 April 2013. Given the rise in the share of external resources within the total state treasury balance, there was a gradual decline in the cash reserve, and in the middle of the year the Ministry revised the Strategy, based on which a decision was made to reduce the gross borrowing requirement for 2013 and the cash reserve accordingly, in particular via a negative net issuance of money market instruments. Compared to previous years, the cash reserve no longer represents the largest part of the treasury single account and its function was replaced to a certain degree by external resources in the state treasury for the purpose of liquidity management.



Figure 40: Average Monthly Balances of State Treasury Clients in 2013

Source: Czech National Bank and MoF

The Ministry compensated the growth of the total available liquidity of the state treasury with the gradual reduction of the cash reserve. The state treasury balance in the second half of 2013 ranged between CZK 230 billion and CZK 270 billion, with a few fluctuations. In the long term, the Ministry does not expect the complete dissolving of the cash reserve, given that the balances on state treasury client accounts are not entirely stable throughout the whole year. It is necessary to leave space to active influence the balance of the state treasury through a certain share of the Ministry's own resources, the value of which is linked to the development of the state budget balance and the funding needs in the course of the year. The Ministry continually evaluates the structure of the state treasury and the behaviour of individual groups of state treasury clients, but because the full-year time sequences documenting the development of balances on accounts subordinated to the state treasury are not available to date, it is not possible to stipulate a plan for the share of the cash reserve in the total state budget balance for 2014. The value of the cash reserve will continue to be governed by the financing needs, whereas with regard to the flow of entirely new liquidity to the state treasury, the liquidity risk arising from everyday fluctuations in the total state treasury balance may not be taken into account to the extent customary in previous year. Hence, the cash reserve might not play the such a significant role of a liquidity buffer to soften the impact of sudden unexpected developments on financial markets, and it will be more closely bound to liabilities due in the given year.







The Ministry monitors the share of the cash reserve in the total resources that must be expended to cover the financing needs in the following year. The value of this ratio for 2013 expects the fulfilment of the budgeted state budget balance in the amount of CZK -100 billion, and amounts to 34.3%. The rise of the ratio for 2013 compared to previous year is in line with the increase of the cash reserve in 2012. The originally planned value of the cash reserve for 2014 and 2015 was reassessed after the amendment to the Budgetary Rules Act came into force, based on which the Ministry proceeded to revise the Strategy for 2013. In the mediumterm horizon, the cash reserve will be adapted so that its value at the end of the year constitutes at least 10% of all due liabilities in the following year on average. Owing to new resources of available liquidity in the state treasury, this ratio could be reduced without any impact on the state's ability to meet its liabilities. The reduction of the cash reserve in 2013 was carried out particularly by reducing the total nominal value of money market instruments outstanding, whereas the Ministry expects zero change in the reserve in coming years while maintaining this year's budgeted state budget balance.

The value of refinancing risk is indicated by the share of the liquid state financial assets as of the end of the year in the financing needs in the following year, which mostly follows the development of the share of the cash reserve in the financing needs, whereas includes other liquid state financial assets balances to the cash reserve and increases the ratio of these sources by 13bps on average within the years 2008 to 2016.

The total state treasury liquidity position includes all liquid state financial assets; moreover it includes all external state treasury resources. The share of the other state treasury resources was relatively stable since 2010. The amendment to the Budgetary Rules Act enabled the utilization of the new external state treasury resources. This leads to the increase of the share of the total state treasury liquidity position in the total financing needs in 2014.

The flow of additional cash resources to the state treasury strengthened the state's position on financial markets, which provides a new dimension on the road to modernisation of the government resources management, achievement of budget savings and reduction in costs on state debt service, in particular thanks to stable balances on the accounts of mandatory clients. Inclusion of the accounts of non-mandatory clients under the treasury single account resulted particularly in slowing down the outflow of cash resources from the state treasury, which balanced out some significant fluctuations in the state treasury balance. The more even distribution of expenditure over time, which led to reduced discrepancies in the daily balances of the state treasury, contributes to improving smooth cash flow within the state treasury liquidity management.



Figure 42: Cash Reserve and Other Liquidity in 2013

Source: Czech national Bank a MoF

Within the framework of state treasury EURdenominated liquidity management, the Ministry's investment options increased through the establishment of the respective single account, because it enabled to include the resources of the National Fund, which currently constitutes the largest part of the state treasury's EUR resources, into investment activity. With regard to the lack of data about cash flows, it was necessary to maintain a cautious approach during the year. For this reason, the Ministry will carry out technical development of the options for EUR-denominated liquidity management in full-fledged operation in 2014. At the end of 2013, the Ministry will be ready to commence active use of the available services of foreign central depositaries, through which it can diversify the investment strategy for available state treasury EUR-denominated liquidity and conduct even very short-term investments.

In the course of the first half of this year, the cash reserve amounted to approximately 50% to 60%

of the total state treasury resources (with some fluctuations), whereas the daily average during this period was 54%. Within the revision of the Strategy in July of this year, the Ministry proceeded to gradually reduce the cash reserve in connection to the amendment to the Budgetary Rules Act. The share of the Ministry's resources in the total state treasury resources can be reduced thanks to the steady growth of balances on the accounts of mandatory state treasury clients in particular, without increasing the liquidity risk. This leads to savings on costs related to funding state debt. In the second half of the year, the share of the cash reserve in total state treasury resources declined, and is mainly in the range of 20% to 40%, whereas the daily average is 33%. The annual average is 44%.

Figure 43: Ratio of the Cash Reserve to Total State Treasury Resources in 2013



Development of the State Treasury and the State Budget in 2013 and 2014

This year, it was possible to observe discrepancies between the actual and predicted development of the state treasury balance, caused mainly by the impact of the amendment to the Budgetary Rules Act, thanks to which the accounts of new mandatory and non-mandatory clients were included under the treasury single account, thus raising the available liquidity of the state treasury above the predicted level. The significant discrepancy in the first four months was also due to the much better development of the state budget balance. The discord between actual development and the prediction is related mainly to the time shift in the distribution of certain expenditure and also to the drawing of EU grants from the National Fund, which will particularly affect the last months of this year compared to the prediction based on estimates stemming from cash flows from previous years. Development of the state budget balance and state treasury balance in December is based on the predictions.



Figure 44: Development of the State Budget and State Treasury Balance in 2013 (CZK billion)

In December 2013, the state treasury disposes of CZK- and EUR-denominated liquidity in of CZK 250.3 billion, which is an increase of CZK 41.0 billion compared to the end of last year. The liquidity of the

state treasury excluding the cash reserve, which was already actively reduced by the Ministry by CZK 95.9 billion or CZK 97.9 billion if the net change excl. revaluation of the part denominated in foreign

currencies due to the exchange rate changes is considered, increased by CZK 136.9 billion over the course of the year, which represents the net income of new liquid resources, which are available to the Ministry to cover unexpected borrowing requirements in the course of the calendar year.

The average daily balance on the treasury single account increased by December 2013 by CZK 100.0

billion to CZK 278.7 billion compared to the same period last year. A significant increase in the total additional available liquidity of the state treasury is not expected in the coming years, although certain shifts may occur as the respective entities gradually transfer their funds to accounts subordinated to the treasury single account within the deadlines stipulated by law.

Table 20: Comparison of Balances on State Treasury Accounts (CZK billion)

State trea	sury	31 Dec 2011	31 Dec 2012	30 Jun 2013	31 Dec 2013
Original	Cash reserve	70.6	139.9	114.3	44.0
accounts	Other cash resources	31.4	69.4	69.0	70.2
New	Mandatory clients	-	-	53.4	129.6
accounts	Non-mandatory clients	-	-	13.7	6.5
Liquidity e	excl. cash reserve	31.4	69.4	136.1	206.3
Total available liquidity		102.0	209.3	250.4	250.3

Source: Czech National Bank and MoF

Table 21: Comparison of the Average Daily Balance on State Treasury Acounts (CZK billion)

	31 Dec 2011	31 Dec 2012	30 Jun 2013	31 Dec 2013
Average daily balance	79.5	178.7	298.1	278.7
Of which CZK	59.5	156.2	242.5	215.4
Of which EUR	20.0	22.5	55.6	63.3

Source: Czech National Bank and MoF



Figure 45: State Treasury Balance and Cash Reserve

Source: Czech National Bank and MoF

Comparing this year to 2012, there is an evident easing of the link between the development of the state treasury balance and the development of the cash reserve. The involvement of new client accounts into the state treasury was reflected in its total balance mainly at the beginning of 2013, when this factor outweighed the development of the cash reserve. A significant role in the first quarter of this year was also played by the state budget surplus, which is not included in the cash reserve, but is included in the total balance of the state treasury. The second half of the year was no longer so strongly influenced by one-off fluctuations on the part of new clients of the state treasury, which is why the development of the cash reserve is more visible within the total balance of the state treasury, although it does not represent the majority of the state treasury, and the growth of other available state treasury liquidity is clearly evident from the differences in the daily balances of the cash reserve and total state treasury balance.

Hedging against liquidity risk of the state treasury can be illustrated on the ratio of the cash reserve in individual months of this year and its ratio to the short-term state debt due within 1 year. In the first half of the year, the cash reserve is in the range of 40% to 55% of short-term state debt. In the second half of the year the Ministry proceeded to revise the Strategy for 2013 and reduce the cash reserve in connection to increasing the available liquidity of the state treasury thanks to the amendment to the Budgetary Rules Act, which is why the ratio of the cash reserve to the short-term state debt due within 1 year declined to the range of 20% to 40%. Hence, compared to last year this ratio declined, having been 33% to 55% in 2012. Even reducing the cash reserve did not disrupt the effort to attain a low degree of dependence on current developments of financial markets within the process of reducing costs on state debt management. Thanks to the balance on the accounts of new state treasury clients, issuance activity can be limited or expanded based on current development of the government bond yield on the primary and secondary market, without threatening the ability of the state to meet all of its liabilities on time and the related credibility on financial markets, even if the cash reserve was reduced by almost CZK 100 billion.

Compared to previous years, there was a gradual reduction of the cash reserve during this year, starting in April, when the impact of the amendment to the Budgetary Rules Act became apparent, and it was obvious how large an increase of availability state treasury liquidity could approximately be expected. For this reason, the reserve reached the value needed to cover all liabilities until the end of the year only in October. Compared to last year, when the coverage of all liabilities occurred in September, the reduction of the share of Ministry's resources in the total state treasury resources from the title of reducing the liquidity ratio thanks to the flow of new external resources to the state treasury became apparent, wherefore it was possible to stop accumulating the reserve during the year, which in 2012 was necessary practice to secure flexibility in financing and ensure independence of current developments on financial markets. Thanks to the balances on client accounts, which are subordinated to the treasury single account, it is even possible to use these external funds in the short term to ensure smooth financing even without a cash reserve, which leads to more effective state financing and the operational adaptability of issuance activity and other activities to potential changes on financial markets.

Figure 46: Ratio of the Cash Reserve to Liabilities Due within One Year





Figure 47: Ratio of the Total Cash Reserve to Liabilities Due by End of the Year

Note: The ratio is defined as the share of the cash reserve to the sum of all due liabilities and state financial assets operations by the end of the year. Source: MoF

The value of the cash reserve at the end of 2013 will reach CZK 44.0 billion. Were it necessary to rely only on the Ministry's resources in the case of an extreme situation on the financial market, it is obvious that the redemption on government bonds and state budget deficit would exhaust the cash reserve by March of next year. If we consider all the resources of the state treasury, financing of the state would be ensured until the end of August 2014. The reduction in the cash reserve compared to 2012 was enabled by the flow of new sources of available liquidity of the state treasury. Although the option of using external resources for funding reduces the safe value of the cash reserve, the Ministry does not expect a longterm reduction of the cash reserve to zero, because the external state treasury resources are also subject to fluctuations during the year, and therefore cannot be fully relied on.

Figure 48: Cash Resources at the End of 2013 and Cumulative Funding Needs in 2014



The prediction of state treasury balance and state budget balance development in 2014 was created based on the data available to date. The links between development of the state treasury balance and the state budget balance can be compared on a daily basis, because the budgeted revenue and expenditure form one of the most important and simultaneously most volatile components of the treasury single account. The estimated balances on the accounts of new state treasury clients, whose behaviour is difficult to predict, had to be added to the prediction of the state treasury components, whose behaviour is rather foreseeable thanks to the several years of history available to the Ministry. On these grounds, the prediction for next year will likely be encumbered by a substantial degree of inaccuracy, but it is expected that the main trends as registered in 2013 will be preserved even in 2014.



Figure 49: Daily Prediction of the State Treasury and State Budget Balance for 2014

The daily development of the CZK-denominated cash reserve must be monitored particularly for the purpose of planning of issuance activity. Nevertheless, at present when the state treasury has total available liquidity of around CZK 278.7 billion, it is not necessary to concentrate issuance activity into the period where the state budget deficit increases, because it can be distributed evenly throughout the whole year without regard to the development of the state budget balance. This strategy enables flexible reaction to changes in the situation on financial markets, and therefore it is expected in coming years that the value of the cash reserve achieved in 2013 in case of the budget deficit of CZK 100 billion will be maintained. In the short term the Ministry will be able to make do without its own resources, thanks to the balances on the accounts of mandatory and non-mandatory clients of the state treasury, which can be included in funding over the short term based on the amendment of the Budgetary Rules Act.

