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CZECH REPUBLIC

Selected Issues and Statistical Appendix

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Approved by European I Department

August 8, 2003

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THE MONETARY POLICY TRANSMISSION MECHANISM IN THE CZECH REPUBLIC[1,2]

A. Introduction and Summary

1. Approaching EMU membership of the Czech Republic motivates examining the monetary policy transmission mechanism (MPTM) and prospective changes after joining EMU. This study aims to answer two questions. First, how does the Czech MPTM compare to that in the euro area? This is important because asymmetries could lead to diverging business cycles after adopting the single monetary policy. Second, what changes could be expected in the MPTM after joining EMU?.

2. The analysis is structured around the standard taxonomy of transmission channels: the interest rate channel, the exchange rate channel, and the credit channel. While these channels are treated separately, the exchange rate and the credit channels mainly amplify or dampen the response of the economy to changes in interest rates. With sticky prices, an increase in nominal interest rates translates into an increase in real rates and thereby the cost of capital, which reduces both investment and spending on housing and durable goods. Additional effects on consumption also operate through disposable income and household wealth depending on the level of household indebtedness and the responsiveness of financial asset prices to interest rates. Prices then start to decline gradually (direct interest rate channel). If the increase in interest rates induces an appreciation of the real exchange rate, net exports fall and prices decline (exchange rate channel). Finally, the credit channel operates through the effect of monetary policy on the supply of loans by depository institutions (bank lending channel) and the net worth and on other determinants of the financial position of potential borrowers (balance sheet channel).

3. For the credit channel to work two conditions must be met. First, a monetary tightening must limit banks' ability to supply loans by reducing bank reserves. If banks can adjust their balance sheets by selling securities or can obtain loanable funds by issuing instruments not subject to reserve requirements, e.g. bonds or certificates of deposits, they can absorb the monetary policy tightening without reducing the supply of loans. Second, bank credit and other debt instruments must not be perfect substitutes for at least some borrowers so that a fall in the supply of bank loans reduces the availability of credit. Typical examples of this class of borrowers are small- and medium-size enterprises (SMEs) and households.

4. The empirical work in this study focuses on two questions related to the MPTM: (i) the strength of the direct interest rate channel relative to the exchange rate channel; and

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[1] Prepared by Yasemin Bal Gündüz.

[2] I would like to thank Kornélia Krajnyák, Ludek Niedermayer, and the participants of the seminar at the CNB, particularly Ales Capek, Victor Kotlan, and David Vavra for their valuable comments and suggestions. Of course, any remaining errors and omissions are mine.

(ii) whether a credit channel can be detected. The first issue is important to gain insight into how giving up exchange rate flexibility with the euro area membership may affect the potency of the monetary policy. The recent strong pickup in domestic lending to households against the background of stagnant credit growth to the domestic corporate sector and SMEs gives prominence to the second issue.

5. The empirical findings suggest that the direct interest rate channel is the strongest channel of the MPTM, while the exchange rate channel is weak. No evidence of a credit channel is detected. The strength of the direct interest rate channel suggests that adopting the euro is not likely to weaken the potency of monetary policy. The dominant role of the direct interest rate channel accords with findings for the euro area countries (see Box 1). However, quantitative comparisons of the potency of monetary policy or the strength of transmission channels with those for the euro area are ambiguous, as studies examining the MPTM for euro area countries present a wide range of estimates.

Box 1. The MPTM in EMU

Research on the MPTM in euro area countries surged in the run-up to EMU. Early studies on euro area countries mainly focused on asymmetries in the strength and speed of MPTM among the euro area countries by measuring the effects of monetary policy on output.[1] The majority of these studies used a VAR methodology for the estimation. The quantitative estimates varied considerably. While a major source of heterogeneity was attributed to differences in monetary policy reactions, results also varied in terms of the persistence of heterogeneity after adjusting for the common monetary policy.

A number of studies addressed the relative strength of the different channels. Clements et al. (2001) find that for euro area countries, the interest rate channel is by far the dominant one, overshadowing the effects of the exchange rate and credit channels. This implies that to reduce the asymmetries, it would be more appropriate to target the factors that cause differences in the interest rate channel. Angeloni, Kashyap, and Mojon (2003) find that while the exchange rate affects output and prices of individual euro area countries rather significantly, the link between monetary policy and the exchange rate is not systematic, therefore the exchange rate channel is not an important element of the MPTM. For the credit channel, Worms (2003) provides evidence that the bank-lending channel is strong in Germany, and Clements et al. (2001) suggest that the credit channel is particularly strong in the Netherlands, and also in Belgium, France, and Spain.

