



**MINISTRY OF FINANCE OF THE CZECH REPUBLIC**  
**DEBT AND FINANCIAL ASSETS MANAGEMENT DEPARTMENT**

# **Funding and Debt Management Strategy for 2008**

3 December 2007

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The Minister of Finance decided on 21 November 2007 about the structure and manner of financing the gross borrowing requirement of the Central Government in the budget year 2008, and approved the fundamental absolute and relative limits applicable to issues to be exercised on both domestic and international markets, and to the active management of the debt portfolio in relation to any other central-government liabilities and the State financial assets (Ref. No.: 20/93372/2007-201). The operating framework thus delimited in the form of the submitted Funding and Debt Management Strategy for 2008 (hereinafter the "Strategy") traditionally contributes to transparency of the implementation of the government debt management policy and facilitates flexible involvement by the Ministry of Finance (hereinafter the "Ministry") on the financial markets, while actively procuring sources required to cover the central government's borrowing requirement and to achieve its strategic targets, which represent an essential precondition for the smooth implementation of the budgetary and fiscal policies of the Government.

The Strategy is based on and is consistent with the 2008 State Budget of the Czech Republic Bill, the Medium-term Projections of the State Budget of the Czech Republic in 2009 and 2010, the Medium-term Expenditure Framework in 2009 and 2010, the internal Issuance Plan of Government Bonds in 2008 to 2010, and the Convergence Programme of the Czech Republic.

The Strategy has been submitted via the Debt and Financial Assets Management Department (hereinafter the "Department"), which is in charge of all transactions related to the state funding, debt portfolio and risk management, cash management of the State Treasury system, and investing of available cash belonging to the State financial assets.

## Introduction

Management of liabilities and the concept of the medium-term strategy of financing of the Central Government have focused on those segments of the central-government financial balance, whose management constitutes the direct responsibility of the Minister of Finance and whose structure directly impacts on the cash flows within the State budget, as a result of fluctuations of both economic and financial risk factors. The main balance items are represented by the **State debt** (25.6% of the GDP) and by the **risk-exposed State guarantees** (6.0% of the GDP), which may not constitute part of the State debt but which nevertheless represent analogous financial and credit risks in respect of the expenses side of the State budget as the structure of the State debt. Most of the State guarantees, moreover, have already been included in the Government sector debt, in keeping with the ESA95 methodology, and the reimbursement of any liabilities related to them represents a routine portion of the expenses of the State budget, thus contributing to higher State budget deficits and to increased State debt.

The winding up of Česká konsolidační agentura (Czech Consolidation Agency - ČKA) without liquidation as of the end of 2007 represented an important event within the Government sector; its residual balance and all relating cash flows will be fully integrated into the accounting books of the Ministry. Commencing in 2008, therefore, the central-government's borrowing requirement will no longer include a special extra-budgetary item covering liquidity requirements of the ČKA, which used to play a significant role in the drafting of the issuance policy and the debt management strategy in 2005 to 2007.

Commencing in 2008, the Strategy will be significantly complemented by an active involvement of the Ministry on the domestic secondary market of government bonds, which began in the second half of 2007, in the form of direct sales of government bonds from the Ministry's own portfolio, 'repo' trading with such instruments, and buy-backs and exchanges of government bonds prior to their maturity. By introducing such transactions, the Ministry has completed the process of modernisation of the government debt management in keeping with the best practices of the countries of the European Union and the OECD, and currently it possesses all standardised instruments required for the financing of the State and for the efficient management of a trade-off between costs and risks on the debt portfolio.

## 1 Medium –Term Government Borrowing Requirements

### Outlook of the Government Gross Borrowing Requirements

Creation of the medium-term gross borrowing requirements derives from deficits of the State budget and further by due to increasing values of the principals of matured benchmark government bonds, which will have to be re-financed by new issues on both domestic and international markets.

In 2007, the last extra-budgetary transfer of liquidity to the ČKA took place, as reimbursement for the aggregate loss generated pursuant to the State Bond Programme Act No. 5/2005 Collection of Laws (hereinafter "Coll."). Commencing in 2008, re-financing of buy-backs and exchanges of government bonds on the domestic secondary market prior to their due maturity, is also planned regularly.

The annual central-government gross borrowing requirements without revolving money instruments in circulation have been determined as stable in the period from 2007 until 2010 at a relative level ranging between 4 and 5 % of the GDP. Their coverage, in particular by issuance on both domestic and international markets, and further by drawing on Government loans from the European Investment Bank (EIB), therefore, does not constitute any serious risk for the implementation of the fiscal and budget policies of the Government, or for the financial stability of the domestic economy.

**Table 1: Outlook of Gross Government Borrowing Requirements until 2010 (CZK billion)**

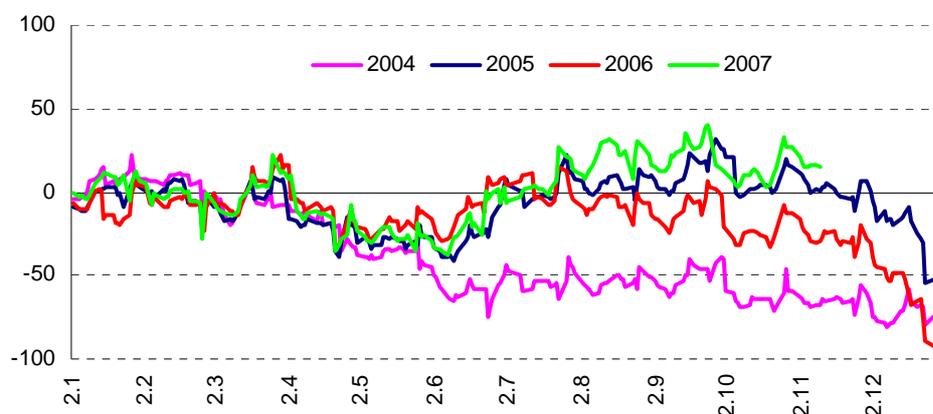
	2006	2007		2008	2009	2010
	Reality	Plan	Expect.			
<b>Deficit of State budget w/o ČKA</b>	<b>97.6</b>	<b>91.3</b>	<b>80.0</b>	<b>70.8</b>	<b>72.7</b>	<b>73.5</b>
o/w: Gross costs on the State debt	31.6	38.1	34.9	46.9	49.1	54.8
<b>Planned funds for ČKA</b>	<b>20.0</b>	<b>13.3</b>	<b>13.2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Redemptions on state debt</b>	<b>58.0</b>	<b>44.8</b>	<b>44.8</b>	<b>84.5</b>	<b>86.9</b>	<b>74.0</b>
<b>Buy-backs of government bonds</b>	<b>0.0</b>	<b>0.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>
Special Pension Account	-2.8	10.0	0.0	10.0	10.0	10.0
Other changes in financial asset accounts	7.6	-0.2	-0.2	-0.6	0.0	0.0
Creation (+) /drawing (-) funding of reserves	-10.1	0.0	5.0	5.0	5.0	5.0
<b>Total gross borrowing requirement</b>	<b>170.3</b>	<b>159.2</b>	<b>152.8</b>	<b>179.7</b>	<b>184.6</b>	<b>172.5</b>
<b>% of GDP</b>	<b>5.3</b>	<b>4.6</b>	<b>4.3</b>	<b>4.7</b>	<b>4.5</b>	<b>3.8</b>
Net drop in money market instruments	2.3	20.0	4.0	10.0	10.0	10.0
<b>Total gross borrowing requirement, incl. net drop in money market instruments</b>	<b>172.6</b>	<b>179.2</b>	<b>156.8</b>	<b>189.7</b>	<b>194.6</b>	<b>182.5</b>
<b>% of GDP</b>	<b>5.4</b>	<b>5.2</b>	<b>4.5</b>	<b>5.0</b>	<b>4.8</b>	<b>4.1</b>