Figure 50: Daily Prediction of the Cash Reserve for 2014



6 - Risk Management and Portfolio Strategy

Public definition of the strategy 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 have been set up based on the requirements stemming from the cautious approach to the management of financial and credit risks while minimizing economic costs over the long term. The main risks to which the debt portfolio is subjected over the long term are refinancing, interest and currency risks. All of the objectives and limits defined below are being applied to the portfolio of the state debt as a whole, including derivative operations. Starting in 2011, the Ministry has been monitoring and from the point of view of market risks also managing the portfolio of related state financial assets, which are included in the composition of the net debt portfolio. The Ministry defines all the limits in accordance with international practice and respects the estimated absorption capacity of the domestic market.

Refinancing risk

Refinancing risk is managed by a system of four indicators: share of short-term state debt, share of medium-term state debt, average time to maturity and the maturity profile. These four indicators must be considered as a self-contained system, whereas focussing attention on only one of them is dangerous. For instance, a portfolio containing only the same share of a 50-year bond and a 3-month treasury bill has a relatively high average maturity, but the other indicators probably show a increased risk. Similarly, a portfolio with a low share of shortterm debt says nothing about the refinancing risk in the second or later year.

Over the course of 2013, there was a substantial reduction of refinancing risk in relation to the increase in available liquidity of the treasury single accounts. The average daily balance of the treasury single accounts grew by CZK 100.0 billion in 2013 compared to 2012, reaching CZK 278.7 billion, whereas more than 95% of these funds are invested into short-term money market instruments. In the short-term horizon, funds from the entire state treasury can be used in the case of funding shortages; in the medium and long-term horizon, only the cash reserve can be involved.

The share of short-term state debt (i.e. the share of debt due within one year of out the total state debt) is a key indicator of refinancing risk in the short-term horizon. The Ministry has been focusing on managing short-term refinancing risk since 2004 and since 2006 it applies limits which have not been exceeded in any year of their existence. In 2006 to 2012, the limit for this indicator was defined at 20.0%. For 2012 and 2013, the limit was increased by 5 p.p. to 25.0% in relation to introducing a limit on the share of medium-term state debt. The system of limits on the share of short-term and medium-term state debt allows the distribution of the refinancing risk of the debt portfolio over the short-term and long-term horizon. For 2014, the Ministry will reduce the limit of shortterm state debt by 5 p.p. to 20.0% of the total gross state debt. The Ministry has undertaken this step due to the increased availability liquidity of the treasury single accounts and the subsequent reduction of the cash reserve, which consists entirely of money market instruments. The decline in the limit is in line with the decline in the balance of state treasury bills outstanding, which occurred evenly over the course of 2013.

The expected share of short-term state debt at the end of 2013 is 15.9% of the total state debt. Compared to the end of 2012, the value of short-term state debt declined by 2.0 p.p., which is due largely to the negative net issue of state treasury bills in 2013 in the total nominal value of CZK -68.2 billion.

In assessing the overall refinancing risk of the debt portfolio, it is important to take into account the balance of assets available within one year. The expected share of state financial assets available within one year at the end of 2013 is 5.0% of the total state debt, its value having declined by 5.7 p.p. compared to the end of 2012. This decline resulted from the reduction of the cash reserve in 2013. Since 2011, available funds on the pension account are left in the same mode as the cash resources deposited on other state financial asset accounts. In this case, these liquid resources form a part of the treasury single account with a positive impact on immediate liquidity and state debt. The cash resources within the treasury single account will be invested into shortterm money market instruments with maturity in the order of days (repo operations) and may thus be involved in short-term financing. The expected funds balances of pension account and special-purpose state financial assets account at the end of 2013 are CZK 22.6 billion and CZK 11.0 billion. Despite the relatively sharp decline in the level of assets available within one year, the available liquidity of the state treasury at the end of 2013 covers almost the entire state debt due in 2014.

Figure 51: Structure of Short-Term State Debt and State Financial Assets Available within 1 Year



Note: As at the end of each year. The positive axis shows the structure of the short-term debt portfolio, total available liquidity of the state treasury and cash reserve. The negative axis shows the structure of state financial assets available within one year. Predictions for 2014, 2015 and 2016 are based on the base case scenario of funding programme for these years. Source: MoF

In 2013, the structure of short-term state debt also changed, with the share of medium-term and longterm government bonds exceeding the share of money market instruments in this category for the first time since 2008. The expected share of money market instruments in short-term state debt at the end of the year is 45.3%, having declined by 18.1 p.p. compared to the end of 2012. The expected share of money market instruments in total state debt is 7.2%, having declined by 4.2 p.p. compared to the end of 2012. In coming years, the Ministry does not expect a substantial increase in the share of money market instruments in short-term state debt. On the contrary, it would appear that the share of medium-term and long-term government bonds in the short-term debt will grow. In a situation where yields of 2-year to 3-year government bonds are close to the yields of 12-month state treasury bills, the Ministry prefers to issue bonds

with a short-term maturity period as opposed to state treasury bills, due to the lower refinancing risk. Should there be no significant growth in the difference between yields of bonds maturing within three years and yields of 12-month state treasury bills, the Ministry plans a zero or negative net issue of money market instruments outstanding in 2014, which will further reduce the refinancing risk and share of money market instruments in the shortterm state debt. If the policy of zero net issue of money market instruments is maintained in coming years, the share of money market instruments in short-term state debt at the end of 2014 would increase slightly compared to the end of 2013 due to the lower level of short-term state debt. Afterwards, however, the impact of this policy would be fully reflected in the increased share of medium-term and long-term bonds in the shortterm state debt.

	2007	2008	2009	2010	2011	2012	2013F
CZK-denominated medium-term and long-term government bonds	48.0	55.2	48.1	47.1	39.0	33.7	17.3
Savings government bonds	0.0	0.0	0.0	0.0	3.3	2.5	4.3
Foreign issues incl. hedging	0.0	0.0	0.0	0.0	0.0	0.0	32.4
Total bonds	48.0	55.2	48.1	47.1	42.3	36.2	54.0
Money market instruments	49.3	44.3	51.3	52.4	55.9	63.4	45.3
EIB loans	2.7	0.5	0.6	0.5	1.8	0.4	0.6
Short-term debt to GDP	4.5	4.6	4.6	5.7	7.8	7.8	6.9

Table 22: Structure of Short-Term State Debt (%)

Note: As at the end of each year. The GDP data come from Czech Statistical Office; forecasts come from Fiscal Outlook of the Czech Republic – November 2013 Source: Czech Statistical Office, MoF

In 2013, the short-term state debt was reduced despite the rising value of the gross state debt. In 2013, the trend which started in 2012 was

confirmed and emphasized, with the share of shortterm debt to GDP declining while the share of state debt to GDP rises. The predicted share of shortterm debt to GDP at the end of 2013 will decline by 0.8 p.p. compared to the same share at the end of 2012, and is thus on the level roughly between the years 2010 and 2011, although the predicted share of state debt is about 6.5 p.p. higher compared

to this level. In 2013, the growth of the share of gross state debt to GDP was significantly reduced compared to the period of 2007 to 2012, when this share grew by 4.4 p.p. per year on average.



Figure 52: Gross State Debt and State Debt Due within 1 Year

Note: As at the end of each year. The source for the GDP data for 2007 to 2012 is Czech Statistical Office, for 2013 to 2016 Fiscal Outlook of the Czech Republic – November 2013. The predictions for 2014, 2015 and 2016 are based on base case scenario of funding programme for these years. Source: MoF, Czech Statistical Office

The size of short-term state debt of the Czech Republic is relatively low compared to EU countries, with the share of short-term state debt to GDP far below the EU average and as well as below the EU median, on the level of Denmark and United Kingdom.



Figure 53: Short-term state debt in EU

Note: As of the end of October 2013. Excludes non-marketable state debt, includes retail state debt. The predictions of the gross domestic product of individual economics are based on the GDP predictions of the European Commission. Source: ESRB Risk Dashboard

In connection with refinancing risk, it is also necessary to mention the early redemption of savings government bonds, the value of which is not yet significant, given that the total nominal value of early redeemed savings government bonds in 2013 is CZK 0.2 billion. The Ministry is monitoring the situation and if necessary, is ready to compensate a substantial increase in the total nominal value of premature redeemed savings government bonds by reducing buy-backs of medium-term and long-term government bonds, so that the gross borrowing requirement remains unchanged.

Also in 2013, the Ministry proceeded to execute buy-backs of CZK-denominated medium-

term and long-term government bonds. These operations on the secondary market reduce the refinancing risk of the debt portfolio by reducing the share of short-term debt and extending the average maturity of the debt portfolio. The total nominal value of government bonds due in 2014 and later, bought back over the course of 2013, is CZK 7.5 billion. With regard to the situation on the secondary bond market and developments in early redemption of savings government bonds, buy-backs and exchanges of CZK-denominated medium-term and long-term government bonds due in 2015 and later are also planned in 2014 for up to CZK 10.0 to 30.0 billion.

In 2013, the Ministry also used a new facility in the form of lending repo operations, in which the collateral consists of medium-term and longterm government bonds. These are technical operations that were carried out for the purpose of supporting the liquidity of the government bond market, not to obtain cash resources. These operations affect the value of state debt in the same as well as the risk indicators of the debt portfolio. The total nominal value of repo operations carried out over the course of 2013 is CZK 20.7 billion. At the end of the year, all repo operations will be settled. Because the liquidity of the secondary government bond market is important to the Ministry, the Ministry plans to retain this facility in 2014. Should the total nominal value of repo operations concluded within this facility be significantly increased at any one moment, it would be suitable to adjust the risk indicator of state debt for this component.

In terms 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 using the share of medium-term debt to total state debt indicator, for which the Ministry has been setting explicit limits since 2012. For 2012 and 2013, this limit was set at 70.0%.

For 2014, the Ministry will leave the limit for the share of medium-term state debt to total state debt at 70.0%. The setting of this limit is related to the Ministry's long-term strategy, and therefore it is unlikely to change even in coming years. The expected value of the share of medium-term state debt to total state debt at the end of 2013 is at a level of 53.7%. Compared to the end of 2012, the share of medium-term debt to total state debt increased by 1.0 p.p. The expected share of state debt due within three years is 35.2% at the end of 2013.

Figure 54: State Debt by Maturity Baskets



Note: As at the end of each year. The predictions for 2014, 2015 and 2016 are based on base case scenario of funding programme for these years. Source: MoF

Another indicator used in managing of the refinancing risk is the average time to maturity of state debt. The goal for this indicator was first explicitly declared for 2005. The span of the target band was 1 year for the years 2005 to 2008, and in 2005 it amounted to 5.5 to 6.5 years and for 2006 to 2008 it was increased by 0.5 year to 6.0 to 7.0 years. For 2009 and 2010, the Ministry widened the target band by half a year, setting it down to 5.5 to 7.0 years. For 2011, the

Ministry narrowed the target band and moved it down to 5.25 to 6.25 years. For 2012 and 2013, the Ministry adjusted the target band down by 0.25 years to 5.0 to 6.0 years. The declared goals were fulfilled in all years. The downward adjustment of the target band in recent years was the result of the increased uncertainty related to the future development of the Eurozone and the related preference of investors to purchase short-term government bonds. For 2014, the Ministry has preserved the target band of average maturity of state debt on the level of 5.0 to 6.0 years with an outlook in the upper part of the interval. Maintaining the average time to maturity within the target band and smooth maturity profile of the debt portfolio determine the term and volume structure of the issues of government bonds on the domestic and foreign market and the setting of repayment schedule for loans drawn from the European Investment Bank. The expected average time to maturity of the state debt at the end of 2013 is 5.6 years. The value of this indicator has declined compared to the end of 2012 by 0.1 years, having been 5.7 years at the end of 2012.

In 2013, the average time to maturity of medium-term and long-term government bonds sold on primary and secondary market this year was extended by one year and one month in comparison to the end of 2012 and amounts to 7 years and 9 months (as of the end of 2013), resulting in obtaining highest value of this indicator since 2007. Despite this extension and relatively significant negative total nominal value of net issue of money market instruments, the average time to maturity of debt portfolio does not decrease, but decreases. The main reason is the structure of the debt portfolio; to maintain the stable average time to maturity, the debt portfolio in total nominal value of approximately CZK 1,500 billion aging by 1 year must be compensated by gross issue of government bonds in total nominal value of approximately CZK 180 billion, i.e. one eighth of nominal value of state debt. Another reason are, among the others, the issues of savings government bonds in 2013, which despite historically highest average time to maturity of newly issued bonds reduced the average time to maturity of newly issued medium-term and long-term government bonds in 2013 to 6 years and 11 months.

