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MINISTRY OF FINANCE OF THE CZECH REPUBLIC

**Government Debt Management Unit**

# Financing and Debt Management Strategy for 2005

## Contents

On 11 November 2004, the Minister of Finance decided on the structure and method of financing borrowing needs of the central government in the budgetary year 2005 and approved the overall absolute and relative limits for issuance activities on the domestic and foreign financial markets and for the active management of debt portfolio of the state. The so defined operational framework in the form of submitted Financing and Debt Management Strategy for 2005 contributes to more transparent implementation of debt policy and enables more flexible work of the Ministry on the financial market for the purpose of active ensuring financial needs of the Government and achieving the set medium-term strategic targets of the state debt management policy.

## 1. The Gross Borrowing Requirement

The total planned gross borrowing requirement of the Government in 2005 is CZK 135.6 billion. This amount consists of the planned deficit of the State Budget of CZK 83.6 billion, the planned payment of a part of loss of the Czech Consolidation Agency (CCA) in the amount of CZK 30.0 billion and refinancing due medium- and long-term government bonds in the amount of CZK 22.0 billion. Gross financing requirements (without revolving of T-bills) are further increased in 2005 by cca CZK 749 million in relation to increasing the balance on the accounts of state financial assets (see section 2(3) of the draft of the Act on State Budget of the Czech Republic for 2005).

**Tab. 1: Government Financing Requirement in 2005 (CZK bn)**

| **Gross financing requirement (excl. short-term funding in T-Bills )** | **136.38** |
|---|---|
| | |
| Expenditure by the central government | 908.42 |
| Receipts to the central government | - 824.83 |
| **Deficit of the central budget, excl. funding the CCA** | **83.59** |
| Planned funds covering the losses of the CCA (incl. financing reserve) | 30.00 |
| **Net borrowing requirement of the Government** | **113.59** |
| Redemptions on domestic T-Bonds | 22.00 |
| Maturing long-term loans | 0.05 |
| **Gross borrowing requirement (excl. short-term funding in T-Bills)** | **135.64** |
| Increase in state financial assets | 0.75 |

Source: MF, CCA.

The planned payment of a part of CCA’s loss for 2005 is based on updated estimates. Of course, the real future development will depend on a number of factors, especially on incomes from receivables in individual and block sales and in their recovery and on the Government’s intentions in disposing with selected property participations. The expected special government bond programme, nevertheless, provides the Ministry with sufficient flexibility in financing any possible additional needs of CCA in 2005, of course, in dependence on the situation on the financial market.

## 2. Annual Financing Programme

The planned financing programme for 2005 is based on the following limits defined by the Minister of Finance that are determining for using individual debt instruments ensuring the Government’s financial needs in 2005.

> **The share of financing in the foreign capital market will be maximally 40% of the total annual gross financing requirement (without revolving of T-bills).**

This maximum limit enables a flexible reaction of the Ministry to the current conditions on the domestic and foreign financial markets. It is a limit restricting foreign issuing activities from above, and therefore it does not need to be used fully in the case of unfavourable conditions on the foreign market in comparison with the domestic market development. When obtaining resources from abroad, the Ministry will focus mainly, similarly as in 2004, on strategic operations on the eurozone market in accordance with the Convergence Programme of the Czech Republic for 2004.

**Financial requirements of CZK 11.78 billion will be ensured by long-term loans from the European Investment Bank.**

Drawing on these loans for infrastructure projects has been approved by the Government, has been decided by the Minister of Finance and are also included in the draft of the State Budget for 2005. The Government Debt Management Unit isn't accountable for management of these loans and only ensures the debt service, statistics and cooperates during setting their schedule of payments.

As of the end of 2005, the share of non-marketable state debt will approach the level of 5%. It is a supplementary financing instrument and its further using should not be, in the medium-term horizon, at variance with the issuing and debt strategy of the Ministry on the domestic and foreign markets. The current government plans indicate that the share of non-marketable instruments in the debt portfolio should not exceed the level of 10% in the medium-term horizon by 2007.