Note: Total gross borrowing requirements don't include any revolving instruments of the money market within the framework of the budget year.

Source: CSO, MF CR.

## Gross borrowing requirement of the Government in 2007

In the course of 2007, the gross borrowing requirement of the Government dropped, in particular due to more favourable management of the State budget, which is anticipated in the budgetary documentation to result in a drop in the deficit by CZK 11.3 billion.

**Figure 1: Daily Position of the State Budget in 2004 to 2007 (CZK billion)**

Source: MF CR.

Since the management of the pension insurance system in 2006 generated a deficit in the amount of CZK 0.9 billion, there was no need for issuing any government bonds in order to create any reserves on the special pension insurance account as part of the State financial assets, which was originally envisaged to reach the amount of CZK 10.0 billion.

In 2007, buy-backs of domestic government bonds commenced on the domestic market in keeping with Act No. 105/2007 Coll., governing the State Bond Programme, in order to cover the principals of State bonds re-purchased on the market in 2007, which allows for the re-purchase of government bonds before maturity up to the amount of CZK 10.0 billion. The Ministry shall implement such transaction directly on the secondary market via the Reuters 'Dealing 3000' and their settlement is ensured separately thanks to Ministry's membership of the national settlement centre "Univyc" and directly from the implemented debt management information system "WallStreet/Trema Suite". At the same time, creation of financial reserves has been preliminarily envisaged in the amount of CZK 5.0 billion until the end of 2007.

All in all, a drop in the gross borrowing requirement in 2007 is expected roughly in the amount of CZK 6.4 billion. The final volume of the decline will depend in particular on the development of the State budget management and on transactions executed on the State financial asset accounts in the course of December 2007.

Commencing in 2005 and until 2007, any anticipated requirements for new funds resulting from the presumed projections of the [liquidity requirements of the ČKA](#) represented an important part of the planning of its bond issues by the Ministry. Until the winding up of the ČKA without liquidation as of 31 December 2007, those funds were ensured via issuance of government bonds under the special State Bond Programme, intended to cover parts of the losses generated by the ČKA (Act No. 5/2005 Coll.) up to the amount of CZK 63.3 billion. Step by step, government bonds were issued and funds subsequently transferred to the ČKA in the amount of CZK 30.0 billion in 2005, in the amount of CZK 20.0 billion in 2006, and in the amount of CZK 13.2 billion in 2007. Thus, the legislative framework was made use of in full. Commencing on 1 January 2008, the activities of the ČKA will be fully integrated into the structures of the Ministry and all associated financial flows will be incorporated in the State budget, the State financial assets, and the State debt management processes.

## 2 Annual Financing Programme 2008

### Implementation of Programme of Financing in 2007

The definition of the 2008 financing programme is based on the implementation of the planned 2007 programme of financing. It has mainly been affected by a reduction of the gross borrowing requirement of the Government as a result of more favourable results of the management of the State budget and the decision of the Minister of Finance not to execute a public benchmark issue on the international markets.

**Table 2: Implementation of the 2007 programme of financing (CZK billion)**

	Plan as of 01/12/2006	Expectation as of 30/11/2007
<b>The Government's gross borrowing requirement (w/o revolving money market instruments)</b>	<b>159.2</b>	<b>152.8</b>
<b>State debt increment</b>	<b>114.4</b>	<b>97.4</b>
<b>Direct loans from international financial institutions</b>	<b>6.4</b>	<b>3.8</b>
<b>Issuance of government bonds</b>	<b>152.8 to 182.8</b>	<b>153.0</b>
Issuance of domestic government bonds	72.8 to 152.8	153.0
Issuance of foreign government bonds	0.0 to 80.0	0.0
<b>Net change in money market instruments</b>	<b>0.0 to -30.0</b>	<b>-4.0</b>

Source: MF CR.

More than 95% of the central-government gross borrowing requirement had to be covered exclusively through the domestic bond market. The result, similarly as in 2006, was only a moderate absolute drop in the value of money market instruments, as against 2004 and 2005, in each of which those values were successfully reduced by more than CZK 30 billion, particularly thanks to the benchmark issues on international markets.

### Financing Requirement in 2008

The planned central government's gross borrowing requirement without revolving money market instruments will amount to **CZK 179.7 billion** in 2008.

**Table 3: The Central Government's gross borrowing requirement in 2008 (CZK billion)**

State budget expenses	1,107.3
State budget income	- 1,036.5
<b>State Budget Deficit</b>	<b>70.8</b>
Planned extra-budgetary financial requirement	0.0
<b>Net financing requirement</b>	<b>70.8</b>
Redemptions on government bonds	80.0
Buy-backs of government bonds	10.0
Repayment of non-marketable State debt	4.5
<b>Gross financing requirement (without revolving money instruments)</b>	<b>165.3</b>
Special Pension Insurance Account	10.0
Other changes in financial assets accounts	-0.6
Creation (+) /drawing (-) financing reserves	5.0
<b>Government's gross borrowing requirement</b>	<b>179.7</b>

Source: MF CR.

This amount consists of the planned State budget deficit in the amount of **CZK 70.8 billion**, the reserve created for potential transfers of the positive balance between revenues from premiums and expenditures on pension insurance in 2007 in respect of the Special Pension Insurance Account in the State financial assets pursuant to section 36(3) of Act No. 218/2000 Coll. in the amount of **CZK 10.0 billion**, re-financing of matured medium-term and long-term government bonds, which accounts for **CZK 80.0 billion** after considering the buy-backs in 2007, re-financing of buy-backs of government bonds in 2008 in the amount of **CZK 10.0 billion**, repayments of loans from the European Investment Bank in the amount of **CZK 4.5 billion** and the creation of cash reserves pursuant to section 35(3) of Act No. 218/2000 Coll. in the amount of **CZK 5.0 billion**. At the same time, part of the Government's net financing requirement in the amount of **CZK 0.6 billion** will be covered by way of reducing the deposits on the accounts of the State financial assets.