Figure 55: Average Maturity of State Debt and Declared Goals



Note: As at the end of each year. The predictions for 2014, 2015 and 2016 are based on base case scenario of funding programme for these years. Source: MoF

Figure 56: Average Time to Maturity of CZGB and Savings Government Bonds on the Domestic Market



CZGB CZGB (ind. savings government bonds)

Note: Average time to maturity of CZK-denominated CZGB and savings government bonds sold over the course of the respective calendar year as at the end of the year. Source: MoF

The Ministry monitors not only the average time to maturity of the total state debt portfolio, but also the average time to maturity of its individual components. The expected average time to maturity of money market instruments stabilized at 0.4 years since 2009. The Ministry does not expect any significant change in this value in 2014. The expected average time to maturity of foreign issues at the end of 2013 decreased by 1.0 years in comparison to the end of 2012 due to the non-realization of foreign issue in 2013. The expected average time to maturity of CZK-denominated medium-term and long-term government bonds at the end of 2013 decreased by 0.1 year despite higher average time to maturity of newly issued bonds in the course of 2013. The reason is the above-described discrepancy between the total nominal values of the existing portfolio of CZK-denominated mediumterm and long-term government bonds and total nominal values of newly issued CZK-denominated medium-term and long-term government bonds. The expected average time to maturity of savings government bonds at the end of 2013 decreased by 0.2 years in comparison to the end of 2012 despite the redemption of 1.5-year discounted savings government bonds, non-issuing of new discounted savings government bonds in 2013 "Christmas" series of issues and achieving historically highest time to maturity of savings government bonds

issued in 2013 "Christmas" series of issues in comparison with the earlier series. The reason is the above-described discrepancy between the total nominal values of the existing portfolio of savings government bonds and total nominal values of newly issued savings government bonds and higher share of gross issue of 3-year reinvestment savings government bonds compared to the five-year and longer savings government bonds.

At the end of 2013, the expected average time to maturity of state treasury bills amounts to 0.4 year, 5.9 years for CZK-denominated mediumterm and long-term government bonds including savings government bonds, 5.1 years for foreign issues including hedging and 11.4 years for nonmarketable state debt

Table 23: Average Time to Maturity of Individual Components of the State Debt (years)

Indicator	2005	2006	2007	2008	2009	2010	2011	2012	2013F
CZK-denominated CZGB	5.7	6.3	6.6	6.5	6.6	6.3	6.2	6.3	6.2
Savings government bonds	-	-	-	-	-	-	3.0	3.3	3.1
Foreign issues, incl. hedging	10.6	10.7	9.6	9.2	7.3	7.1	6.2	6.1	5.1
Money market instruments	0.4	0.4	0.2	0.3	0.4	0.4	0.4	0.4	0.4
Non-marketable state debt	10.3	9.7	9.3	12.0	12.2	12.5	11.5	11.8	11.4

Note: As at the end of each year. Foreign issues incl. currency hedging of the foreign-currency nominal value. Source: MoF

The declining trend in the average time to maturity of government bonds lasting since 2009 is partly caused by the decline of the total nominal value of government bonds in the segment with a remaining maturity of 10 to 15 years lasting since 2009. At the end of 2013, the expected share of the total nominal value of government bonds outstanding in the segment with a remaining maturity of 10 to 15 years in the total nominal value of all government bonds outstanding is 6.7%, having declined by 2.3 p.p. compared to the end of 2012, when it was 9.0%. On the other hand, the share of government bonds in the segment of remaining time to maturity of 5 to 7 years, 3 to 5 years, 1 to 3 years, and also up to 1 year has increased. The share of the government bonds in the segment of 1 to 3 years has been increasing since 2011. The segment of 7 to 10 years and above 15 years is relatively stable.



Figure 57: Structure of Government Bonds by Time to Maturity

Note: As at the end of each year. CZK-denominated CZGB, foreign issues, savings government bonds and state treasury bills are shown on positive axis. Buy-backs and cash reserve is shown on negative axis.

Issuance calendars of government bonds, sales of government bonds on secondary market, possible foreign issues and drawing of long-term loans from European Investment Bank will continue to be managed in accordance with the fulfilment of another key goal, namely the stabilisation and smoothing of the maturity profile of the state debt over time. The medium-term outlook shows the annual level of debt redemptions after taking into account the impact of buy-backs in the amount of CZK 180 billion. For this reason, the Ministry will offer only one auction of Issue 77, CZGB 0,50/2016 and the further sales of this bond will depend on the extent of withdrawal of Issue 34, CZGB 6,95/2016 form circulation probably in form of exchange operations.



Figure 58: Maturity Profile of State Debt and Financial Asset as at the End of 2013

With regards to the refinancing risk, the Ministry monitors the structure of the debt portfolio according to the individual instruments. Over the long term, fixed-rate CZK-denominated mediumterm and long-term government bonds account for the greatest share, with a predicted share of 52.2% of the total state debt at the end of 2013; having increased by 0.1 p.p. compared to the end of 2012. In 2014, the share of fixed-rate mediumterm and long-term government bonds should reach 52.6% of the total state debt. Expected share of floating-rate CZK-denominated medium-term and long-term government bonds will reach 12.1% of the total state debt in 2013, which represents an increase of 0.7 p.p. compared to the end of 2012. In 2014, the predicted value should reach 14.3%, which represents an increase of 2.2 p.p. The expected share of foreign issues at the end of 2013 is 19.1% of the total state debt, which represents an increase of 0.5 p.p. compared to the

end of 2012. This increase is caused partly by the Czech National Bank currency interventions, which depreciated the currency exchange rates to more than 27,00 EUR/CZK. Due to the redemptions of two foreign issues in total nominal amount of EUR 3,0 billion, the Ministry expects the share to decrease in 2014, even in case of realization of foreign issue in 2014. The expected share of state treasury bills at the end of 2013 is 7.2% of the total state debt, which represents a decline of 4.1 p.p. compared to the end of 2012. In case of zero net issue in 2014, the prediction indicates the decrease of the share of money market instruments to 6.7% of total state debt. The expected share of savings government bonds at the end of 2013 is 5.2% of the total state debt, which is an increase by 1.8 p.p. compared to the end of 2012. At the end of 2014, the Ministry predicts a further rise in the share of retail state debt by 1.3 p.p. to a level of 6.5% of the total state debt.

Note: Expected maturity profile as of the end of 2013. The positive axis shows liabilities and planned buy-backs on bonds due in later years carried out in 2014, the negative vertical axis shows state financial assets and planned buy-backs carried out in 2014, and carried out in 2014. CZK-denominated CZGB include savings government bonds. Excl. the roll-over of money market instrument Source: MoF

Figure 59: Structure of the State Debt by Instrument at the End of 2013 and 2014





Note: The prediction for 2014 is based on a base case scenario of funding programme for this year. Source: MoF

Since 2011 there has been an evident increase in the share of households in the holding of CZK-denominated medium-term and longterm government bonds, particularly due to the introduction of savings government bonds in 2011, which are designated for citizens and

Source: MoF

selected legal entities as an alternative to savings accounts and term deposits. At the end of 2013, the expected share of households in the holding of CZK-denominated medium-term and long-term government bonds is about 6.2%.



Figure 60: Structure of CZK-Denominated CZGB by Holder Type

Note: As at the end of each year. 2013 based on data available as of 30 October 2013 Source: MoF

The structure of domestic government bonds holders in recent years has not dramatically changed. Since 2011, there has been a clear increase in the share of domestic holders, which is mainly due to the issues of savings government bonds, which were first issued in this year. At the end of 2013, the expected share of household in domestic government bonds holders amounts to 5.4%. The increase of this share is caused mainly due to the issue of "Christmas" series of savings government bonds as at 12 December 2013. The share of nonresident in domestic government bonds holders is relatively low in international comparison and shows high stability, as since 2008, the value is ranges from 12.3% (end of 2008) to 15.3% (end of 2010). At the end of October 2013, this share amounts to 13.6%. The share of domestic banks in domestic government bond holders stabilized in range from 46.4% (end of 2010) to 50.7% (end of 2012). At the end of October 2013, the share of domestic banks in domestic government bond holders amounts to 48.4%. The share of non-financial institution in domestic government bonds holders shows a downward trend, as since 2010, it has decreased by 5.3 p.p., and is almost fully compensated by the increase of the share of households in domestic government bonds holders.

In terms of geographical structure of non-residents holding domestic government bonds, the non-





Figure 62: Structure of Non-Resident Holders of Domestic CZGB



Interest Rate Risk

Interest rate risk remains the most important market risk affecting the management of state debt. The Ministry manages interest rate risk using the strategic indicator - **average period until re-fixing of state debt**. Starting in 2011, the Ministry has set an explicit target band for this indicator to value between 4.0 to 5.0 years. The goal was set in line with international practice, taking into consideration optimization of costs of state debt and risks stemming from the re-fixing of interest rates.

The average time to re-fixing of state debt in the range of **4.0 to 5.0 years** is maintained in accordance with the longer-term strategy of the interest rate risk management also for 2014. The primary tool for fulfilling this goal in 2014 will be the issues of fixed- and floating-rate government bonds and drawing of loans from the European Investment Bank. The Ministry believes that the target band may be achieved using only the primary tool. However, the Ministry is monitoring the development of debt crisis in the Eurozone viewing it as a matter of concern, and in case the investors' interest shifts towards the instruments with a rate at the shorter end of the yield curve, the Ministry will consider reaching the target band using derivate operations.

The expected value of the average time to refixing of state debt in 2013 is set at the level of 4.3 years and thus within the target band. Compared to the end of 2012, there has been a decrease in the average time to re-fixing of state debt by 0.1 year. The decrease in the average time to re-fixing is consistent with the decrease in the average time to maturity of the debt portfolio during 2013. In the segment of instruments bearing interest on the short end of the yield curve, floating-rate medium-term and long-term government bonds in the total nominal value of CZK 30.4 billion were issued in both the primary and secondary market in 2013, which amounts to 20.9 % of the total gross issue of CZK-denominated medium-term and long-term government bonds in 2013. Compared to 2012, the share of newly issued floating-rate medium-term and long-term government bonds decreased by 21.6 p.p., having been 42.5% at the end of 2012. As the end of 2013, the share of state treasury bills outstanding in the total state debt amounts to 7.2%, having decreased by 4.1 p.p. from 11.3% at the end of 2012.

The decrease of average time to re-fixing of state debt causes the interest costs of state debt are on average generated on the shorter end of the yield curve, which should result in savings in interest costs in medium term. The Ministry's benchmark model compares accrued interest costs generated by the government bonds sold in auctions of medium-term and long-term government bonds with the benchmark portfolio containing only fixed-rate government bonds issued on the same day the auction is carried out and in the same nominal value as the real government bond and with the time to maturity ensuring achieving the average time to maturity of synthetic benchmark and debt portfolio corresponding to the average time to maturity of real debt portfolio as of the end of 2013. The benchmark model shows that regarding issuance activity on primary market of medium-term and long-term government bonds , due to the properly set up structure of issuance calendars of the mix of floating-rate and fixedrate medium-term and long-term government bonds, the decrease in the average time to refixing generates savings in the amount of CZK 0.2 billion. Detailed information about this benchmark portfolio is available in the section Benchmark portfolio hereinafter.



Figure 63: Interest Re-fixing of State Debt and State Financial Assets

Note: As at the end of each year. The positive vertical axis shows the debt portfolio, the negative vertical axis shows state financial assets. The predictions for 2014, 2015 and 2016 are based on a base case scenario of funding programme for these years. The predictions of modified durations is based on current interest rates Source: MoF

Another indicator monitored by the Ministry in connection with interest rate risk management, for which the Ministry has also been setting the strategic goal for each year since 2006, is the interest re-fixing of the debt portfolio within 1 year, referring to the share of debt which is sensitive to interest rate fluctuations on the financial market the following year. For 2014, the Ministry is keeping the target band at the level of 30.0 to 40.0% of total state debt with an outlook close to the middle of that interval. This goal is in line with the average time to re-fixing in the target band of 4.0 to 5.0 years. The target band was first achieved in 2009. From 2006 to 2012 the indicator shows a growing trend in the amount of 2 p.p. on average per year, which was caused by the increase in the amount of state treasury bills outstanding in 2009 to 2012 and non-negative net issue of floating-rate government bonds in every year since 2008. At the end of 2013, the expected decrease of this indicator amounts to 2.1 p.p. in comparison to the end of 2012, as the expected value of the interest re-fixing of the debt portfolio within 1 year amounts to 35.4% and stays in the middle of target band valid for 2013, despite

a significant decrease in the amount of money market instruments outstanding and a decrease in the share of issued floating-rate government bonds in total gross issue in 2013. The development of the interest re-fixing of the debt portfolio within 1 year is therefore same as the development of the average time to re-fixing as both indicator decreased during 2013. However, these indicators have different impact on interest rate risk

The structure of interest re-fixing of the debt portfolio within 1 year is important not only for the expression of short-term interest rate risk, but also affects long-term interest rate risk expressed by the indicator average time to re-fixing. The debt portfolio sensitive to interest rate fluctuation in the financial market in the following year consists mainly of CZK-denominated floating-rate mediumterm and long-term government bonds (34.2%), government bonds issued on foreign markets (24.0%) and state treasury bills (20.3%). Loans from the European Investment Bank account for 11.2% and CZK-denominated fixed-rate mediumterm and long-term government bonds account for 7.7% of this portfolio. Compared to 2012, there was a change in the structure of interest re-fixing of state debt, particularly in foreign bonds, where the share increased by 13.6 p.p. due to the redemption of the 1st and 4th issue of Eurobonds in 2014 in a total nominal value of CZK 86.4 billion; in CZK-denominated fixed-rate medium-term and long-term government bonds there was a decline of 9.0 p.p. due to the redemption of one CZK-denominated fixed-rate issue in 2014 in the amount of CZK 46.0 billion compared to the redemption of two fixed-rate

Figure 64: Interest Re-fixing of State Debt within 1 Year



The Ministry also monitors the structure of CZK-denominated medium-term and long-term government bonds based on the current time to maturity, the original time to maturity and coupon rate. Thus constructed structure of bonds allows a detailed breakdown of interest costs on state debt service generated by CZK-denominated medium-term and long-term government bonds. At the end of 2013, these bonds have an average coupon rate of 3.39%. The bond maturing in 2014 has a coupon rate of 2.75%, in the structure of 2- to 4-year original maturity the bonds have an average coupon rate of 2.07% and in the 8- to 10-year original maturity the bonds have an average coupon rate of 2.43%. The discount on state treasury bills and discounted

issues for a total nominal value of CZK 100.5 billion in the previous year. Redemptions of fixed-rate issues also caused a rise in the share of floatingrate government bonds in the interest re-fixing of state debt within 1 year by 5.4 p.p. The decline in the share of state treasury bills in the interest refixing of state debt within 1 year is fully consistent with the decline in their nominal value outstanding in 2013 and amounts to 11.2 p.p. compared to the end of 2012.