**Amount of issued medium- and long-term government bonds on the domestic market will be maximally CZK 120 billion.**

This amount is based on the estimate of absorption of the domestic capital market accepted in terms of costs and ensures that the maximum offer of these instruments will be in 2005 at a comparable level as in 2004. The final annual issued amount will depend especially on the amount of resources raised on the foreign market. In the case of a lower than maximum permitted amount of foreign issues, the amount of issued domestic government bonds will be increased by the same amounts up to the limit of CZK 120 billion, or the planned dis-issue of T-bills will be decreased.

The issue of government bonds and their subsequent re-opening on the domestic market will continue in the maturities of 3, 5, 10 and 15 years. The emphasis will still be laid also on the creation of a limited number of marketable liquid benchmark issues so that their equivalent in the future domestic currency euro would fluctuate at EUR 1 to 3 billion. In the course of 2005, the Ministry is planning to introduce to the domestic market four new benchmark issues with the maturities in 2008, 2010, 2015 and 2020. The average time structure of these issues will be such so that the defined targets in the area of management of refinancing and market risk of state debt would be achieved.

**In 2005, the Ministry will continue in the programme of decreasing the share of treasury bills in financing long-term obligations of the Government so that as of the end of 2005 the short-term state debt would decrease minimally to the limit of 23 to 24% or below**.

It follows from the projection of the debt portfolio structure as of the end of 2005 that in order to achieve the target ratio of short-term debt payable up to one year, it is necessary to decrease the amount of treasury bills outstanding by minimally CZK 24 billion, i.e. as of the end of 2005 the share of treasury bills in state debt should fluctuate at the limit of maximally 15%. Successfulness of this programme of treasury bills reduction will depend mainly on the real State Budget development and on successfulness of the Ministry in issuing medium- and long-term government bonds on the domestic and foreign markets. Issuing treasury bills with the maturities of 3, 6, 9 and 12 months will continue, while three primary auctions will be held every month.

**Tab. 2: Annual Financing Programme in 2005 (CZK bn)**

| **Gross financing requirement (excl. short-term funding in T-Bills )** | **136,38** |
|---|---|
| | |
| **Long-term loans from the international institutions** | **11,83** |
| European Investnment Bank | 11,78 |
| Notes to cover EBRD subscription | 0,05 |
| **Gross T-Bonds issues** | **148,55 až 174,55** |
| Domestic capital market | 94,00 až 120,00 |
| International capital market | 28,55 až 54,55 |
| **Net T-Bills issues** | **-24,00 až –50,00** |

Source: MF.

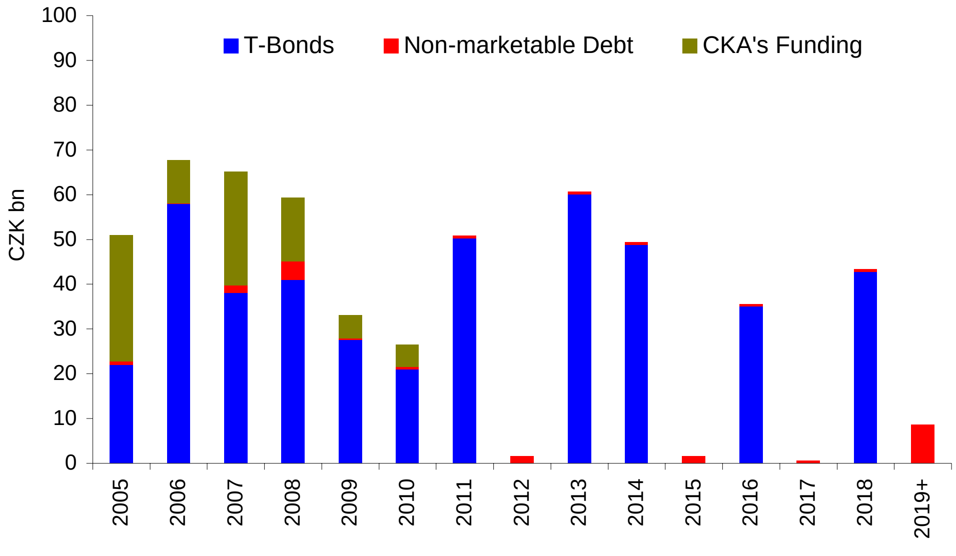
## 3. Refinancing Risk Management and Coordination between the Ministry and the CCA