The central-government borrowing requirement may also be affected by additional requirements of extra-budgetary State funds, the development of the public health insurance system, the results of international arbitrations, and the implementation of other explicit and implied contingent liabilities. Similarly as in the past, the Strategy does not anticipate any major payments resulting from the realisation of the guarantee for the IPB bank issued to the benefit of the Czech National Bank, which amounted to CZK 157.0 billion at the end of 2007; its utmost maturity is in 2016. Also, upon communication with representatives of the Czech National Bank, the Ministry does not anticipate any transactions aimed at reducing its aggregate accounting loss.

## **Financing Programme 2008**

The 2008 financing programme is based on the planned gross borrowing requirement in the amount of CZK 179.7 billion, which will be covered within the framework of the following absolute and relative limits determining the options of the Ministry in the application of certain individual debt instruments on both domestic and international financial markets.

**The share of financing on international markets will amount to no more than 50% of the total annual gross borrowing requirement of the Government, free of the planned net change in the money market instruments in circulation and their revolving within a budgetary year.**

The Ministry will analyse the topical development of the conditions of financing on both domestic and international markets and it will operate within the framework of the given relative limit in 2008, which remains identical to that applied in 2006 and 2007, and which caps international issues. In view of the fact that no public benchmark Eurobond issue took place in 2006 and 2007, connected to the successful transactions executed in 2004 and 2005, the Ministry will focus its 2008 international financing ventures particularly on such strategic transactions and on strengthening the position of the Czech Republic on the Euro-zone markets, as part of preparations of the country for the adoption of the uniform European currency. As additional measures, also some cost-effective private placements of the government bonds can be implemented with certain selected groups of strategic investors. As far as the currency structure

is concerned, international transactions have not been subjected to any explicit limits, so long as they apply prudent approach to currency risk management.

**Borrowing requirement in the amount of CZK 14.7 billion will be ensured by the long-term CZK loans from the European Investment Bank.**

Acceptance of such loans designated exclusively for infrastructure projects shall be conditioned by the adoption of the appropriate legislation by the Parliament of the Czech Republic. The drawing on such loans and their application to cover State budget expenses of the materially relevant ministries shall be explicitly contained in the draft State budget for 2008, similarly as in the previous years.

In keeping with any previously adopted legislation, they are such projects as the "Development of the material and technical base of Masaryk University in Brno", in the amount of approximately CZK 0.4 billion (EUR 13 mil.), the "Ring Road around the Capital City of Prague, the South-Western Branch", in the amount of approximately CZK 3.1 billion (EUR 115 mil.), the "Development and reconstruction of water pipes and sewers", in the amount of CZK 0.8 billion, and the "Flood Prevention Programme II", in the amount of CZK 1.2 billion. At the same time, approval is under way of an act concerning a loan for the Operation Programme – Transport, in the amount of CZK 34 billion, which is to be drawn on in 2008 in the amount of CZK 10.6 billion. The difference between the planned expenses on infrastructure and the financing programme of drawing on EIB loans in 2008 will be covered with help of funds derived from loans drawn in the previous years, which – however - have not yet been applied.

Loans from the EIB represent non-negotiable debt instruments, which thus eliminate issuance of government bonds. At the end of 2007, the share of such non-negotiable State debt will be around 4.4%, and the figure will exceed 5.0% by the end of 2008. It represents a complementary financing instrument and its further uses should not conflict with the issue and debt strategy of the Ministry on both domestic and international markets in the medium horizon. The existing Government plans have so far indicated that the share of non-negotiable instruments in the debt portfolio would not exceed 10.0% until the end of 2010.

**The amount of issued CZK medium-term and long-term government bonds on domestic market will not exceed CZK 165.0 billion.**

The above-described maximum value can be achieved, unless the Ministry, same as in 2006 and in 2007, enters the international public capital markets in 2008. The final annual value of any bond issues will depend particularly of funds collected from international markets. In the event of lower than the maximum permitted volume of international issues, identical amounts will be added to the volume of the issued domestic medium-term and long-term government bonds, and/or the planned change of the money market instruments in circulation will be adjusted accordingly.

Issuance of government bonds and their subsequent re-opening and secondary sales on domestic market will have maturities of **3, 5, 10, 15, 30, and 50 years**. They will be bonds with fixed coupons. The Ministry will continue to create a limited number of negotiable liquid benchmark issues, so that their equivalent quoted in the future local currency "euro" equalled roughly EUR 1 to 3 billion.

In the course of 2008, the Ministry, in keeping with its long-term plan of smoothing the maturity profiles, will introduce only one new benchmark issue on the domestic market maturing in **2011**. Simultaneously, re-openings will be taking place on the primary market and sales on the secondary market, drawing on the Ministry's portfolio of issues maturing in **2012, 2017, 2022, and 2036**. On 21 November 2007, the Ministry exercised successfully its historically first auction of CZK bonds with maturity of fifty years, in **2057**. That issue, similarly as issues maturing in 2036, will not be included in the regularly published quarterly issuance calendars but their potential future re-opening and secondary sales in the course of 2008 will be based on the Ministry's intention to satisfy any indicated demand among both local and international investors within those segments of the yield curve; at the same time, issuance plans will be set in such a manner so that the Ministry can respond flexibly to any such demand.

The Ministry will also implement **active direct sales of government bonds** on the secondary market in 2008, drawing from the Ministry's own portfolio, with the objective of reducing the costs of the financing of borrowing requirement and increasing flexibility in the management of liquidity of the treasury system. To this objective, the Ministry will accompany each and every primary auction with purchases of its own bonds to replenish its portfolio, in pre-announced volumes, and at the minimum level of CZK 1.0 billion. At the same time, similarly as in 2007, any difference (if any) between the quantity on offer and the quantity sold will be purchased. Government bonds held in the Ministry's own portfolio will also serve as collateral in 'repo' transactions involving such type of instruments.

**In 2008, the Ministry will manage the volume of money market instruments in financing long-term liabilities of the Government so that the short-term State debt is kept under 20% in the course of 2008.**

Projections of the debt portfolio structure at the end of 2008 show that maintaining the limits applicable to the short-term State debt maturing within one year will require keeping the share of money market instruments under 10% of the debt portfolio, consistent with stabilisation or with their drop by CZK 20.0 billion as against the end of 2007. Management of money market instruments in circulation will particularly depend on the genuine management of the State budget and on the Ministry's success in respect of its issues of government bonds on both domestic and international markets. Also in 2008, treasury bills in standardised maturities of 3, 6, 9, and 12 months will be issued.

Based on the structure and extent of the above-described limits, the following programme of financing the central-government gross borrowing requirement in 2008 has been adopted. The programme stipulates the planned structure of the debt portfolio and thus unequivocally determines the limits of debt management implementation in the course of 2008.