Figure 65: Structure of Interest Re-fixing of State Debt within 1 Year (% of total state debt)

savings bonds is a cost for the state budget at the moment of the sale of the bond, and therefore does not affect interest costs on state debt service in future years. In 2013, the Ministry opened three new benchmark issues of fixed-rate medium-term and long-term government bonds, the gross issue of which account for approximately 60% of the total gross issue of CZK-denominated medium-term and long-term government bonds on the primary and secondary market in 2013. Due to the low yields to maturity of CZK-denominated government bonds at the time of setting their coupon rates, the indicator of average coupon rate for maturity in 2016 declined by 0.57 p.p. and for maturity in 2019 by 1.12 p.p.

Table 24: Maturity Profile of CZK-Denominated CZGB by Time to Maturity and Coupon Rate (% p.a.)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024+	average
Average coupon rate ¹	2.75	3.34	2.08	3.02	3.89	3.78	3.75	3.85	4.70	1.41	4.95	3.39
Average yield to maturity ²	1.98	3.11	3.77	4.01	3.96	3.71	3.93	3.25	4.72	-	4.19	3.72

¹ Includes fixed-rate medium-term and long-term government bonds

² Includes only fixed-rate medium-term and long-term government bonds, exludes discounted and inflation linked savings government bonds and state treasury bills Source: MoF

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

Figure 66: Maturity Profile of CZK-Denominated CZGB by Time to Maturity and Coupon Rate (% p.a.)



■ 2-4 ■ 4-6 ■ 6-8 ■ 8-10 ■ 10-15 ■ 15+ ■ VAR CZGB ■ Savings government bonds

Note: Expected maturity profile at the end of 2013. Data in the individual segments represents the average coupon rate in %. Excluding discounted and inflation linked savings government bonds. Source: MoF

The Ministry also monitors the structure of CZKdenominated fixed-rate medium-term and longterm government bonds based on the current time to maturity, time to maturity at the moment of the sale of the bonds and achieved yield to maturity at the moment of sale. Thus constructed structure of bonds indicates the average annual costs of these bonds in the individual segments of the current time to maturity and time to maturity at the moment of the bond sale. At the end of 2013, the average annual costs of the CZK-denominated fixed-rate medium-term and long-term government bonds amount to 3.72%. The buy-backs of bonds due in 2014 carried out in 2013 have reached an average yield to maturity of 0.05%. In 2014, government bonds with average annual costs of 1.98% mature in the following structure: bonds issued as 0- to 2-year bonds with average annual costs of 0.17%, bonds issued as 2- to 4-year bonds with average annual costs of 2.10%. The low yields achieved in auctions of medium-term and long-term government bonds across the maturity profile caused the decline in the average annual costs in all maturities in comparison to the average annual costs as at the end of 2012. The average annual costs decreased the most for medium-term and long-term government bonds maturing in 2016 (decrease of 1.77 p.p.) and 2019 (decrease of 1.13 p.p.), due to the relatively low yields to maturity and the issuance of the aforementioned new benchmark issues of mediumterm and long-term government bonds.

Figure 67: Redemption Profile of CZK-Denominated Fixed-Rate CZGB by Time to Maturity at the Moment of Sale and Achieved Yield to Maturity (% p.a.)



■0-2 ■2-4 ■4-6 ■6-8 ■8-10 ■10-15 ■15+ ■Buv-backs

Note: Expected maturity profile at the end of 2013. 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 %. Excluding savings government bonds. Source: MoF

Within the net debt portfolio, the Ministry also monitors the development of the basic risk parameters of investment portfolios. The value of the indicators is mainly affected by the amount of funds managed on the pension account. The Ministry decided not to further invest these available funds, but to keep them in the same mode as the cash resources deposited on the other accounts of state financial assets. In this case, these liquid resources form a part of the treasury single account with a positive impact on immediate liquidity and state debt. Within the treasury single account, the cash resources are invested in short-term money market instruments with maturity in the order of days.

Table 25: Risk Parameters and Yield of Investment Portfolios

Parameter	2007	2008	2009	2010	2011	2012	2013F
Average yield (%)	3.8	2.9	2.1	1.9	2.1	1.5	1.3
Average maturity (years)	5.1	2.0	1.9	2.0	2.2	1.7	1.4
Modified duration (years)	4.2	1.8	1.7	1.8	2.1	1.0	1.1

Source: MoF

Benchmark Portfolio

In order to assess the ability to generate profit from the decline of the average time to re-fixing of state debt and to create savings on interest costs for servicing state debt thanks to average generation of such costs on the short end of the yield curve, the Ministry created the synthetic benchmark portfolio consisting of the fixed-rate CZK-denominated bonds only. The bonds contained in the benchmark portfolio are always issued on the auction day at the same nominal value as the real issued bonds. All bonds within the benchmark portfolio are issued with the same time to maturity, whereas this time to maturity guarantees the same average time to maturity of the synthetic portfolio of state debt containing the benchmark portfolio as the average time to maturity of the real portfolio as of at the year's end. The predicted average time to maturity of the state debt as of at the end of 2013 is 5.6 years. Provided the real issuance of CZK-denominated medium-term and long-term government bonds is substituted by the fixed-rate benchmark portfolio bonds with maturity of 8.2 years at the time of auction, the required average maturity of the synthetic portfolio of state debt will be 5.6 years as at the end of 2013.

Figure 68: Time to Maturity of Medium-Term and Long-Term Government Bonds Sold in Auctions in 2013 and Benchmark Bonds



The average weighted yield of the portfolio of CZK-denominated medium-term and long-term government bonds sold at auctions during 2013 amounted to 1.53% p.a. The average weighted yield of the benchmark portfolio bonds achieved in 2013 amounts to 1.85% p.a., i.e. it is 32 basis points higher than the real portfolio yield. To

assess the actual savings achieved in 2013, it is essential for the 2012 accrued interest costs of each issued bond to be expressed in both the real and benchmark portfolio and to subsequently compare these total accrued costs in the individual portfolios. The total accrued interest costs for 2013 from all actually sold CZK-denominated mediumterm and long-term bonds at auctions during 2013 amount to CZK 1.1 billion. The total accrued interest costs for 2013 generated in the benchmark portfolio is CZK 1.3 billion. The achieved savings on interest costs of the state debt amounting to

CZK 0.2 billion demonstrate that a decrease to the average re-fixing of the state debt portfolio resulted in a reduction to interest costs in 2013 thanks to an appropriately set issuance calendar.





It must be noted that the achieved savings of CZK 0.2 billion do not follow from the decline in yields from government bonds, which was prevalent throughout 2013. The savings are generated entirely by the setting of the issuance calendar, so as to profit from the growing shape of the yield curves over the course of 2013. It must also be noted that the reduction of the average time to maturity of the debt portfolio does not automatically mean a reduction of the interest costs of the state debt every year. The price for the possibility of generating savings is the higher risk of increased interest rates and yields, which can mean negative achieved savings.

Over the course of 2013, 31 auctions of fixed-rate CZK-denominated medium-term and long-term government bonds at the total nominal value of CZK 107.3 billion and 9 auctions with floating-rate CZK-denominated medium-term and long-term government bonds at the total nominal value of CZK 28.8 billion were held on the primary market. The average weighted time to maturity of all CZK-denominated medium-term and long-term government bonds sold at auctions on the primary market in 2013 reached a value of 7.6 years as at the end of 2013. To achieve the target average time to maturity of 8.2 years.

Cost-at-Risk of State Debt

Since 2005, the Ministry has been applying a sophisticated model framework known as Cost-atrisk (CaR) for measuring and managing interest risk, which is based on Value-at-Risk methodology and simulates future expected and maximum interest costs 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 portfolio of state debt, which is based on the planned method of funding the government's gross borrowing requirement while respecting the set strategic goals for managing financial risks. The primary goal of the model is to determine the maximum costs of 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 costs of state debt. The simulation framework operates separately with the interest costs and interest revenues. The outcome of aggregation of interest costs and interest income are the net interest costs of state debt. Compared to gross expenditure on state debt service, gross interest costs do not include fees related to state debt service, which are of a deterministic nature.

The following figure illustrates a comparison of net interest costs at risk, the expected as well as budgeted net interest costs with the net interest costs which were actually realized. Over all the years the CaR methodology being applied, the model has fulfilled the primary goal, since the predicted maximum costs were not exceeded in any of those years.

Table 26: Net Interest Costs and Costs at Risk (CZK billion)

	2006	2007	2008	2009	2010	2011	2012	2013	2014P	2015P	2016P
Budgeted costs ¹	33.9	37.8	43.7	41.3	56.1	66.7	72.1	63.6	57.8	64.1	70.3
Actual costs ²	31.5	34.0	37.5	44.1	35.6	45.0	41.1	50.6	-	-	-
Expected costs	32.4	33.3	41.7	44.9	57.5	49.1	56.4	50.6	50.9	55.2	61.7
CaR 95%	36.6	35.8	50.2	49.9	62.9	59.2	64.9	61.3	60.0	73.6	83.8
CaR 99%	-	-	-	-	-	67.8	71.5	65.9	62.3	82.3	97.0

¹ In 2014, the budgeted net interest costs after the first reading of draft State Budget Act in the Budget Comittee of the Chamber of Deputies of the Parliament of the Czech Republic submitted by the government, in 2015 and 2016, Medium-term Outlook of the State Budget of the Czech Republic . As of 13 December 2013 ² In 2013, an expected net interest costs Source: MoF



Figure 70: Net interest Costs and Costs at Risk (CZK billion)

Note: Original budgeted costs in 2009. In 2013 an estimate of the actual costs at end of year. The predictions for 2014, 2015 and 2016 are based on base case scenario of funding programme for these years. Source: MoF

Budgeted net interest costs on state debt service for 2014 are at the 84% quantile of the CaR indicator and therefore will not be exceeded with the probability of 84%. In 2015 and 2016, the expenditure frameworks of budget chapter 396 -State debt are above expected interest costs on state debt service a do not reach the values of CaR 99% and CaR 95% indicators, which is mainly due to the volatility of interest rates, which increases witch increasing prediction horizon. For this reason, the difference between 99% quantile and the expectation amounts to approximately CZK 27.1 billion in 2015 and approximately CZK 36.3 billion in 2016, while this difference amounts to CZK 11.4 billion in 2014. Due to the fact that the state budget is compiled only for the following year, the prediction horizon of interest costs for the budget compilation for following year will be shorter, and therefore, given the market condition remain unchanged, the difference between expected costs and CaR 99% indicator will decrease due to the lower volatility of the interest costs prediction.

In 2013, the actual gross interest costs of state debt are assumed to reach approximately CZK 57.5 billion, the expected gross interest costs in 2013 predicted by the model amount to CZK 58.7 billion. The assumed interest revenue of the state debt in 2013 amounts to CZK 6.9 billion, while the interest costs in 2013 predicted by the model amount to CZK 8.1 billion. The assumed net interest costs of the state debt in 2013 amount to CZK 50.6 billion and are at the value predicted by the model.

The assumed net interest costs will thus remain below the CaR 95% and CaR 99% level even in 2013, having been fixed at CZK 61.3 billion and CZK 65.9 billion, respectively. The primary goal of the model was thus achieved, as the actual interest costs of the state debt remained below the CaR 99% level and the fulfilment of the state budget balance for 2013 approved by the Chamber of Deputies from the title of budget chapter 396 – State debt was not jeopardized. The expected gross interest costs predicted by the model are CZK 1.2 billion higher compared to the predicted reality and the prediction of expected net interest costs corresponds with the expected reality. The prediction of expected interest revenue is CZK 1.2 billion higher compared to the expected reality.