The stabilisation of refinancing risk still remains in the centre of attention in drafting the issuance strategy of the Ministry. The key figure targeted by the Ministry in this connection starting from 2004 is **short-term state debt** (i.e. debt payable up to one year). In the first half of 2004, the Ministry declared, in connection with the decision of the Minister of Finance, starting regular issuing activities on the foreign market with a gradual three-year path of decreasing the short-term state debt in this form: 2004 – 25.0 to 30.0%, 2005 – 22.5 to 27.5%, 2006 – 20.0 to 25.0%. A successful introducing of foreign financing in June 2004 enables to redefine the strategy towards further speeding up this reduction programme. As of the end of 2004, we expect the value below 26.0% and by the end of 2005 the target is further decreasing minimally to the level of **24% and less**. As of the end of 2006, the Ministry should already reach the planned limit of **20%** that will become, starting from 2007, one of the fundamental limits of risk management.

Another measure used for refinancing risk management is the **average time to maturity of state debt**. So far, no target quantitative values have been announced explicitly for this measure. Thus, the Ministry announces for the first time the target of **5.5 to 6.5 years** for the average time to maturity of state debt that should be achieved by the end of 2005. On achieving this target, also the specific average time structure of state bonds issues on the domestic and foreign markets will be based and the schedules of payments of loans from the European Investment Bank will be set.

New issues of government bonds as well as drawing on long-term loans will be managed primarily in accordance with meeting another key target in the form of **stabilisation and smoothing the redemption profile of state debt within a time**.

**Fig. 1: Expected State Debt Redemption Profile and Outlook of the CCA's Funding**
(End-2004, CZK bn; excl. risky state guarantees and T-Bills outstanding)




Source: MF, CCA.

Fig. 1 also shows expected needs of new resources resulting from the expected outlook of cash flows of the Czech Consolidation Agency (CCA) by the end of 2010. The outlook of these needs of the Ministry's financing has been updated at the joint meeting of the Ministry and CCA at the level of the First Deputy Minister of Finance on 19 November 2004. Until dissolution of CCA without liquidation, i.e. 31 December 2007, the Ministry will provide these resources especially by issuing government bonds according the special state bond programme for the payment of a part of CCA's loss up to CZK 63.3 billion that has already been approved by the Chamber of Deputies and will be discussed by the Senate by 13 December 2004. After dissolution of CCA, its assets and liabilities will be transferred to the Ministry and will be administered as a part of the standard budgetary process and state debt management and the Ministry's issuing policy.

The final coverage of CCA financial needs in the next years will be based on the regular coordination between the Ministry and CCA in accordance with the medium-term outlook of borrowing needs of the Government and in relation to needs of risk management of state debt.

Further, the own activity of CCA on the financial market in 2005 was agreed upon. CCA will not, especially in 2005, issue its own medium- and long-term bonds. Nevertheless, it can finance short-term additional needs by means of the money market by issuing short-term bonds and loans on the inter-bank market. The intention of CCA is to raise financial resources in the mentioned way in the amount of CZK 15 billion.

## 4. Interest Rate Risk Management

Interest risk remains the most important market risk of state debt management. In connection with starting interest rate management by means of financial derivates, in 2002 the Ministry started annual targeting of the modified duration of state debt. The newly defined target of the **modified duration of state debt**, including the effect of financial derivatives, is **3.8 ± 0.4 years** for 2005. Compared to 2004 (the target 3.3 to 4.3 years), the middle target value of duration is kept and at the same time the range is narrowed by 0.2 year. Therefore, the Ministry does not plan any further more significant increase in modified duration, but in 2005 it will strive for its stabilisation in a narrower range.