**Table 4: The 2008 financing programme (in CZK billion)**

<b>Government's gross borrowing requirement (without revolving money market instruments)</b>	<b>179.7</b>
<b>Direct loans from international financial institutions</b>	<b>14.7</b>
Loans from the European Investment Bank	14.7
Other non-marketable debt	0.0
<b>Issuance of government bonds</b>	<b>165.0 to 185.0</b>
Issuance of domestic government bonds	75.1 to 165.0
Issuance of foreign government bonds	0.0 to 89.9
<b>Net reduction of money market instruments in circulation</b>	<b>0.0 to 20.0</b>

Source: MF CR.

### 3 Strategic Targets and Financial Portfolio Management

Public definition of the strategic, and/or benchmark, portfolio of Government liabilities and financial assets via the declaration of strategic targets represents the key tool in increasing transparency of the Ministry's debt policy. The target has been set in keeping with the requirements resulting from prudent management of financial and credit risks while minimising long-term economic costs. The strategic targets have been formally declared for the State debt portfolio also for 2008.

In view of the restrictive policy applied in the area of providing new State guarantees and also in view of repayments of major volumes of principals of guarantees (particularly, in respect of Aero Vodochody and the consolidation and stabilisation of the banking sector in relation to the Czech National Bank), the value of the State guarantees dropped to CZK 210.0 billion at the end of 2007. Considering the non-standard guarantees provided in the amount of CZK 157.0 billion to the benefit of the Czech National Bank in respect of the IPB bank, therefore, the active financial portfolio management only focuses on the **value of standard guarantees**, which have established their repayment schedules and unambiguous currency and interest rate structures. The value of such guarantees amounts approximately to **CZK 53.0 billion**, i.e., approximately

only 6% of the State debt, so that their structure can no longer divert in an undesirable manner in respect of the declared targets the criteria monitored on an integrated basis, and thus threaten stability of the State budget expenses as compared to the debt portfolio.

As far as the given quantitative relations are concerned, information about the fulfilment of the strategic targets of risk management will no longer be published on an integrated basis commencing in 2008. The value of the portfolio of standard risk State guarantees will be evenly decreasing until 2022, along with the step-by-step spending from the State budget on the repayment of the instalments, which will thus be re-financed by way of issuance of government bonds within the framework of the budget deficit.

In view of the integration of the asset and liability management, an important change is seen within the State budget, commencing in 2008, in relation to transfers into the "State Debt" chapter of revenue from investing available financial funds from the accounts of the State financial assets and of the State Treasury system by the Department. The 2008 budget envisages such revenue in the amount of CZK 1.5 billion. Thus, the public will be able to see, within a single budget chapter and in a transparent manner, the **net interest costs** on the State debt, which represents an economically more correct benchmark of efficiency of management of the debt portfolio and State transactions on the financial markets than gross interest costs.

## Re-financing Risk Management

Stabilisation of re-financing risks represents the pivotal point in the concept of the issuance strategy applied by the Ministry. The key indicator focused on by the Ministry in this connection commencing in 2004 has concerned the **share of the short-term State debt** (i.e., debts maturing within one year to the overall debt). The Ministry declared in the first half of 2004, in connection with the decision of the Minister of Finance to launch regular issues on international markets, a gradual three-year declining curve of such indicator as follows: 2004 – 25.0 to 30.0%, 2005 – 22.5 to 27.5%, 2006 – 20.0 to 25.0%.

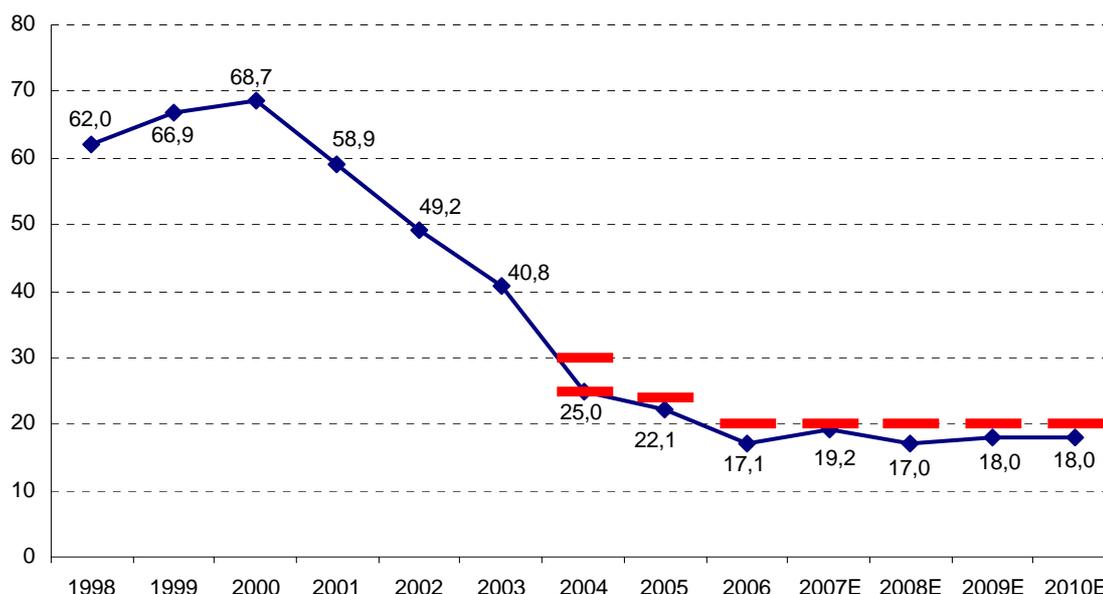
Successful commencement of international financing in June 2004 facilitated the re-definition of the strategy towards further acceleration of the reduction programme. At the end of 2004, the relevant value reached exactly the level of the lower limit of the declared 25.0% ribbon. Also in 2005, the target of 24% and less was met, since the indicator amounted to 22.1% at the end of the year. As early as in the first quarter of 2006, the planned final and long-term targeted limit of 20% was reached, and the value generated at the end of the year equalled 17.1%.

The limit of **20% of the total State debt** remains, in keeping with its long-term strategy, the fundamental limit of the Ministry's 2008 issuance and of management of financial risks of the Czech the debt portfolio.

At the end of 2007, this indicator is expected to reach the value of around 19%. An increase of the short-term debt has been caused by higher annual values of matured principals of benchmark issues nearing the sum of CZK 100 billion, while the Czech Republic has been absent from the international capital markets in 2006 and 2007.

Therefore, the expectation of the Ministry has been confirmed that maintaining the limits of the short-term State debt, which come closer to the parameters applicable to debt portfolios in the developed countries of the European Union, has been very difficult given the borrowing requirements of the Government, if implemented solely via issuance on domestic market, without any impact on the balance between supply of and demand for government bonds.