The difference in expected gross interest costs is given primarily by the lower total issue of state treasury bills according to the Revision of the Strategy for 2013 and due to the state treasury bills auction yields lower than predicted by the model. The total issue of state treasury bills in 2013 decreased from the originally planned approximately CZK 267.0 billion to CZK 172.2 billion. The weighted yield achieved in state treasury bills auctions predicted by the model was 0.52%, but due to the decline in the government bond yield curve at the short end, a weighted yield of 0.13% was achieved in auctions. The total impact on the gross interest costs in the case of state treasury bills discounts was thus approximately CZK 0.9 billion. Due to the continuing decrease of the PRIBOR reference rates, the costs are approximately CZK 0.2 billion lower arising from floating-rate instruments of state debt. Due to the changes in medium-term and long-term government bonds issue calendars, which reacted flexibly to the situation on the financial market, savings in gross interest costs in the amount of approximately CZK 0.1 billion were achieved.

As for interest revenue, the prediction of expected interest revenue is CZK 1.2 billion higher compared to the predicted reality. The difference is caused primarily by changes in the issue plan of mediumterm and long-term government bonds, where the re-opening of issues with relatively high coupon rates was lower than planned, resulting in lower revenue in form of premiums and accrued interest revenue. The total decrease in revenue caused by changes in the structure of the issue plan was approximately CZK 1.1 billion.

In 2013, the predictions made by the model were relatively accurate. However, it is essential to point out. that the model is designed to predict the probability distribution of interest costs of the debt portfolio, i.e. assigning the probabilities to each possible scenario of the interest costs development. The expected value is weighted average of possible outcomes, and the characteristics of continuous distributions imply that the probability of actual costs equalling expected is zero. The extraordinary accuracy of the model in 2013 is documented also by the predictions of 10-year swap rates made on 13 November 2012 shown on the following picture. Money market interest rates expressed by 6-month PRIBOR got beyond the simulations of the 1% and 99% guantile mainly due to the high illiquidity of these rates.







In terms of the results of fixed-rate mediumterm and long-term government bonds in 2013, the weighted yield achieved in auctions of these government bonds decreased, as the yield amounted to 1.7 p.p. at average time to maturity of 8.1 years. In comparison to 2012, weighted yield decreased by 0.7 p.p. while the average time to maturity increased by 1.2 year.



Note: Simulations carried out on 13 November 2012 Source: MoF

The assumed net interest costs on state debt service will amount to CZK 51.9 billion in 2013 on an accrual basis, of which net interest costs on state debt issued in 2013 amount to CZK 1.6 billion. The assumed total nominal amount of newly generated state debt in 2013 amounts to CZK 360.9 billion including money market instruments roll-over and excluding savings government bonds yields reinvestment, which does not affect accrued costs. Due to the time heterogeneity of individual borrowing operations in 2013, the accrued costs on this debt will increase to CZK 3.3 billion in 2014, which is maximum value of accrued costs on state

debt issued in 2013. After 2014, the accrued costs on this debt will only decrease as the individual instruments, which are parts of this debt, will be redeemed. Specifically, these costs will decrease to CZK 3.2 billion in 2015 and CZK 3.1 billion in 2016.

	Nominal		Net inter		
	value	2013F	2014F	2015F	2016F
Cash basis expression	360.9	-3.1	3.1	3.1	4.2
Accrued basis expression	360.9	1.6	3.3	3.2	3.1
Gross issuance of CZGB	145.6	1.2	2.2	2.2	2.1
Gross issuance of state treasury bills	172.2	0.1	0.1	-	-
Foreign issues	-	-	-	-	-
Gross issuance of savings government bonds	38.8	0.3	1.0	1.0	0.9
Drawing of EIB loans	4.3	0.0	0.0	0.0	0.0

Table 27: Accrued Interest Costs of the Newly Issued State Debt (CZK billion)

Note: Excluding reinvestment of yields. The predictions for 2014, 2015 and 2016 are based on base case scenario of funding programme for these years.

Completely different development of net costs on the same debt can be seen when expressed in cash basis, as assumed amount of these costs in 2013 amount to CZK -3.1 billion. In the following years, the net interest costs on state debt issued in 2013 will increase to CZK 3.1 billion in 2014 and 2015, and to CZK 4.2 billion in 2016. Newly generated state debt in 2013 brought state budget cash revenue in total amount of CZK 3.1 billion in 2013 due to the re-openings of issues with high coupon rate, which together with low market yields generated auction premiums. State budget revenues from state debt issued in 2013 will be compensated by higher expenditure on this debt in following years, which will be fully shown in 2016 and later. It is true, that cash and accrued net interest costs on new state debt are equal for the existence of this debt. The following figure shows that in 2010 to 2013 the debt issued in each of those years generated cash revenue in the

year of issue, which was caused by the continuous decrease of market yields and supporting the liquidity of the secondary market. If case that only 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 and cash net interest costs would be identical in the year of issue. For this reason, the accrual expression of costs on state debt is more accurate and revealing, since it is not affected by the reopening of issues with other than market coupon rate, which, however, can not 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 that the accrued net interest costs on newly issued state debt in 2013 decreased significantly compared to the accrued net interest costs on debt issued in 2012.



Figure 72: Net Accrued and Cash Interest Costs of Newly Issued Debt

After the substantial decline of yield curves on the CZK and EUR money market in 2012, the 6-month PRIBOR rate has been decreasing with very low volatility. On contrary, 6-month EURIBOR rate has showed significantly higher volatility in 2013 and at the end of November began to increase again.

The Czech National Bank kept the basic interest rate (2-week repo rate) at a historical minimum at 0.05% during the whole 2013 and didn't decrease it even after the announcement of foreign exchange interventions against CZK.

Figure 73: Development of Rates: 6M PRIBOR, 6M EURIBOR and 2W Repo Rate



Note: As at 13 December 2013 Source: Bloomberg

In 2013, the yield curves of CZK-denominated government bonds remained at historically low levels after significant decrease in 2012. With the exception of temporary sharp increase at the end of first half of 2013, short-term CZK-denominated

government bonds maturing within 3 years remained at the historically low levels during 2013, which were reached after the announcement of foreign exchange interventions against CZK by Czech National Bank.



Figure 74: Yield Curve of CZK-Denominated Government Bonds

Note: Yield curve of CZK-denominated government bonds always at the end of the year, in 2013 as at 13 December 2013. Source: MoF, MTS, Bloomberg

The risk premiums of government bonds stabilized during 2013 at very low levels in comparison to previous years. The risk premium is defined as the difference between the yield curve of government bonds and the yield curve of the money market. The low value of the risk premium confirms the attractiveness of the Czech Republic as an issuer of government bonds among investors. This situation confirmed the Ministry's correct decision at the end of 2012 to model this premium in a less conservative manner. The value of the risk premium for a 10-year CZK-denominated government bond at the start of the year was approximately 50 basis points, and at the end of the year it is around 30




Source: MoF, MTS, Bloomberg

For 2014, the Ministry is again operating with the three-year simulation horizon, due to the correspondence of the prediction of revenue and expenditure of budget chapter 396 - State Debt as a part of the Medium-term Outlook of the State Budget of the Czech Republi, which is construed for three years. The three-year simulation horizon is used to conduct analyses of the efficient frontier, which provides better comparability of the individual strategies through the gradual accumulation of expected interest costs and relative risk of individual issue strategies. The yield curves simulations fully reflect the decline in the level and the volatility of short-term government bond yields after the announcement of foreign exchange interventions against CZK.

The interest rate model used to construe the CaR indicator for the period of 2014 to 2016 is based on the modelling of the entire yield curve. Another very important feature of the model is the nonundervalued estimate of the volatility of the long curve end. The model was defined for the first time ever and applied in Yacine-Ait Sahalia: Testing Continuous Time Models of the Spot Interest Rate, The Review of Financial Studies, 9, 2, 385-426, 1996. The model is characteristic for its "mean reversion" feature, i.e. convergence of expected rates to its balanced value and has been modified by the Ministry so as to comply with Czech market specifics. The model parameters are estimated based on historical daily observations of the Czech yield curve starting on 25 August 2000. 10 000 simulations of interest rates are conducted daily for each of the required maturities for the horizon from 27 November 2013 to 31 December 2016. Due to the fact that the applied

model contains the feature of the interest rate return to its long-term mean value, the model expects the rates to increase in the medium-term horizon. The model outcome includes simulations of money market yield curves, according to which, however, only a small portion of the state debt bears interest. Therefore, it is important to model the risk premium of government bonds, defined as a difference between the government bonds yield curve and money market yield curve. Like in 2012, the Ministry opted for a less conservative approach to modelling the risk premium for 2014 to 2016. In the previous year, this approach better described the actual situation in the markets and did not unjustifiably increase the value of the risk premium and thereby the simulated interest costs of state debt. As from 2012, the Ministry has switched from the CaR 95% indicator to the CaR 99% indicator when evaluating the risk of interest costs of state debt. It was first used to estimate costs of state debt in 2011. One of the reasons for this transition is compliance with the risk management practices in developed financial institutions. The CaR 95% indicator is still constructed along with the whole probability distribution of future interest costs

The **gross interest costs in 2014** predicted by the model amount to **CZK 58.3 billion**. Gross interest costs at risk, i.e. CaR 99% amount to CZK 66.8 billion (CaR 95% CZK 64.9 billion). The actual gross interest costs in 2014 will not be more than CZK 8.5 billion higher compared to expected costs with 99% probability. **The budgeted gross interest costs** of budget chapter 396 – State Debt in 2014, as approved by the government, amount to **CZK 65.2 billion** and are thus at 96% quantile of gross interest costs distribution in this year.

When using the simulation of interest rates from the Funding and Debt Management Strategy for 2013, in which the CaR indicator for 2014 had already been construed, and when using the currently valid funding plan for 2014, the budgeted gross interest costs of budget chapter 396 – State debt in 2014 approved by the government are at a 70% quantile of gross interest costs distribution in 2014. The CaR 2014 analysis published in the previous Strategy was based on facts known as at 13 November 2012. The difference

in the values of quantiles is caused by the shorter horizon of prediction, which causes lower volatility of the predicted interest rates in 2014. Another factor that caused the reduction of the costs predicted by the model was a further decline in the risk premium on government bonds. The following table shows in detail the development of cumulative gross interest costs of state debt in 2014 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 28: Development of Cumulative Gross Interest Costs (CZK billion)

Months of 2014	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
Expected costs	3.3	3.4	6.7	20.3	28.6	33.4	34.0	38.3	50.6	52.4	55.9	58.3
Absolute CaR 95%	3.6	4.0	7.9	21.8	30.6	35.7	36.9	41.7	55.0	57.7	62.1	64.9
Absolute CaR 99%	3.7	4.1	8.2	22.2	31.1	36.4	37.8	42.8	56.3	59.3	64.0	66.8

Source: MoF

The graphic presentation of simulations of cumulative gross interest costs of state debt in 2014 calculated on a daily basis is shown in the

following figure. The figure also shows the expected values of costs and the respective 5% and 95%, 1% and 99% quantiles of simulated values.

Figure 76: Simulation of Gross Interest Costs of State Debt over the course of 2014 (CZK billion)



Note: Development of gross interest costs on a daily basis. Source: MoF

The net interest costs in 2014 expected by the model amount to CZK 50.9 billion. Net interest costs at risk, i.e. CaR 99% amount to CZK 62.3 billion (CaR 95% CZK 60.0 billion). Actual net interest costs in 2014 thus will not exceed expected costs by more than CZK 11.4 billion higher with 99% probability (CZK 9.1 billion with 95% probability). The budgeted net interest costs of state debt for 2014 approved by the government amount to CZK 57.8 billion, which corresponds to 84% quantile of these interest costs distribution in 2014. The difference between the quantile of net interest costs on state debt service and the quantile of gross interest costs is caused by the fact that the Ministry decided to budget revenue using a less conservative approach based on expectations of the model, and not using the 99% quantile simulation as it did in previous years.

Table 29: Development of cumulative net interest costs in 2014 (CZK billion)

Months of 2014	1	2	3	4	5	6	7	8	9	10	11	12
Expected costs	2.1	-0.2	1.8	15.1	22.5	27.1	27.5	31.6	43.7	45.3	48.5	50.9
Absolute CaR 95%	2.7	1.2	4.2	18.0	26.3	31.4	32.5	37.2	50.4	53.0	57.2	60.0
Absolute CaR 99%	2.8	1.5	4.8	18.7	27.2	32.4	33.7	38.6	52.1	55.0	59.5	62.3
Source' MoF												

Source: Mol







Source: MoF

The Ministry is also concerned 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 Eurozone, a sharp increase of the risk premium for Czech government bonds, etc. The Ministry strives to quantify the impact of these circumstances on interest costs and revenue of budget chapter 396 - State debt. 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 2014. 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.