1/ A few are: Clements, Kontomelis, and Levy (2001); Mojon and Peersman (2001); Angeloni, Kashyap, Mojon, and Terlizzese (2002); Kakes and Pattanaik (2000); Kieler and Saarenheimo (1998).

6. Credit market segmentation and the low level of credit to households and SMEs qualify the implications of the failure to detect an effective credit channel. Banks have a predominant role in the financial sector, and the level of bank intermediation, while still far below the EU average, is high compared to other transition economies. This suggests scope for an important credit channel. On the other hand, high bank liquidity reduces the potency of

the credit channel.[3] Moreover, the segmented credit market reduces the response of credit to the interest rate in several ways:

- **Foreign-owned firms** have easy access to bank credit and other means of financing and have attracted large foreign direct investment (FDI) inflows in the last decade. Therefore, domestic credit conditions are not binding for these firms.

- **Domestic enterprises and SMEs** face credit constraints arising from institutional factors, namely inadequate protection of creditors' rights, slow bankruptcy proceedings, and weaknesses in the transparency and timeliness of financial data. These constraints tend to weaken the responsiveness of credit to interest rates.

- **Households'** indebtedness is very low by international standards but has posted a fast increase recently in response to low interest rates, anticipated increase in incomes, and a willingness of banks to increase their exposure to this segment. The credit channel should be operating for household lending; however, the low stock of household borrowing makes only a weak contribution to the overall credit response to the interest rate.

7. Looking ahead, the implications of EMU membership on the MPTM are uncertain and the Lucas critique may apply. Although, the experience of the euro area countries offers some insights, joining a monetary union represents a large institutional change. Since regime change influences the expectation formation mechanism, the response of the economy to policies is likely to change. Based on experience in the euro area, three factors are likely to render the direct interest rate channel more similar across countries: (i) adoption of a common monetary policy; (ii) convergence of the institutional and legal frameworks in a variety of areas; and (iii) stronger financial integration. Non-policy-driven factors, mainly time preferences and output compositions, are likely to explain persistent differences. Recent literature[4] on changes in the MPTM induced by EMU tended to focus on banking and financial markets, as these should respond the fastest. Empirical evidence appears to support increasing homogeneity and larger speed of the pass-through from policy rates to lending rates among euro area countries. This is due to less volatility of money market rates.[5] Two ongoing processes also support convergence towards a fuller and more homogenous pass-through over time: (i) declining bank margins thanks to increasing competition between bank loans and corporate debt instruments, and between bank deposits and money market mutual

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[3] Bank holdings of T-bills, CNB-bills and government bonds increased from 16.9 percent of GDP in 1997 to 39.8 percent of GDP in May 2003, mainly reflecting banks' caution in taking on risks after the cleanup of the banking sector; and lately, sizable sterilized foreign exchange intervention.

[4] See Angeloni and Ehrman (2003); Ciccarelli and Rebucci (2002); Angeloni, Kashyap, and Mojon (2003); Hofmann (2003); De Bondt et al.(2003); Suardi (2001).

[5] Mojon (2000) shows that the pass-through from policy to lending rates is inversely related to the volatility of the money market rate.

funds; and (ii) increasing disintermediation characterized by a faster adjustment of interest rates.

8. With euro adoption, the exchange rate channel, by definition, becomes less effective. Any given monetary policy shock will induce a smaller response of the effective exchange rate. Therefore, asymmetries originating from the external side are reduced.

9. In the Czech Republic, the credit channel is also likely to strengthen. First, an adjustment is expected in the composition of bank lending toward households and SMEs, which are more likely to be affected by credit conditions. The government has already started addressing the institutional impediments constraining credit to domestic enterprises and SMEs and growth in lending to households has been dynamic. Second, as banks resume their usual activities in providing loans, excess liquidity in the banking sector will decline. Third, joining EMU should strengthen the pass-through from policy rates to lending rates. On the other hand, EMU membership should also facilitate access of both banks and enterprises to international capital markets. Although this potentially reduces the strength of the credit channel, a banking system which is over 90 percent foreign-owned and the high share of FDI companies that have easy access to international capital markets and funding from their mother companies suggest that the first effect is likely to dominate.