**Figure 2: Development and Targets of Short-term State debt in 1998 to 2009 (% of total debt)**

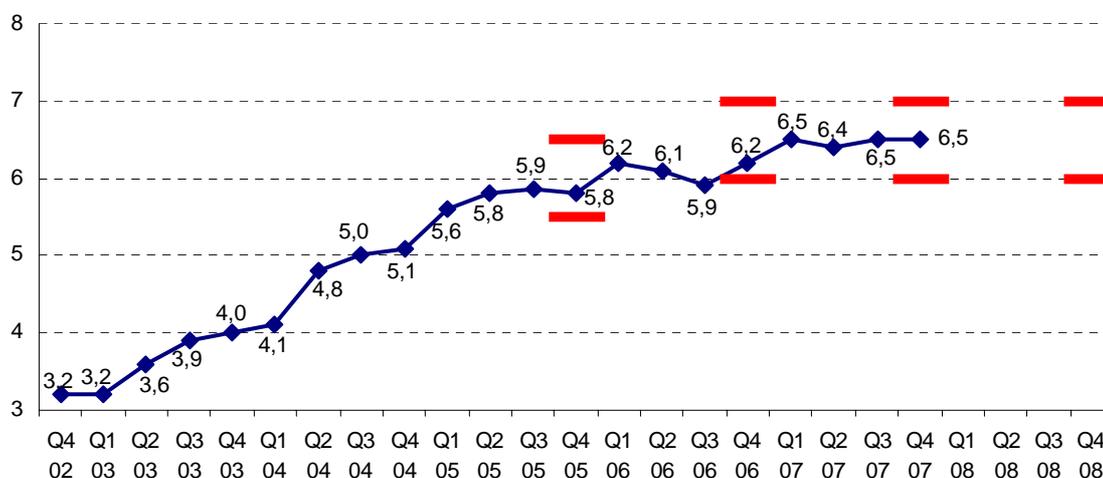


Source: MF CR.

Yet another indicator applied in the management of re-financing risks is represented by the **average term to maturity of State debt**. The Ministry declared the explicit target for the first time in respect of 2005, namely at the level of 5.5 to 6.5 years; it was fulfilled as the average maturity stood at 5.8 years. As far as 2006 was concerned, the target brackets were extended by 0.5 year, up to 6.0 to 7.0 years; the achieved value equalled 6.2 years. An identical range remained also in 2007, and it is possible to envisage that the end-of-the-year average maturity would equal the medium value of that interval.

As concerns the end of 2008, the Ministry continues to apply the State debt average maturity target of **6.0 to 7.0 years**. The achievement of the target shall determine the time and the volume structure of issues of State bonds on both local and international markets and the setting of repayment schedules of loans drawn from the EIB. A trouble-free implementation of a public benchmark issue on international markets in 2008 in the segment of 10 and more years represents an implicit precondition for the fulfilment of that target range.

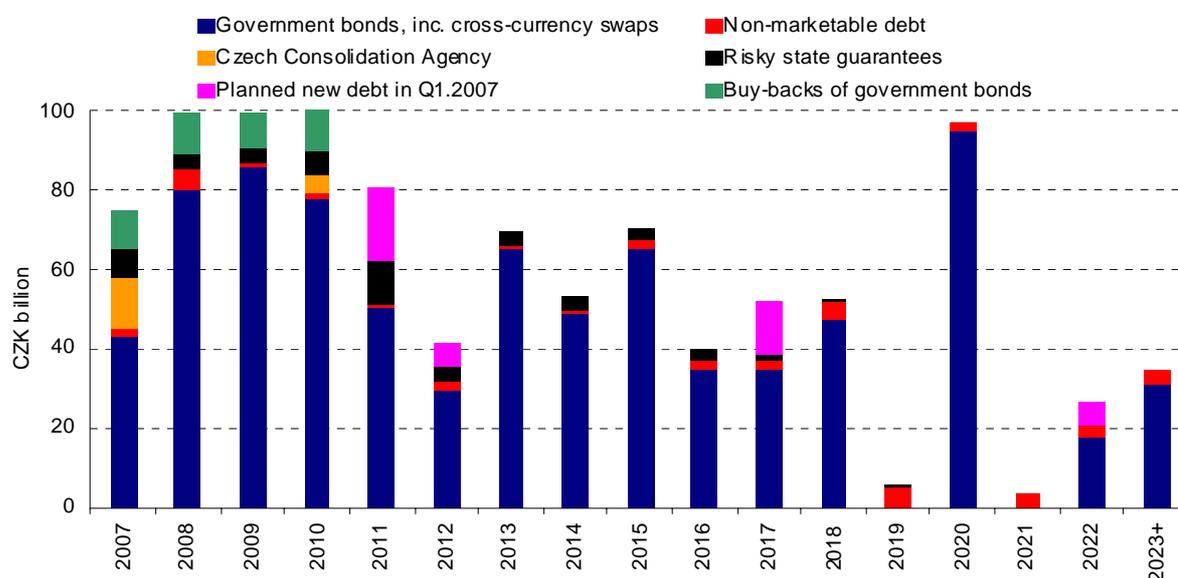
**Figure 3: Average Time to Maturity of the State Debt and Annual Targets (years)**



Source: MF CR.

New issuance of government bonds, same as drawing on long-term loans from the EIB, will continue to be managed in keeping with the implementation of the key targets in the form of **stabilisation and smoothing of the redemption profile of State liabilities in time**, which has been monitored since 2005 and planned on an integrated basis. Active management and fine tuning of the maturity profile also takes place by way of transactions on the secondary market involving government bonds, which were launched in 2007, and will continue also in 2008. In the medium term, the total annual redemptions will not exceed the amount of CZK 100 billion.

**Figure 4: Expected Redemption Profile of Explicit State Liabilities at the end of 2007**



Note: Without money market instruments in circulation and non-standard State guarantees.  
Source: MF CR.

Redemption profile shows decreasing quantitative importance of repayment of standard-exposure State guarantees, which have been evenly distributed in the horizon until 2022 and therefore do not represent any significant re-financing and market risks on the expenses side of the State budget. The sole bullet redemption of some importance is represented by the repayment in 2011 of a bond principal in the amount of CZK 7 billion, which was issued by the Railway Track Administration. Another bond issued by the ČKA in the amount of CZK 5 billion shall mature in 2010. Due to the winding up of the ČKA, this bond shall be shifted to the State debt as of 1 January 2008 and it will be repaid in a standard manner as part of the re-financing of the State debt in keeping with the relevant State Bond Programme Act.