	Current model	Shift of rates at the short end of the yield curve		Shift of ra long end o cu	ites at the of the yield rve	Shift of the whole yield curve		
		by 1p.p.	by 5 p.p.	by 1 p.p.	by 5 p.p.	by 1 p.p.	by 5 p.p.	
Expected net costs	50.9	53.6	64.3	56.8	73.4	59.5	86.9	
Absolute CaR 95%	60.0	62.7	73.2	65.1	79.8	67.8	93.1	
Absolute CaR 99%	62.3	65.0	75.6	67.3	81.4	70.0	94.7	

Table 30: Development of Net Interest Costs in Case of Sudden Interest Hikes (CZK billion)

Note: The shock in the form of a one-time shift in the yield curve will occur at the start of 2014. Source: Mol

The shift of the yield curve for CZK-denominated government bonds at the short end by 1 p.p. upwards in 2014 would bring an increase in the expected net interest costs by CZK 2.7 billion. If the rates increased at the long end of the yield curve by 1 p.p., the expected net interest costs of the budget chapter 396 - State debt would increase by CZK 5.9 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 costs in 2013 by approximately CZK 8.7 billion. Compared to 2013, the Ministry is more exposed to the risk of a shift of the interest curve at its long end, which is due mainly to the reduced balance of state treasury bills in the debt portfolio and the resulting lower gross issue.

The Ministry also quantifies the impact of an unplanned increase of the state budget deficit on the interest expenditure of the budget chapter 396 - State debt. If the state budget deficit of the Czech Republic were to increase by CZK 10.0 billion in 2014, and assuming the financing of this increase by means of the equal increase of nominal values of medium-term and long-term government bonds sold in auctions according to the current issue calendar, this change would result in an increase of expected gross interest rates of the budget chapter 396 - State debt by CZK 0.2 billion. The impact on the state budget on a cash basis is very sensitive to selected methods of financing the deficit increase. If a bond with a premium is issued, the increased gross issue may not be reflected in a growth of costs with regard to the cash principle, and will cause a reduction of net costs; the expense will be apparent only in later years in the form of increased coupon payments. If the accrual approach is applied to costs for managing state debt, the increase of the gross issue would be apparent immediately.

Within three-year simulation horizon, the Ministry also constructs CaR indicators for 2015 and 2016. In 2015, the CaR 99% indicator for net interest costs, i.e. net interest costs at risk, amounts to CZK 82.3 billion. CaR 95% indicator for 2015 amounts to CZK 73.6 billion. Actual net interest costs in 2015 will not exceed CZK 82.3 billion with 99% probability The expected net interest costs of state debt in

2015 predicted by the model amount to CZK 55.2 billion. The expected gross interest costs in 2015 predicted by the model amount to CZK 62.2 billion. The following table shows in detail the development of cumulative gross interest costs of state debt in 2015 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 CaR 99% and expected costs in 2015 is higher than same difference in 2014. The reason is higher uncertainty with longer yield curve prediction horizon, which increases the volatility of interest costs.

Table 31: Development of Cumulative Gross Interest Costs in 2015 (CZK billion)

Months of 2015	1	2	3	4	5	6	7	8	9	10	11	12
Expected costs	3.7	4.8	7.5	21.2	29.3	33.1	33.7	39.2	52.9	56.8	59.1	62.2
Absolute CaR 95%	4.5	6.1	10.5	25.1	33.5	38.3	39.2	47.5	62.7	68.5	72.9	76.0
Absolute CaR 99%	4.8	6.8	12.1	27.3	35.8	41.4	42.7	52.5	68.7	75.9	81.5	84.7

Source: MoF

Figure 78: Simulation of Gross Interest Costs of State Debt during 2015 (CZK billion)



Note: Development of gross interest costs on a daily basis Source: MoF

In 2016 the value of the CaR 99% indicator for net interest costs i.e. net interest costs at risk amounts to CZK 96.7 billion. The CaR 95% indicator for 2016 amounts to CZK 83.8 billion. The actual net interest costs in 2016 should not exceed CZK 96.7 billion with 99% probability. Expected net interest costs of state debt in 2016 predicted by the model amount to CZK 61.7 billion. Expected gross interest costs in 2016 predicted by the model amount to CZK 65.1 billion. The following table shows in

detail the development of cumulative gross interest costs of state debt in 2016 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 costs in 2016 is higher than the same difference in 2014 and 2015. The reason for this difference is higher uncertainty with longer yield curve prediction horizon, which increases the volatility of rates.

Table 32: Development of Cumulative Gross Interest Costs in 2016 (CZK billion)

Months of 2015	1	2	3	4	5	6	7	8	9	10	11	12
Expected costs	3.6	6.5	8.8	20.6	29.8	34.2	35.6	40.9	52.2	58.2	60.6	65.1
Absolute CaR 95%	4.6	9.7	13.3	26.5	38.9	43.7	47.1	55.5	67.4	76.6	79.4	85.6
Absolute CaR 99%	5.4	11.5	16.2	30.8	44.9	50.2	54.7	64.6	77.0	88.5	91.7	98.8
Source: MoE												

Source: Mol



Figure 79: Simulation of Gross Interest Costs of State Debt during 2016 (CZK billion)

Note: Development of gross interest costs on a daily basis Source: MoF

Efficient Frontier

The Ministry's primary goal is always the problemfree financing of the central government's gross borrowing requirement at minimal costs related to the specific level of risk. Due to the fact that the gross borrowing requirement consists solely 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 issue 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 of 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 (in case of the whole efficient frontier analysis concept, time to re-fixing is considered as time to maturity) of the individual instruments. A fluctuation in yield curves and the need for refinancing (re-fixing) causes every refinancing (re-fixing) bears the risk of increased costs. Portfolios with a higher share of instruments that accrue 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 accrue interest at the long end of the yield curve.

The effective 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 expected costs of the portfolios containing only bonds with a constant time until maturity.

For all alternative debt portfolios in the conducted analysis, all financing of government's 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. 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 central government's 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 at the end of each year is secured at 6.0 years. A third to sixth alternative portfolios finance the gross borrowing requirement evenly always with two instruments; it is 15-year

government bonds and 3-month state treasury bills, it is 10-year government bonds and 12-month state treasury bills, it is 10-year government bonds and 3-month treasury bills, it is 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 3and 12-month state treasury bills, whereas the debt instruments are issued equally in former alternative portfolio and regarding the latter portfolio, 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 80: Efficient Frontier and Alternative Debt Portfolios

Source: MoF

The expected costs of the individual debt portfolios represent the cumulated expected costs on state debt service in 2014 to 2016. In all cases, the costs are expressed on an accrual basis. Thereby the comparable position of each alternative portfolio is achieved. To determine the degree of risk of the individual debt portfolios, the cumulative CaR 99% indicator is used in 2014 to 2016; specifically, 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 time to maturity, does not lie on the efficient frontier. The actual debt portfolio containing the current actual gross borrowing requirement funding strategy is very close to the efficient frontier. The current debt portfolio lies near a cluster of alternative portfolios, which consist of the mix of government bonds with similar average time to maturity. The updated cumulative expected costs of newly issued debt according to the actual issue calendars amount to CZK 30.6 billion with the risk of 90.0%. There is therefore a risk that the actual realized costs for next 3 years will exceed the expected costs by 90.0%, or in absolute terms CZK 27.5 billion. If the average time to maturity of the newly issued actual debt

Currency Risk

Currency risk is another market risk to which the state debt portfolio is exposed. As from 2011, the Ministry has been actively managing this risk. Starting in 2014, the Ministry will start managing the net foreign-currency exposure of the state debt. By changing the methodology, the Ministry will take into account the foreign-currency exposure of state financial assets, which reduces foreign-currency exposure of the debt portfolio and provides a more realistic picture of real currency risk.

In this respect, the Ministry distinguishes between net foreign-currency exposure of state debt and foreign-currency state debt. Foreign-currency state debt represents the total nominal value of the debt portfolio denominated in foreign currency. Net foreign-currency exposure represents the difference between the foreign-currency exposure of state debt and the foreign-currency exposure of state financial assets, and reflects the real market risk to which the foreign-currency debt is exposed as a result of fluctuating exchange rates. Net foreign-currency exposure of state debt is mainly affected by derivative transactions which hedge a part of foreign-currency debt against the unfavourable development of exchange rates. The key indicator introduced in relation to currency risk management is the share of net foreign-currency state debt exposure in total state debt, for which a strategic limit was set at to 15 % + 2 p.p.

For 2014, the share of net foreign-currency exposure of state debt in total state debt must not exceed 15% + 2 p.p. In the long term, it is not possible to exceed the limit of 15%. The share of net foreign-currency exposure of state debt in

decreased, the position of the real portfolio would be closer to the x-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 simultaneously 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.

total state debt may exceed the limit of 15% by up to 2 p.p., but it is only a short-term bridge in case of sudden depreciation of the domestic currency, for example after the announcement of the Czech National Bank's foreign exchange interventions against CZK on 7 November 2013, the EUR/CZK exchange rate increased sharply by CZK 1.2.

At the end of 2013, the expected value of the net foreign-currency exposure amounts to CZK 158.6 billion, representing 9.4% of the total state debt, thus safely below its limit. Compared to the end of 2012, the indicator increased by 1.4 p.p. mainly due to the depreciation of CZK in the course of 2013. The share of the foreign-currency state debt in total state debt as at the end of 2013 is expected by the Ministry to be 19.0%, having increased by 1.3 p.p. compared to the end of 2012. The increase in both indicators during 2013 was due to the launch of foreign exchange interventions by the Czech National Bank, the goal of which is to depreciate the domestic currency above the level of 27.00 EUR/CZK, which has a direct impact on the amount of foreign-currency liabilities expressed in the domestic currency.

In 2013, the Ministry did not realize any foreign issue on foreign market due to the revision of the gross borrowing requirement and the resulting revision of funding programme as a result of significant increase in available balance of state treasury in connection with the extension of the treasury single account. The Ministry monitors the situation on foreign markets with the intention to issue new syndicated benchmark issue under favourable conditions.



Figure 81: Net Foreign-Currency Exposure and Foreign-Currency State Debt

The Ministry also monitors the share of net foreigncurrency exposure denominated in EUR in the total net foreign-currency exposure of state debt. The dominance of EUR in the net foreign-currency exposure has been evident since 2008. As of the end of 2013, the Ministry expects the share of EUR in the total net foreign-currency exposure of the state debt to amount to 89.0%, having increased by 1.6 p.p. compared to the end of 2012. Once again, this increase is caused by the aforementioned foreign exchange interventions executed by the Czech National Bank, which increased the net exposure of state debt denominated in EUR, and the reduction of state financial assets denominated in EUR.

7 - Primary and Secondary Market for Government Bonds

Primary Dealers and Evaluation Methodology

The group of Primary Dealers in Czech government bonds is confirmed by the Ministry for every calendar year. For 2014, the Czech Republic will have a total of 13 Primary Dealers as listed below, which is the same numbers as throughout most of 2013. As at 1 November 2013, The Royal Bank of Scotland plc terminated its activities as a primary dealer, the new primary dealer for 2014 will be Morgan Stanley & Co International PLC.

Table 33: Primary Dealers in Czech Government Bonds in 2013 and 2014

2013	2014
Barclays Bank PLC	Barclays Bank PLC
Citibank Europe plc	Citibank Europe plc
Česká spořitelna, a.s.	Česká spořitelna, a.s.
Československá obchodní banka, a. s.	Československá obchodní banka, a. s.
Deutsche Bank AG	Deutsche Bank AG
Goldman Sachs International	Goldman Sachs International
HSBC Bank plc	HSBC Bank plc
ING Bank N. V.	ING Bank N. V.
J. P. Morgan Securities plc	J. P. Morgan Securities plc
Komerční banka, a.s.	Komerční banka, a.s.
PPF banka, a.s.	Morgan Stanley & Co International PLC
The Royal Bank of Scotland	PPF banka, a.s.
UniCredit Bank Czech Republic and Slovakia, a.s.	UniCredit Bank Czech Republic and Slovakia, a.s.
e: MoF	'

The status of a Primary Dealer in Czech government bonds was contractually formalised as of 1 October 2011, when the Primary Dealer Agreement for 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 entered into this Agreement with the Ministry will have the right as of 1 January 2012 to participate in auctions according to the Rules for Primary Sale of Government Bonds organised by the Czech National Bank.

Sourc

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 at 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 for government bonds. For 2014 and 2015, MTS Czech Republic (which launched operation on 1 July 2011) was chosen as this platform once again based on a decision taken by the Primary Dealers Committee on 6 September 2013.

A Primary Dealer is granted exclusive access to primary auctions of government bonds and the Ministry's operations on the secondary market, such as buy-backs and exchanges of government bonds, tap sales, lending facilities or reverse repo operations. Primary dealers are also the Ministry's counter-parties to foreign issues, private placements and other financial operations by the state. Primary dealers also have an exclusive right to participate at regular meetings with the representatives of the Ministry, at least once per quarter, 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.