The new target for duration is consistent with quantitative analyses and simulations in the ten-year horizon conducted so far from which it follows, among other, the preliminary conclusion that increasing interest exposition of debt portfolio up to 1 year brings on average a quicker decrease in expected interest costs compared to the increase in their variability. The current exposition to the change of interest rates up to 1 year generated by the structure of state debt in terms of imposing interest rates on debt instruments (after including derivative operations), the so called **interest refixing up to one year**, has stabilised below 30 % from the end of the third quarter of 2004.

With respect to the fact that the simulation model framework of state debt management has to be specified in the course 2005 in terms of the used methodology and assumptions (e.g. the accession of the country to the euro zone, convergence of interest rates and the method of simulation of primary budget deficit), the preliminary conclusions are interpreted in a very conservative way, i.e. the Ministry has decided to stabilise interest risk in the following year, not to increase considerably (i.e. not to decrease the duration target compared to 2004). In the course of 2005, the determination of the optimum value of short-term interest exposition of state budget will be based especially on specifying interest models of the Ministry (see Appendix) that will enable finer management of the relation between interest risk and expected costs resulting from the structure of debt portfolio. The final decision on this exposition will be, of course, fully consistent with meeting the new duration target for 2005.

It is important that any possible increase in interest exposition for the purpose of the final decrease in average interest costs of state debt does not threaten the above-mentioned targets in the sphere of stabilisation and decreasing refinancing risk. In order to manage interest exposition more flexibly, the Ministry will continue in using actively the respective derivative operations.

## 5. Currency Risk Management

At present, state debt (without taking into account the state guarantees) is not exposed to any relevant risk resulting from exchange rate fluctuations. Seeking the optimal currency structure of state debt in the period prior to the accession of the country to eurozone is now another key subject of quantitative research of the Ministry. Therefore, for 2005 no quantitative target has been concretised in this sphere. Nevertheless, currency risk management will still be carried out in relation to co-ordination and common procedure of the Government and the central bank in the area of exchange rate policy of the state.

## 6. Technical and Economic Objectives of the Government Debt and Liquidity Management

Also in 2005, the Ministry will realise a number of steps aimed at modernisation of administration and making state debt management more effective in accordance with the best practice of the developed countries of the European union and OECD. These steps concern mainly the following four spheres.

### (1) Integrated management of financial risk of state debt portfolio and state guarantees.

From the perspective of management of financial risk of expenditure flows of the State Budget, not only the structure of state debt is relevant, but also the structure of the portfolio of provided state guarantees, for which the State Budget pays effectively principle repayments and interest payments. These risky guarantees have already been transferred according to ESA95 methodology prescribed for the calculation of the Maastricht criteria into the government sector debt, nevertheless, they are not a part of state debt. Therefore, in the middle of 2004 analytical work was started in the Ministry for evaluating the refinancing, time, currency and interest structure of risky state guarantees. The first preliminary outputs of this work have already become a part of the Convergence Programme of the Czech Republic for 2004.

For the future, there is no economic sense in monitoring strategic targets and declaring any quantitative criteria for the state debt portfolio and ignoring financial risk of state guarantees. Therefore, the management of the integrated portfolio of state debt and provided risky state guarantees will be started from 2005, including realised derivate operations. Practically it means especially that the declared and monitored criteria of risk management will still be related formally to state debt, nevertheless, but the meeting of these criteria will be regularly evaluated each quarter after taking into consideration the structure of both portfolios. If the structure of risky state guarantees portfolio will start diverting considerably the monitored criteria on the integrated basis in an undesired manner beyond the declared targets, the Ministry can use its available instruments (especially financial derivatives) in order to reverse these trends and ensure stabilisation of the criteria towards acceptable levels. The first results and experience of the Ministry with the integrated management of global portfolio of the State Budget obligations will be published at the end of the first quarter of 2005. The information will also be a part of the next Convergence Programme of the Czech Republic for 2005, whereby the effort of Government to increase transparency of public finance management will be supported further.