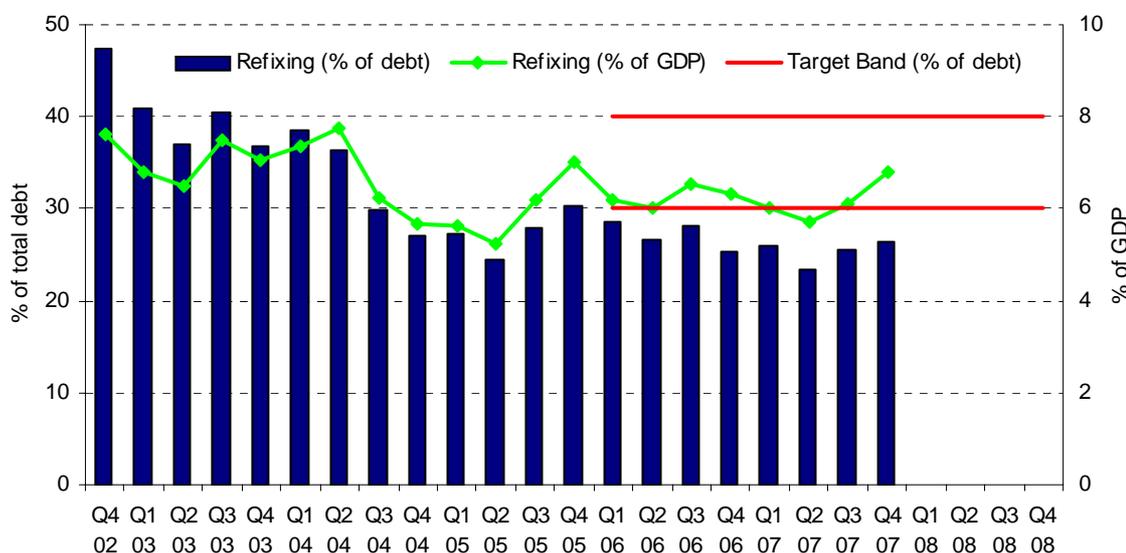
## Interest-Rate Risk Management

Interest-rate risk remains the most important market exposure in the area of State debt management. Commencing in 2006, changes were introduced in respect of declaring strategic targets for this area of debt management. The new explicit target was defined as **interest-rate re-fixing of the debt portfolio up to one year**, which is not sensitive to interest rate fluctuation on the financial markets. In 2006 and 2007, the medium-term target was established at 30 to 40% of the total State debt.

The main reason for the failure of the Ministry to achieve the target in the course of those years was the decision of the Minister of Finance not to issue a public Eurobond whose currency hedging would otherwise follow the 2005 model, so that the CZK equivalent of the principal is left in the floating leg of the hedging swap, thus being exposed to fluctuating rates at the inter-bank market. It was decided at the same time that no other synthetic derivative transactions would be performed, which would boost interest-rate exposure, even in the absence of a Eurobond issue, and that parameter was left slightly below the lower limit of the target ribbon.

Since the macro-financial model simulations continue to indicate positive medium-term trade-off in relation to costs versus risks, the Ministry has decided to leave unchanged also in 2008 the target of the exposure of the debt portfolio to changed interest rates up to one year, including transactions with derivatives, in the form of a ribbon of **30 to 40% of the total State debt**. The limits of the ribbon correspond approximately to 8 to 10% of the GDP, while the interest-rate re-fixing have fluctuated around 6.5% of the GDP in the years 2006 and 2007.

**Figure 5: Interest Rate Re-fixing up to 1 year and Medium-Term Target Band (% of total debt)**



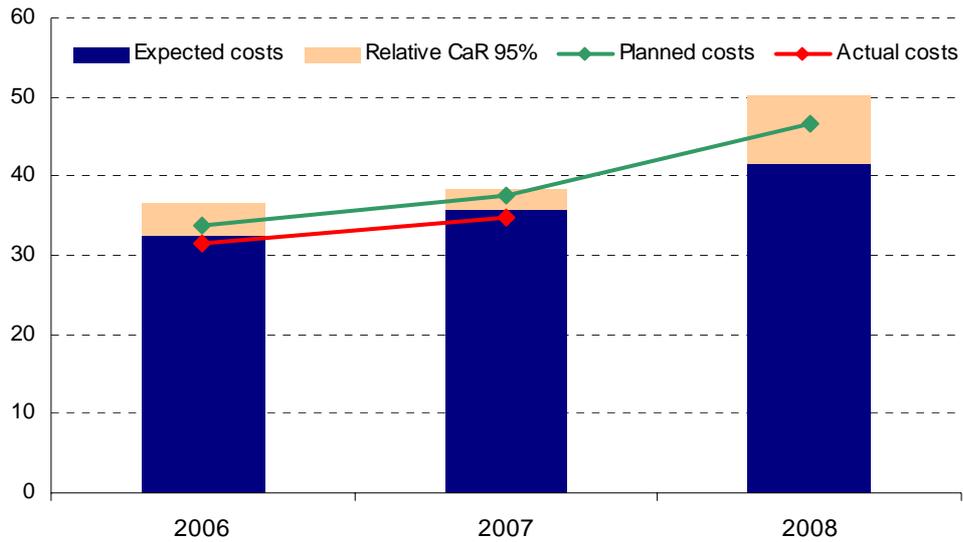
Source: CSO, MF CR.

Commencing in 2005, the Ministry has applied a more sophisticated model framework in interest-rate risk measurement and management, so-called Cost-at-Risk, **CaR**, which derives from the VaR methodology and which simulates future anticipated and maximum interest costs on State debt at a given level of risk, which in turn derives from volatility of the time structure of interest rates.

Thus, the yield curve represents the stochastic element of the CaR model. The development of the State debt portfolio is considered as deterministic within the CaR model, and it is based on the planned issuance schedule, including international issues, the planned drawing on direct loans and from other financial transactions. It is further presumed under the model that coupon payment from potential international issues would be hedged against FX risks.

In 2006 and 2007, the model framework applied in the simulation of the interest costs showed relatively reliable values of the CaR indicator, which were consistent with any enacted legislation governing the State budget and which described the genuine development of gross costs of servicing the State debt. In 2006, the anticipated costs were over-valued by 2.5% as against reality and an over-valuation of 2.3% is expected in 2007.