The new version of the Agreement, which comes into force on 1 January 2014, does not differ significantly from the current version and thus does not change the rights and obligations of Primary Dealers. The system of notifications in case of a failure to meet one of the two basic obligations proved effective in the course of 2013, and the Ministry will continue to apply this practice. The new rules evaluation of Primary Dealers, valid from 1 January 2014, retain the three reference evaluation criteria and their weights. The importance of a functional and liquid secondary market is demonstrated by the allocation of high weight to this 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 activity of Primary Dealers is thus evaluated on a quarterly basis always for the last four consecutive quarters. The latest evaluation is published on the last working day of the month following the end of the corresponding quarter.

Table 34: Criteria f	or Evaluation	of Primary	/ Dealers valid	as of 1 J	anuary 2013

A. Primary market	45 p	B. Secondary market and market operations	40 p	C. Qualitative criterion	15 p
A.1. Primary Auctions Share	25 p	B.1. Quoting obligations on DETS	9 p	C.1. Derivatives Pricing and Credibility	8 p
A.2. Dependability	5 p	B.2. Qualitative Performance on DETS	9 p	C.2. Marketing & Sovereign Advisory	7 p
A.3. Auction Pricing Strategy	5 p	B.3. Traded Volume on DETS	9 p		
A.4. Auction Participation	2.5 p	B.4. Ministry's Market Operations	9 p		
A.5. Primary Auctions Share - T-Bills	7.5 p	B.5. Tap Issuance, Buy- Backs and Exchanges Pricing Strategy	4 p		

Source: MoF

As part of the A criterion 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 Czech 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-category, 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-category 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 criteria of group B, which is primarily based on available statistics and the monitoring tools of the MTS Czech Republic 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-criteria, the traded volumes are weighted based on the time to maturity of the bond. For the next sub-criterion, a Primary Dealer is evaluated based on the ratio of the total nominal value of the transactions carried out (type of repo operation, buy/sell back operation, depo operation, tap sale of government bonds on the secondary market or buy-backs and exchanges of government bonds before their maturity date) to the total nominal value of transactions carried out for the evaluated period. The fifth sub-criterion, added in 2013, 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 or exchanges.

The qualitative evaluation under criterion C focuses on derivative operations, marketing, consulting and credibility. The Primary Dealers are evaluated in ascending order depending on the prices they provide for various derivative instruments. The Ministry further evaluates the quality of consulting activities, cooperation and sharing of information, human and technical resources related to risk management and optimization of the debt portfolio. Sub-criterion C.2 also includes an evaluation of analytical output and economic analyses, which primary dealers may newly send to a specially created e-mail box of the Ministry.

In 2014, there are no significant changes planned to the Rules for Primary Sale of Government Bonds organised by the Czech National Bank and their current effective wording as of 1 January 2012 is expected, including the option to organise more auctions of medium-term and long-term government bonds on one auction day, the current conditions for the competitive part of the auction, and existing conditions of access for Primary Dealers to the noncompetitive part of the auction.

Secondary Market and MTS Czech Republic

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 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. The MTS Czech Republic platform enables clear 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.

An effective secondary market in terms of minimising transaction costs and maintaining market depth and price stability is a necessary condition the issuing activity of the state and smooth and costeffective funding over the long term. In order to meet this task, the Ministry gradually expanded the list of benchmark issues, based on a decision of the steering committee of the MTS Czech Republic (composed of representatives of the Ministry and Primary Dealers) to include all newly issued government bonds in 2013 with maturity in 2016, 2019 and 2028, whose nominal value outstanding was sufficient to allow the fulfilment of marketmakers' obligations. The Ministry also reopened issues that no longer appear in auctions through tap sales, and provided lending facilities to cover the short positions of some Primary Dealers.

Table 35: Benchmark Issues of Government Bonds

Issue No.	Issue	ISIN	Coupon	Maturity Date	Maturity basket
Issue 60 ¹	CZGB 3.40/15	CZ0001002737	3.40%	01.09.2015	А
Issue 77 ²	CZGB 0.50/16	CZ0001003842	0.50%	28.07.2016	А
Issue 55	CZGB VAR/16	CZ0001002331	PRIBOR 6M	27.10.2016	А
Issue 51	CZGB 4.00/17	CZ0001001903	4.00%	11.04.2017	В
Issue 41	CZGB 4.60/18	CZ0001000822	4.60%	18.08.2018	В
Issue 76 ³	CZGB 1.50/19	CZ0001003834	1.50%	29.10.2019	В
Issue 56	CZGB 5.00/19	CZ0001002471	5.00%	04.11.2019	В
Issue 61	CZGB 3.85/21	CZ0001002851	3.75%	29.09.2021	С
Issue 52	CZGB 4.70/22	CZ0001001945	4.70%	12.09.2022	С
Issue 58	CZGB 5.70/24	CZ0001002547	5.70%	25.05.2024	С
Issue 78 ⁴	CZGB 2.50/28	CZ0001003859	2.50%	25.08.2028	D

¹Issue will be excluded from benchmark issues on 1 June 2014 ²Issue included among benchmark issues from 1 October 2013 ³Issue included among benchmark issues from 8 Apil. 2013

Issue included among benchmark issues from 1 October 2013 Note: New fixed government bonds issued in 2014 with maturity in 2018, 2025 or 2026 will be included among benchmark government bonds. Source: Mol

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. 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 evaluation of the performance and activity of participants takes place on a monthly basis.

Table 37: Maturity Baskets Based on the Minimum Traded Volume on the MTS Czech Republic

Α	Bonds maturing within 1.25-3.5 years	CZK 50 million
В	Bonds maturing within 3.5-6.5 years	CZK 50 million
С	Bonds maturing within 6.5-13.5 years	CZK 40 million
D	Bonds maturing within more than 13.5 years	CZK 30 million

Source: MoF

The market average spread (MAS) of the particular bond subject to quoting obligations is calculated as the scalar product of the average time weighted spread (S) during the best five hours quoted by the particular Primary Dealer during the particular trading day:

$$MAS_{o,d} = \frac{\sum_{i=1}^{PD} \sum_{n=1}^{SQ_{o,d,i}} S_{i,d,o} \times (t'_{n,i,d,o} - t_{n,i,d,o})}{\sum_{i=1}^{PD} \sum_{n=1}^{SQ_{o,d,i}} (t'_{n,i,d,o} - t_{n,i,d,o})}$$

The market competitive spread (MCS) of the particular bond subject to quoting obligations is calculated as a multiple of the average market spread. The setting of the k coefficient occurs in cooperation with the Primary Dealers. The value of the k coefficient is currently set at 1.5:

$$MCS_{o,d} = k \times MAS_{o,d}$$

For the particular bond subject to quoting obligations, the fulfilled quotation obligation (Compliance Ratio – CR) fluctuates between 0 and 1 (0 to 100 %, respectively), depending on the number of quoted hours during the particular trading day, when the particular primary dealer quotes the prices of the particular bond subject to quoting obligations within the MCS for the particular bond subject to quoting obligations and in the minimum quoted volume:

$$CR_{o,d,i} = \sum_{n=1}^{SQ_{o,d,i}} \left[IF \left(S_{i,d,o} \leq MCS_{o,d}; \frac{t'_{n,i,d,o} - t_{n,i,d,o}}{\frac{5}{24}}; 0 \right) \right]$$

The daily fulfilment of quoting obligations (Daily Compliance Ratio - DCR) is set based on fulfilment of the quotation obligations for all bonds subject to guoting obligations for the particular Primary Dealer and for the particular trading day. Similarly the monthly fulfilment of quoting obligations (Monthly Compliance Ratio - MCR) for the particular month is calculated as the average of the DCR for the particular primary dealer. The Primary Dealer fulfils quoting obligations as long as MCR \geq 0.9. This key parameter for evaluation of the obligations of Primary Dealers based on the Agreement was approved at the first MTS Czech Republic Committee meeting on 20 September 2011 and the same value was confirmed again for 2013 by a vote at the 3rd meeting of this Committee on 5 October 2012.

$$DCR_{d,i} = \frac{\sum_{a=1}^{SOOB} CR_{o,d,i}}{SOOB} \qquad MCR_{m,i} = \frac{\sum_{d=1}^{D} DCR_{d,i}}{D}$$

Due to strong volatility of global bond markets and pilot operation during the second half of 2011, the actual compliance ratio of the primary dealers was insufficient. Since 2012, the average compliance ratio was oscillating at around 90%. The positive trend was interrupted in June 2013 due to developments on global markets. Although fulfilment of the quotation obligation did not drop far below the 90% limit in the second half, there is an evident lack of activity from one of the departing Primary Dealers, which distorts the average indicator. This has been reflected since November, when RBS formally terminated primary dealership.



Figure 82: Average Daily Compliance Ratio on MTS Czech Republic

Also as far as the traded volumes are concerned, there was a noticeable increasing trend that later settled at an average of almost CZK 8 billion in trades concluded per month, which confirms the rising liquidity and importance of the MTS Czech Republic within the domestic secondary market of CZK-denominated government bonds.



Figure 83: Traded Volumes on the MTS Czech Republic

Note: The above-mentioned trades do not include the trades of the Ministry on the secondary market. Source: EuroMTS and MoF

The spread of the bid and offer prices went through an unstable period since May 2013, particularly as concerns higher maturity terms due to external influences. With decreasing uncertainty on financial markets, the prior stable trend was also restored in the quotation spread. Market stabilization and the gradual narrowing of price spreads were 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 enabled significant flexibility and adaptation to the continually changing and poorly predictable market environment as opposed to the fixed spreads.

Figure 84: Bid-offer Spreads of Selected Bonds Quoted on the MTS Czech Republic



Source: EuroMTS and MoF

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 instruments and smooth running of the system. The Ministry views as very promising the developments related to the fulfilment of quoting obligations,

particularly with regard to the significant expansion of the range of benchmark issues in 2013. Lending facilities, buy-backs and tap sales will continue to be the tools actively used by the Ministry for its direct participation on the secondary market in 2014.

Ministry's operations on the secondary market

Since December 2011, the Ministry has been operating actively on the secondary market, primary through the MTS Czech Republic platform. Buy-backs of government bonds before their maturity date and tap sales of government bonds from the Ministry's portfolio became an integral part of the planned issuance activity two years ago, contributing to the effective management of liquidity and re-financing risk and supporting the liquidity of the domestic bond market.

As per the Agreement, tap sales and buy-backs will be mainly performed every Wednesday between 11 and 12 am and between 2 and 3 pm CET. The Ministry selects the government bonds designated for tap sales based on consultation with the Primary Dealers from the government bonds held in the Ministry's own portfolio, with the exception of government bonds which are being sold in auction during that week, or in the week before or after this auction. In order to ensure maximum transparency, the Ministry informs all Primary Dealers about the intention to conduct a buy-back or a tap sale on the secondary market at least one business day prior to the date on which the transaction is to occur. The Ministry will publish the result of the transactions (total nominal value of the transactions carried out within one buy-back or tap

sale, number of transactions and weighted average price) on its website by the settlement date of the transactions.

During the course of 2013, the Ministry continued using the short-term lending facilities of government bonds for the Primary Dealers. The Ministry intends to continue in this activity based on the creation of sufficient reserves of government bonds in its own portfolio. Pursuant to an amendment to the Agreement and the identical new version of the Agreement valid as of 1 January 2014, the lending facilities are available in the form of repo transactions when the primary dealer can borrow the government bond and lend the CZK liquidity to the Ministry in return. The agreed rate for which the Ministry borrows the liquidity must be lower than rate for the reverse repo transaction with the same maturity and the same nominal value which the Ministry is concluding with the same or other primary dealer at that particular moment. 38 repo transactions were carried out in 2013, the primary objective of which was not to borrow funds to finance the government's gross borrowing requirement, but rather to support the government bond market liquidity. Since the previous year, there has been a significant rise in the number of operations conducted also from the Ministry's investment portfolio.

	1Q	2Q	ЗQ	4Q	2013
Buy-backs	0	0	0	7.455	7.455
CZGB 2.75/14	0	0	0	3.974	3.974
CZGB 3.80/15	0	0	0	3.481	3.481
Tap sales	2.270	1.854	2.697	0.267	5.009
CZGB 3.40/15	0	0.424	0	0	0.424
CZGB VAR/16	0.400	0.660	0.200	0	1.260
CZGB VAR/17	0	0	0	0.083	0.083
CZGB 4.60/18	0.700	0	0.368	0	1.068
CZGB 3.75/20	0	0	0	0.084	0.084
CZGB VAR/23	0.300	0	0	0	0.300
CZGB 4.85/57	0.870	0.770	0.050	0.100	1.790
Lending facilities	5.000	4.600	6.806	6.692	23.098
CZGB 0.50/16	0	0	1.669	1.306	2.975
CZGB 4.00/17	0	0	0.400	1.160	1.560
CZGB 4.60/18	0	1.000	1.000	2.000	4.000
CZGB 5.00/19	0	0	0	1.270	1.270
CZGB 4.70/22	1.140	1.660	1.000	0	3.800
CZGB VAR/23	2.860	0	1.500	0	4.360
CZGB 5.70/24	1.000	1.940	1.237	0.956	5.133
Total	7.270	6.454	9.503	14.414	35.562

Table 38: Nominal Value of Ministry's Operations on the Secondary Market in 2013

Note: Tap sales and buy-backs include only operations carried out on the MTS Czech Republic platform and via Thomson Reuters Dealing 3000. Lending facilities are presented in the nominal value of collateral bond from the Ministry's own and investment portfolio. Source: MoF

Given development on the FX market, in autumn 2013 the Ministry opted for the sending of price bids by Primary Dealers, instead of the original approach of fixing prices for buy-backs by the Ministry. As concerns the tactic for buy-backs, the Ministry will continue to use both methods of stipulating the price, so as to react flexibly to current market conditions particularly in relation to effective liquidity management. The algorithm for obtaining offers to sell bonds designated for buyback is analogical with the current practice of tap sales, meaning using requests for quotes (RfQ), where the Primary Dealers are unaware of their respective bids. The Ministry stipulates a time limit during which the Primary Dealers send their bids for repurchase (or purchase in the case of a tap sale). At the end of this period, the Ministry evaluates the received requests and either rejects them, returns them with adjustments (both in terms of volume and price), or accepts them.