B. Background: The Czech Monetary Policy Framework

10. The Czech Republic operated under several monetary policy frameworks before moving to inflation targeting in 1998. During 1991 to 1996, the monetary policy framework was shaped by a disinflation strategy built around exchange rate and monetary targets. The exchange rate regime pegged the Czech koruna to a currency basket within a crawling band; monetary targets supplemented this framework. Large capital inflows limited the Czech National Bank's (CNB) ability to achieve currency stability and led to a widening of the band in 1996. This increased the room to raise interest rates to respond to inflationary pressures and put more emphasis on monetary targets. Following a speculative attack against the koruna in May 1997, the CNB floated the currency. After a brief period of monetary targeting, the CNB adopted an inflation targeting framework in 1998. Under this framework the CNB has reduced inflation from almost 7 percent to less than 1 percent.

11. The MPTM is influenced by several key structural features of the Czech Republic, a small, open transition economy attracting significant FDI inflows.

- The Czech Republic is an open economy with the ratio of average of exports and imports to GDP above 70 percent. In these conditions, the exchange rate should have a significant effect on both inflation and real activity, and the direct effect on inflation should be relatively quick. But the large direct and indirect import content of exports dampens the output effect of the exchange rate.

- The Czech Republic's relatively large (by transition country standards) financial sector is dominated by banks. M2/GDP rose from 60 percent in 1993 to 74 percent in 2002 (Figure 1). However, domestic credit relative to GDP declined sharply from its peak of 64 percent in 1997 to 40 percent of GDP in 2002 owing to the repercussions

of problems in the banking sector subsequent to the May 1997 currency crisis. Financial deepening is likely to increase the future effectiveness of interest rate channel.

- Bank credit to the private sector[6] declined relative to GDP by 17 percentage points between 1997 and 2002. Banks' post-crisis risk-averse lending policies favored large, export-oriented companies, households and the general government over enterprises producing for the domestic market and SMEs. Thus, the loan supply is not particularly responsive to interest rate movements, weakening the credit channel. However, liquidity conditions are likely to have a significant impact on growth prospects of SMEs that account for 37 percent of GDP and 61 percent of employment.

C. Methodology

12. This study uses a VAR methodology to characterize the MPTM. This approach avoids the need for a complete structural model of the economy (Sims, 1980) and is well-suited to cope with the basic simultaneity problem inherent in the analysis of the MPTM. Monetary policy affects the economy while responding endogenously to changing macroeconomic conditions. Therefore, empirical estimation of the effect of the policy requires some observable exogenous element to the policy. Christiano, Eichenbaum, and Evans (1998) characterize monetary policy as $R_t = f(\Omega_t) + \varepsilon_t$, where R_t is the policy interest rate, Ω_t represents the information set available to the policymaker at time t and ε_t is the monetary policy shock, which is orthogonal to Ω_t. The fact that monetary policy emerges from interactions of decision makers' economic concerns in an uncertain environment justifies treating monetary policy as a random variable (Leeper, Sims, and Zha (1996)). Separating the exogenous monetary policy shocks, ε_t, from the endogenous policy response, $f(\Omega_t)$, makes it possible to identify the effects of monetary policy: once the "monetary policy rule" is characterized, unexpected deviations from this rule, provide impulses to the economy, and the resulting effects on macroeconomic variables can be traced (Bagliano and Favero (1997)).

13. The success of VARs in tracing responses of macroeconomic variables to monetary policy shocks consistent with the "stylized" reaction of the economy justifies using a VAR to analyze the MPTM.

14. Following this approach, the economy is modeled by:

$$A_0 x_t = \sum_{i=1}^{n} A_i x_{t-i} + \varepsilon_t$$

[6] Adjusted for loan write-offs and restructuring, and exchange rate valuation effects.

where x_t is a 5x1 vector of endogenous variables and ε_t is the vector of uncorrelated white noise structural disturbances. Two VAR systems with $x_t = (y_t, p_t, R_t, neer_t, dc_t)'$ and $x_t = (y_t, p_t, R_t, neer_t, m2_t)'$ are estimated where y_t denotes output, p_t stands for the price level, R_t is the short-term nominal interest rate, $neer_t$ is the nominal effective exchange rate, dc_t is a domestic credit aggregate, and $m2_t$ is a broad money aggregate. The first VAR system examines whether credit responds to monetary policy. Estimating the second VAR system complements the analysis of the credit channel, as it examines whether banks face a decline in funding in response to an interest rate shock.