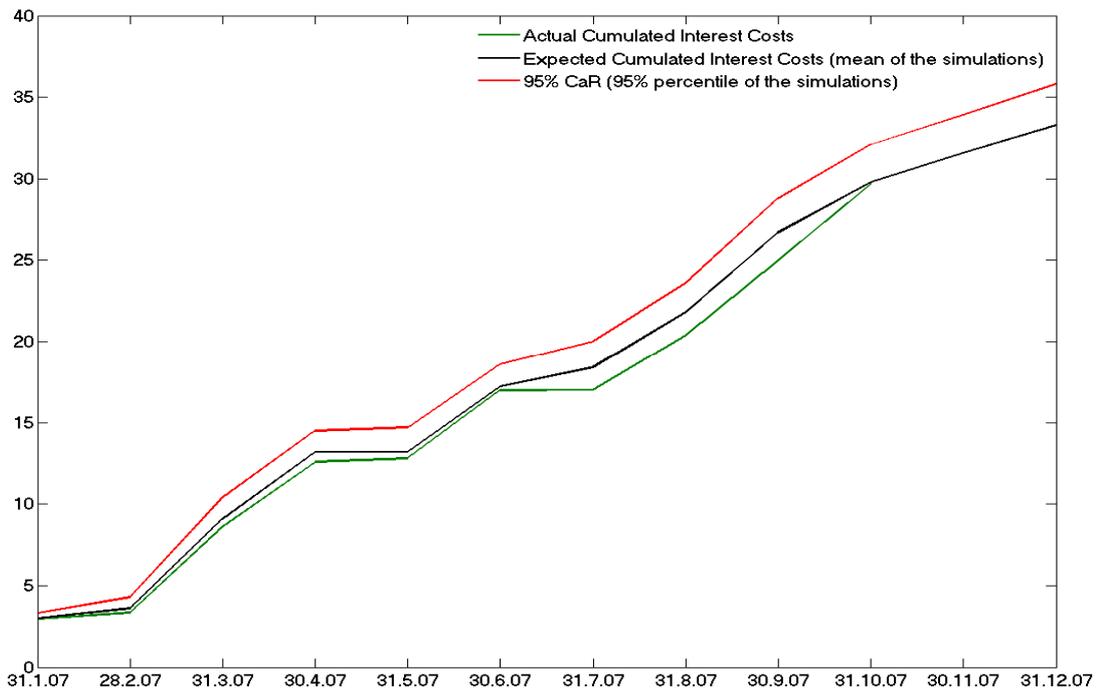
**Figure 6: Gross interest costs and Cost-at-Risk in 2006 to 2008 (CZK billion)**



Source: MF CR.

A comparison of the actual development of interest costs to the development as simulated with help of the CaR model from January until November 2007 shows some satisfactory overlapping of the model and the genuine development.

**Figure 7: Actual versus simulated interest costs on the State debt in 2007 (CZK billion)**

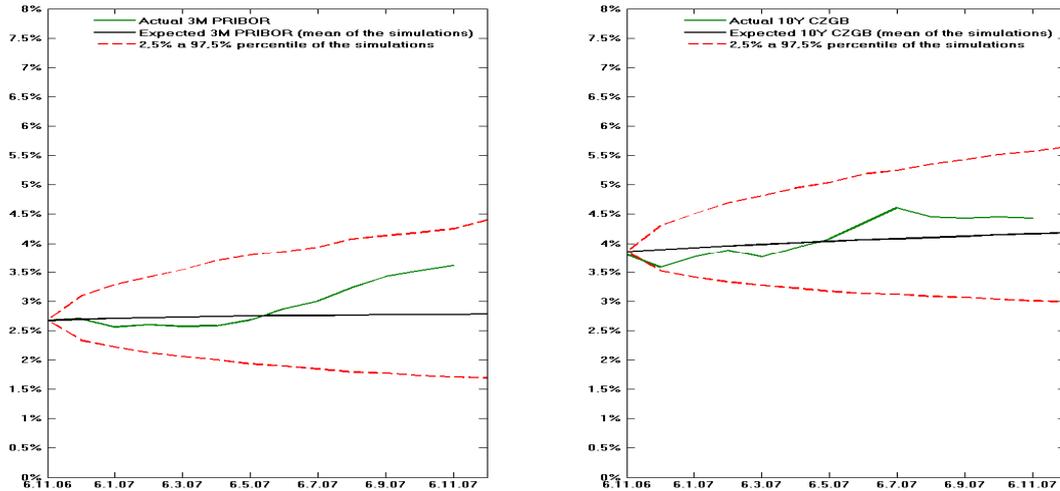


Note: Interest costs have been determined using the cash principle relevant for the methodology applicable to the State budget.

Source: MF CR.

The actual development of the yield curve, together with the expected value (average of simulations) and the 95-% confidence interval (2.5th and 97.5th percentile of the interest rates simulations) for PRIBOR 3 months and 10-year government bond confirms acceptable performance of the CaR model.

**Figure 8: Actual versus simulated development of interest rates in 2007**



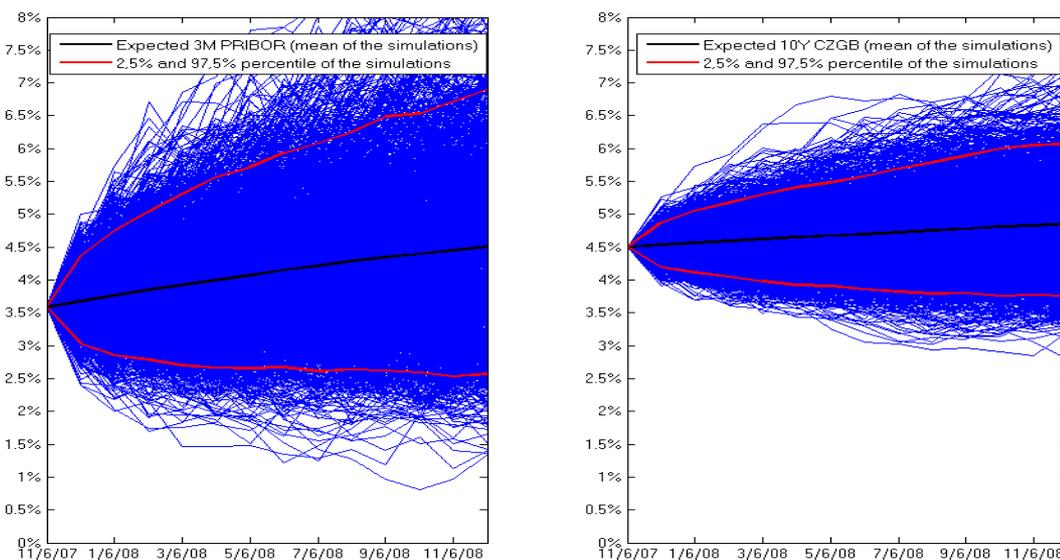
Source: Bloomberg, MF CR.

**Cost-at-Risk model of the State debt in 2008**

In 2008, same as in 2007, simulations of interest rates are based on modelling the main components of the yield curve (*“principal component analysis”*) with help of non-linear stochastic differential equations. The techniques of estimating the parameters of the model are based on an article by Yacine Ait-Sahalia: Testing Continuous-Time Models of the Spot Interest Rate, The Review of Financial Studies, 1996, Vol. 9, No. 2, pp. 385-426.

The parameters of the model have been estimated on the basis of monthly reviews of the yield curve commencing in January 2000. A total of 5,000 interest rate simulations relating to future fourteen months have been performed for each of the required maturities. The model possesses the quality of *“mean reversion”*, which means that the anticipated values of the current values of the interest rates would be growing. Simulation of the interest rates of 3M PRIBOR and a 10-year State bond are shown in Picture 9.

**Figure 1: Simulation of development of the Czech interest rates in 2008**



Source: MF CR.