To date, the Ministry performed these operations only with domestic medium-term and long-term government bonds with a remaining maturity of up to 1 year. In the course of 2014, the Ministry may agree with Primary Dealers to start buying back bonds with a longer remaining period until maturity, which would focus particularly on less liquid bonds without benchmark status, which are not mandatorily guoted by the Primary Dealers on the DETS and which could be replaced with the repurchase of a bond with benchmark status and the same or longer remaining time to maturity at the time of conducting buy-back, so that these operations simultaneously contribute to achieving the stipulated objectives for the management of refinancing risk of the debt portfolio. In 2014, the use of exchange (switch) auctions through the MTS Czech Republic for both bonds maturing in 2016 is an option. The poorly liquid CZGB 6.95/16 would by bought out from the market by direct exchange for an additional issue of benchmark CZGB 0.50/16, whose issued nominal value through primary auctions was reduced for 2014 by decision of the Ministry in order to manage refinancing risk. These operations would not reduce the indicator of the average time to maturity, and would support the liquidity of the given benchmark issues.

Annex

Alternative Approaches to the Central Government's Gross Borrowing Requirement

All possible approaches to calculating the central government's gross borrowing requirement comply with the OECD methods described for example in Hans J. Blommestein: A Suggested New Approach to the Measurement and Reporting of Gross Short-Term Borrowing Operations by Governments, OECD Journal – Financial Market Trends, 2010. The individual methods differ primarily in the concept of calculation of the short-term gross borrowing requirement, i.e. in the manner of calculating the redemptions of money market instruments or redemptions of the debt with original time to maturity less than 1 year due in particular year. If we identify the total state budget revenue as T and the total state budget expenditure as G, then the state budget deficit (BD), or the budget surplus (BS) can be expressed as BD = -BS = [-(T-G)]. The net short-term borrowing requirement in the given year t in the horizon of one year NBR(ST), is then, simplified for the purpose of illustration, determined by the value of the budget deficit in the given year. The debt portfolio consists of short-term and long-term instruments, which must be redeem in the course of the given year. The total value of redemptions (TR) is equal to the sum of the total redemptions of long-term debt **TR(ST)** and total redemptions of long-term debt **TR(LT)**. The short-term gross borrowing requirement in year t is then equal to the sum of all debt redemptions and the net short-term borrowing requirement in the given year, i.e.:

$GBR(ST)_{+} = TR + NBR(ST)_{+} = TR + BR = TR - BS$

The first approach, used also by the Czech Republic until 2013, does not take into account the redemptions and roll-over of short-term instruments, and includes the net short-term

borrowing requirement and total redemptions of long-term debt with a original time to maturity of more than 1 year into calculations of the gross borrowing requirement, i.e.:

$GBR(ST)_{t} = TR(LT)_{t} + NBR(ST)_{t}$

When calculating the short-term gross borrowing requirement, the second approach takes into account the amount of short-term debt as at the end of the previous year $D(ST)_{t-1}$ which is due in the following year, and which consists mainly of state treasury bills $D(TB)_{t-1}$ and other money market

instruments and cash operations $D(CASH)_{t-1}$ in the form of repo operations, received short-term loans and credits and potential daily cash operation, total redemptions of long-term debt with original maturity of more than 1 year and the amount of net short-term borrowing requirement, i.e.:

state treasury bills and the amount of other short-

term debt as at the end of previous year and the

amount of net short-term borrowing requirement

term instruments including potential daily cash

operation durin the year, i.e.:

$GBR(ST)_{t} = TR(LT)_{t} + D(ST)_{t-1} + NBR(ST)_{t} = TR(LT)_{t} + D(TB)_{t-1} + D(CASH)_{t-1} + NBR(ST)_{t}$

When calculating the short-term gross borrowing requirement, the third approach takes into account all redemptions of long-term debt with original maturity of more than 1 year and remaining maturity of less than 1 year, redemptions and roll-over of

$GBR(ST)_{t} = TR(LT)_{t} + TR(TB)_{t} + D(CASH)_{t-1} + NBR(ST)_{t}$

The last approach includes all the redemptions like the third method, and the roll-over of other short-

$GBR(ST)_{t} = TR(LT)_{t} + TR(ST)_{t} + NBR(ST)_{t} = TR(LT)_{t} + TR(TB)_{t} + TR(CASH)_{t} + NBR(ST)_{t}$

into , i.e.:

Comparison of achieved values of gross borrowing requirement according to different approaches shows, that the first approach underestimates the amount of gross borrowing requirement due to the exclusion of short-term instruments redemptions. On the contrary, the third and fourth approach overestimates the amount of gross borrowing requirement by including all roll-over and refinancing transactions with financial instruments within a particular year. For example, if in case of the fourth approach the decision to use daily depo operations in total amount of CZK 2.0 bn under funding operations was made, the gross borrowing requirement would increase by CZK 500.0 bn (in case of 250 working days in a year). It is obvious, that the financial position of the country would be distorted, which does not correspond to the importance of this borrowing operation in funding of the state. The second approach, which is recommended by the OECD in order to standardize and ensure meaningful international comparison among countries, and which the Ministry will use in case of Czech Republic starting with the publishing of this Strategy, represents a compromise among given approaches regarding the manner of inclusion of operations with short-term instruments of the debt portfolio.

Table 39: Alternative methods of c	determining the gross	borrowing requirement	(CZK billion)
------------------------------------	-----------------------	-----------------------	---------------

	2009	2010	2011	2012	2013	2014	2015	2016
		Act	ual		Prediction	Plan (Ba	ase case so	cenario)
Net borrowing requirement	178.2	168.2	151.0	172.8	2.3	113.6	121.4	120.8
Redemption of long-term state debt	100.8	84.1	105.2	136.6	118.4	165.6	148.6	182.6
Money market instruments outstanding at the start of year	78.7	88.1	113.3	162.6	189.1	120.9	120.9	120.9
Roll-over state treasury bills	21.4	55.7	74.4	58.4	51.3	25.0	25.0	25.0
Other roll-over money instruments	2.8	7.5	20.6	22.4	28.2	25.0	25.0	25.0
Gross borrowing requirement								
Method 1	279.0	252.6	256.2	309.4	120.7	279.2	270.0	303.4
Method 3	379.2	396.2	443.9	530.4	361.1	425.1	416.0	449.4
Method 4	382.0	403.7	464.5	552.8	389.3	450.1	441.0	474.4
Method 2 – recommended	357.7	340.5	369.5	472.0	309.9	400.1	390.9	424.3

Source: MoF and OECD

Table 40: Roll-over and re-financing operations within the year (CZK billion)

	2011	2012	2013P
	Actual	Actual	Prediction
Balance as at 1 Jan.	113.331	162.609	189.135
State treasury bills	113.331	162.609	189.135
CZGB lending facility	0	0	0
Repo operations	0	0	0
Received depos, credits and loans	0	0	0
Received financial collateral	0	0	0
Cash operations	0	0	0
Total net change	49.278	26.526	-68.244
State treasury bills	49.278	26.526	-68.244
CZGB lending facility	0	0	0
Repo operations	0	0	0
Received depos, credits and loans	0	0	0
Received financial collateral	0	0	0
Cash operations	0	0	0
Roll-over total	95.00	80.82	79.49
Roll-over of state treasury bills	74.4	58.4	51.3
CZGB lending facility ¹	0	21.0	24.5
Repo operations	20.43	1.42	3.69
Received depos and credits	0.17	0	0
Received financial collateral	0	0	0
Cash operations	0	0	0
Balance as at 31 Dec.	162.609	189.135	120.891
State treasury bills	162.609	189.135	120.891
CZGB lending facility	0	0	0
Repo operations	0	0	0
Received depos, credits and loans	0	0	0
Received financial collateral	0	0	0
Cash operations	0	0	0

¹Includes only lending facilities of medium-term and long-term government bonds, where the collateral is medium-term and long-term government bonds from Ministry's own portfolio. Expressed in the amount of received cash resources. Note: Total nominal value of roll-over and re-financing operations in 2013 amounted to CZK 79.5 bn., of which CZK 51.3 bn was represented by simultaneous issues and redemptions of state treasury bills with the maturity of 3, 6 and 9 months within a given year.

Calendar

January Мо Tu We Th Fr Sa Su 2 3 4 5 1 7 9 12 6 8 10 11 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

February								
Мо	Tu	We	Th	Fr	Sa	Su		
					1	2		
3	4	5	6	7	8	9		
10	11	12	13	14	15	16		
17	18	19	20	21	22	23		
24	25	26	27	28				

April Мо Tu We Th Fr Sa Su 5 6 1 2 3 4 7 8 9 10 11 12 13 16 17 18 14 15 19 20 23 24 25 21 22 26 27 28 29 30

May	Y					
Мо	Tu	We	Th	Fr	Sa	Su
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

July Мо Tu We Th Fr Sa Su 1 3 4 5 6 2 7 8 9 10 11 12 13 14 15 16 17 18 19 20 23 24 25 21 22 26 27 28 29 30 31

October								
Мо	Tu	We	Th	Fr	Sa	Su		
		1	2	3	4	5		
6	7	8	9	10	11	12		
13	14	15	16	17	18	19		
20	21	22	23	24	25	26		
27	28	29	30	31				

August								
Мо	Tu	We	Th	Fr	Sa	Su		
				1	2	3		
4	5	6	7	8	9	10		
11	12	13	14	15	16	17		
18	19	20	21	22	23	24		
25	26	27	28	29	30	31		

November

Мо	Tu	We	Th	Fr	Sa	Su
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

March

Мо	Tu	We	Th	Fr	Sa	Su
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

June Мо Tu We Th Fr Sa Su 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 28 23 24 25 26 27 29 30

Se	September								
Мо	Tu	We	Th	Fr	Sa	Su			
1	2	3	4	5	6	7			
8	9	10	11	12	13	14			
15	16	17	18	19	20	21			
22	23	24	25	26	27	28			
29	30								

December Мо Tu We Th Fr Su Sa 4 5 7 1 2 3 6 10 8 9 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

29

30 31

Publishing of the Debt Portfolio Management Quarterly Review - 2nd Friday of the month following the evaluation period

Publishing of the issuance calendars of state treasury bills and medium-term and long-term government bonds for next month - 2nd or 3rd Monday in the month prior the month with auctions

Publishing of the Performance Evaluation of Primary Dealers in Czech Government Securities

- last bussines day in the month following the evaluation period

Publishing of The Czech Republic Funding and Debt Management Strategy 2015 and the issuance calendar for January 2015 - once a year in December

- State treasury bills traditional auction day
- in regular intervals on Thursday

Medium-term and long-term government bonds traditional auction day

- in regular intervals on Wednesday

Highlights of the Strategy for 2014

- Financing needs: CZK 398.5 billion
- Gross borrowing requirement: CZK 350.1 to 400.1 billion
- Targeted gross domestic issuance of medium-term and long-term government bonds:
- CZK 156 to 186 billion
- Minimum gross domestic issuance of medium-term and long-term government bonds:
- CZK 120 billion
- Expected balance of money market instruments at the end of 2014: CZK 100 to 121 billion
- Retail government bond programme: CZK 20 to 50 billion
- Funding on foreign markets: up to 25% of the gross borrowing requirement
- Treasury bills traditional auction day: Thursday
- Medium-term and long-term government bonds traditional auction day: Wednesday
- Number of issues offered in one auction day: 2 to 3
- New benchmark issues: 2 issues due in 2018 and 2025 or 2026
- New floating rate bonds: 2 issues due in 2020 and 2026 or 2027
- New options of domestic issuance: inflation-indexed government bonds
- Buy-backs and exchanges programme: CZK 10 to 30 billion
- Quarterly update of gross borrowing requirement and funding programme

Contacts

Debt and Financial Assets Management Department



The publication was prepared based on the information and data available on 13 December 2013. The Ministry reserves the right to promptly respond to the actual development of funding requirement using its tools over the course of 2014. Implementation of the funding program and announced strategic targets will depend on the development of the situation on the domestic and foreign financial markets in terms of minimizing costs on state debt service and risk management.

This publication is also available on the following website:

www.mfcr.cz/statedebt

www.sporicidluhopisycr.cz

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