### (2) Implementation of integrated information system for state debt management.

On 12 November 2004, the Minister of Finance decided to purchase and finance the application software for the integrated system of management of state debt, state guarantees and Treasury liquidity. The selection procedure for a supplier company and subsequent implementation within the Government Debt Management Unit should be finished by the end of 2005. It is a key step towards strengthening the technical capacity of state debt management and its standardisation at a level comparable with other countries of the European Union. The main target is to prevent any potential loss from a possible process failure in processing and settle daily financial operations related to state debt management and Treasury liquidity. So the implementation of the system is a necessary condition for minimising operational risk. The system will lead to the automation of routine activities and decreasing dependence on the human factor and will bring a considerable increase in capacities for regular portfolio analyses, derivative credit risk management, internal and external reporting and communication with investors, the budgetary and accounting process, the integration of management of all obligations of the central government as a part of the global portfolio and flexible using modern products of active state debt management. Generally, transparency of public finances will again increase considerably in relation to the governmental budget reform and debt service costs will be reduced.

**(3) Opening the possibility of access to primary auctions of domestic medium- and long-term government bonds for non-residential subjects.**

With its official communication of 27 October 2004, the Czech National Bank supplemented significantly the Rules for primary sale of medium- and long-term government bonds. Newly, also a foreign institution with the registered seat on the territory of the European Union that is a bank, a branch of a bank, a security trader or a branch of a security trade and that is authorised to provide investment services listed in section 4(2) a) to c) and e) of the Act no. 257/2004, on Capital Market, on the territory of the European Union is allowed to become a member of the group of direct participants.

In the course of 2005, interested parties from the ranks of important international commercial and investment banks operating on the primary market of government bonds of the European Union countries will have the possibility to participate in primary auctions of treasury bills and qualify themselves, based on concretised and published criteria, for the group of direct participants of government bonds primary auctions. The Ministry expects from this change especially an increase in price competition on the local market of government bonds, the support of liquidity on the secondary market and an increase in the share of foreign investors in holding of Czech Crown denominated government bonds.

**(4) Making liquidity management more effective by means of the Treasury Single Account.**

Opening the only Treasury Single Account in accordance with international recommendations and its on-line connection to the integrated information system of state debt management in real time are necessary conditions for modern and effective management of short-term state debt. The target of this technical innovation that is common in all developed countries of the European union is minimising interest costs of state debt, a not questionable separation of the Government‘s liquidity management from the implementation of currency and foreign exchange policy of the central bank, an increase in transparency of disposable governmental budgetary funds and a decrease in operational risk related to the current system of the realisation of the Ministry‘s operations on the government bonds secondary market.

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This publication is based on information available up to 1 December 2004. The Ministry has the right to react flexibly to changes in the real needs of the Government resulting from state budget, CCA’s funding, National Property Fund and risky state guarantees. The Ministry will follow the planned financing programme and medium-term targets subject to the conditions on the domestic and foreign financial market in relation to the cost minimizing objective.

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## Appendix: New Measure for the Interest Rate Risk Management

In addition to duration and interest refixing, another important measure for the needs of the State Budget interest rate risk management is the so called **CaR** (Cost-at-Risk). It characterises maximum interest costs for the given likelihood to which the State Budget in a chosen time horizon will be exposed. The development and regular using this ratio is relatively technically demanding.

The Ministry is planning to finish the first version of this measure during the first half of 2005. It will be based on simulations in using the interest rate model that provides probability distribution of the interest rates stochastic process, and therefore also the estimate of their level and volatility. At present, a one-factor interest **CIR model** (Cox, Ingersoll & Ross) from 1985 is implemented, where the process of instantenuous interest rate is described with the following stochastic differential equation:

$$dr(t) = \alpha(\mu - r(t))dt + \sigma\sqrt{r(t)}dW(t)$$

where $r(t)$ is instantenuous spot interest rate in time $t$, $\mu$ is long-term level of this spot rate, $\alpha$ is speed of returning towards $\mu$, $\sigma$ is model volatility and $W(t)$ is Wiener process. In addition to the above-mentioned parameters, it is necessary to estimate the market price of risk $\lambda$ that determines the average slope of the yield curve. Based on these parameters, zero-coupon yield curves are simulated that are the crucial intput for the calculation of CaR.