Simulation of interest rates represents an input in the calculation of interest costs of the floating part of the State debt portfolio: new issuance of money market instruments and government bonds, capital income, and/or losses on re-opened government issues, loans from the EIB and floating legs of interest-rate swaps. Table 5 shows the deterministic change of the structure of the State debt, underlying the simulated interest rates and any subsequently calculated gross interest costs.

**Table 5: Basic scenario in the structure of the State debt until the end of 2008 (CZK billion)**

State as of	Government bonds	Money market	Non-negotiable debt	Total State debt
31/10/ 2007	758.8	59.8	39.3	857.9
31/12/ 2008	863.2	77.6	49.3	990.1

Source: MF CR.

Interest rate simulation provides simulation of interest costs on the State debt portfolio. The mean average of such interest cost simulations gives the estimated anticipated value of the interest costs and the  $p\%$ -quantile of the interest cost simulations gives the estimated  $p\%$ -quantile of the probable distribution of the interest costs. The value of 95% of the quantile of the simulations gives 95% of CaR, i.e., the amount of the interest costs, which will not be exceeded with 95% probability. The evolution of the anticipated value of the aggregate interest costs and 95% of CaR in 2007 is shown in Table 6.

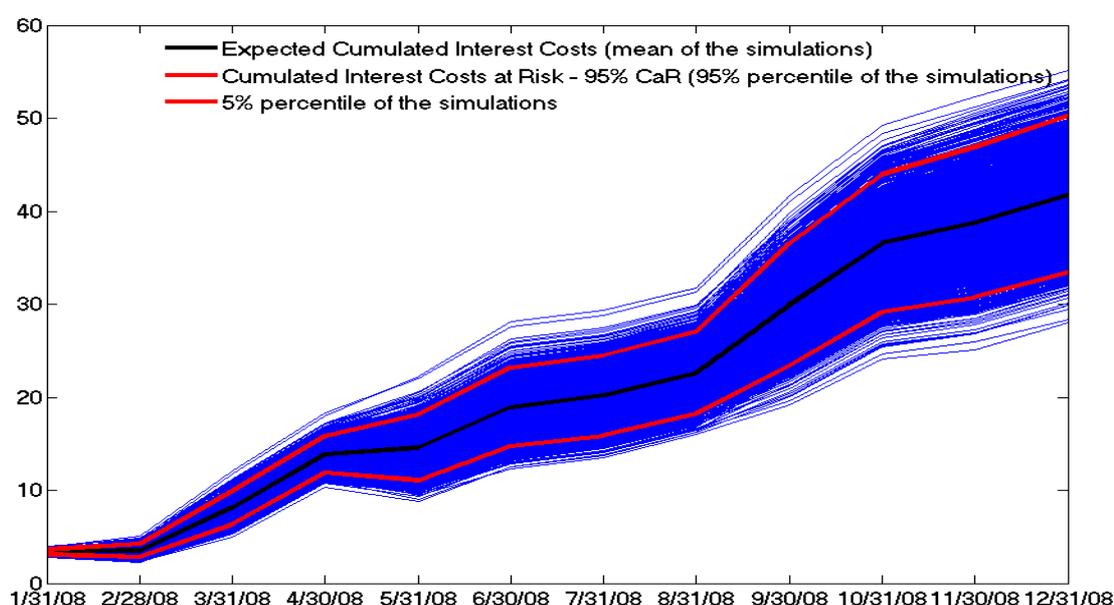
**Table 6: Development of aggregate interest costs of State debt in 2008 (CZK billion)**

Months in 2008	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
Expected costs	3.4	3.5	8.1	13.9	14.6	18.9	20.2	22.6	29.9	36.5	38.8	41.7
Absolute CaR 95%	3.7	4.3	9.9	15.8	18.1	23.2	24.5	27.1	36.5	44.0	46.9	50.2

Source: MF CR.

The expected gross interest costs on the State debt in 2008 equal **CZK 41.7 billion** Cost-at-Risk, i.e., the CaR 95% amounts to **CZK 50.2 billion**. The actual interest costs, therefore, would not be with 95% probability higher than the anticipated costs by more than CZK 8.5 billion. The budgeted amount of the expenses in the State Debt Chapter, therefore, should be sufficient in order to cover any really implemented gross interest costs, subject to the fulfilment of the anticipated development on the financial market in the course of 2008.

**Figure 10: Simulation of gross interest costs in 2008 (CZK billion)**

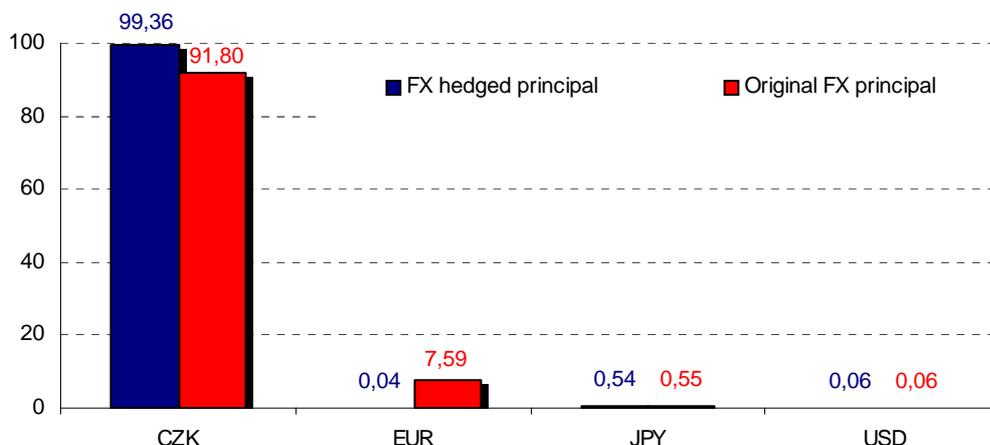


Note: The interest costs have been calculated using the cash principle relevant for the State budget approach.  
Source: MF CR.

## Currency-Risk Management

The State debt has not been exposed to any significant risk resulting from FX fluctuations at the end of 2007. The Ministry does not declare any specific quantitative targets in the area of the currency structure of the State debt in 2008 either.

**Figure 11: Currency Exposure of the State Debt Portfolio at the end of 2007 (%)**



Source: MF CR.

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This publication was prepared on the basis of information available as of 30 November 2007. The Ministry reserves the right to respond flexibly in the course of 2008 and with help of its instruments to the genuine evolution of the gross borrowing requirement of the Government in the area of the State budget, extra-budgetary funds, health insurance, and settlement of exposed State guarantees. The fulfilment of the planned financing programme and of the declared strategic targets will depend, in particular, on the developments on both domestic and international financial markets in view of the minimisation of the costs of debt service and financial risk management.

This publication is also available on the website:

**[www.mfcr.cz/statedebt](http://www.mfcr.cz/statedebt)**

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