15. In order to estimate these systems a reduced form VAR of the form $C(L)x_t = u_t$ is estimated, where $C(L)$ is a matrix-polynomial in the lag operator, and the structural errors are related to the reduced form VAR residuals by $\varepsilon_t = A_0 u_t$.

16. Identification of structural monetary policy shocks in VARs is contentious since there is no uniquely agreed credible set of identifying assumptions. The Choleski decomposition[7] has been used extensively in the MPTM literature[8]. A recursive causal order, as given by x_t, from non-policy real sector variables to policy variables is assumed.[9]

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[7] This method imposes the restriction that the ordering of variables in a VAR system matters for contemporaneous effects among variables. It implies that the shock to the first variable affects all other variables, whereas it is not affected by shocks to variables ordered after it. Similarly, the second one is affected by the shock to the first one but not by the remaining variables so on.

[8] This simple set of recursive identifying assumptions has been preferred in studies of MPTM in Euro area countries to facilitate cross country comparisons.

[9] Ordering the interest rate after output and the price level imposes the restrictions that within the month, the interest rate does not affect output and the price level but it responds to them. The first restriction is justified by the observed slow adjustment in macro variables, including short-term price stickiness. The second restriction can be justified on the grounds that monthly indicators of prices and real activity are available for the policymaker. Assuming a recursive order among the financial sector variables is harder to justify and contemporaneous correlation between these variables could be assumed. The results remain qualitatively similar when a contemporaneous correlation between the interest rate and the exchange rate is allowed. Moreover, the results are not sensitive to omitting the monetary aggregate. In addition, the correlation matrix for the reduced form VAR residuals indicates that correlation coefficients are below 0.2, which suggests that the results would be robust to alternative orderings.

Data

17. The model is estimated on monthly data from 1994–2002. The endogenous variables are measured as follows:

- Output—seasonally adjusted real GDP interpolated from quarterly to monthly frequency[10]
- Price level—seasonally adjusted net CPI (excluding the effects of administered prices and indirect taxes)
- Short-term nominal domestic interest rate—two-week PRIBOR
- Nominal effective exchange rate—trade weighted effective exchange rate from INS database of the International Monetary Fund
- Domestic credit—seasonally adjusted credit to private sector adjusted for loan write-offs and restructuring and exchange rate valuation effects
- Monetary aggregate—seasonally adjusted M2

In order to capture effects exogenous to the system, oil prices in koruna, and FDI[11] are added as exogenous variables. All variables except the short-term interest rate are in log levels since cointegration among the variables could not be rejected.[12] Moreover, Ramaswamy and Sloek (1998) point out an economic rationale for estimating a VAR in levels rather than in first differences. First difference specification implies that monetary shocks have a permanent impact on the level of output, while a level specification allows history to determine whether the effects of monetary policy shocks are long lasting or not. Figure 2 plots the variables. Based on tests for lag restrictions, six lags were considered. Several dummy variables were included: impulse dummies to capture the impact effects of currency crisis and three interval dummies to capture intercept changes after switches in the policy framework or other distinctly separate behaviors of variables.[13]

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[10] Quarterly GDP series is interpolated to monthly frequency by the cubic spline method.

[11] Interpolated from quarterly to monthly frequency by taking simple monthly average of quarterly data.

[12] Sims, Stock, and Watson (1990) show that least-squares estimates are consistent for the level specification whether cointegration exists or not, whereas a difference specification is inconsistent if some variables are cointegrated. But in the absence of cointegration, the estimated standard errors of the level specification are not consistent, so conventional inference could be misleading.

[13] Interval dummies jointly capture intercept changes after adopting the inflation targeting framework (January, 1998–December, 2002). They also break the estimation period into three sub-periods, which correspond to increasing credit (January, 1998–December, 1998), declining credit (January, 1999–November, 2000) and the resumption of credit growth (December, 2000–December, 2002).

18. Working with a monthly data set is preferred for several reasons. First, it may prove problematic to work with quarterly frequency since identifying restrictions of no feedback from monetary policy to output or price may not hold within a quarter. Second, it helps to alleviate the small sample problem.

19. The VAR analysis of the Czech MPTM presents some special difficulties. First, the sample period is short, reducing the precision of the estimates. Second, several changes in the monetary policy operating framework occurred during the sample period. This may result in misspecification and parameter instability. Moreover, the sample period witnessed significant structural changes. These difficulties make the estimates less reliable and call for cautious interpretation of the results.

D. Estimation Results

20. The empirical results from both VAR systems are consistent with standard priors on transmission mechanism, except that the credit response is counterintuitive. In the system specified with M2, a contractionary monetary policy shock, defined as a positive deviation of the interest rate from the average reaction function of the central bank, reduces GDP temporarily, and then lowers the CPI. The exchange rate appreciates quickly and money demand drops. On the other hand, results from the VAR system with the credit aggregate are puzzling: credit increases in response to a contractionary interest rate shock.

21. Taken together, the results from the two VARs suggest that the counterintuitive credit response is likely to be explained by the structure of the credit market. A decline in M2 after a contractionary monetary shock indicates that banks may find it more difficult to raise funds during periods of tight monetary policy. This signals a potential impact of monetary policy on credit. The counterintuitive credit response is then likely to reflect both the segmented nature of the credit market and conservative lending policies in the aftermath of the banking sector cleanup, which tend to insulate loan supply from the availability of funding. Moreover, the results show no significant output response to a credit contraction. This may be explained by credit market segmentation. If the credit market is segmented, using aggregate credit and output data may understate the output response to changes in credit in specific segments.

22. An interest rate shock has moderate effects on GDP and prices.[14] [15] A 100 basis point shock to interest rates reduces output and inflation by roughly 0.4 percent and 0.3 percent,

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[14] Results reported in the remainder part of the paper are drawn from the VAR system specified with M2.

[15] Comparing these estimates to those for euro area countries is difficult, as estimates differ significantly across various studies. The estimated output response is low compared to Clements et al., close to the lower range estimated by Ramaswamy and Sloek (1998) and Baran et al. (1996), and close to the top of the range estimated by Mojon and Peersman (2001). For all impulse response functions, the estimated confidence bands are quite wide, reflecting small sample problems as well as likely effects of structural changes during the estimation periods.

respectively, compared to the baseline. As expected, the output effect precedes the inflation effect. The peak responses are achieved after four months and thirteen months, respectively. The interest rate shock is not quite persistent: it dies out within a year, which may explain the relatively moderate output and inflation response (Table 1, Figure 3). The exchange rate appreciates quickly, reaching the peak increase of about 1.1 percentage point after five months. In about a year, the decline in output brings forth a depreciation of about 0.6 percent. The depreciation is relatively persistent and it contributes to pushing prices back to the baseline.

23. A one percentage point appreciation of the nominal effective value of the koruna has a considerable inflation effect but a weak output effect compared to the 100 basis point increase in the interest rate. It decreases inflation by about 0.2 percent, reaching the peak faster than the interest rate shock, but it leads to a small output increase of about 0.1 percent (Table 1, Figure 4). The pass-through to prices is quicker than that to output. The unexpected result for the output response is explained by the effect of the appreciation in lowering the interest rate (by about 0.2 percent) (Figure 6). The positive output effect of the decline in interest rates more than offsets the output-reducing effect of the appreciation. The exchange rate returns to the baseline slowly, though it depreciates by about 0.7 percent within a year after the initial shock. As the exchange rate shock dies out, the interest rate and price level move back to the baseline.

24. These results suggest that the role of exchange rate channel in the Czech MPTM is limited. In a counterfactual experiment, the exchange rate channel is shut off after an interest rate shock to extract the 'remainder effect' attributable to the direct interest rate channel. The impulse response functions when the exchange rate channel is shut off are presented in Figure 5. An increase in interest rates in this experiment elicits a slightly higher drop in output than in the full model since the interest rate stays high for longer than in the case of the full shock. Inflation is also higher during the first 12 months as the effects of the appreciation are missing. But it is lower afterwards as the effects of the depreciation are excluded.

25. The finding of a weak exchange rate channel is rather controversial in the context of a highly open economy. Caution is needed in interpreting these results, particularly as the impulse response functions are not very precisely estimated. Nevertheless two influences seem to be at work: a weak output response to an exchange rate shock and/or low or non-systematic response of the exchange rate to an interest rate shock. For the interest rate and exchange rate shocks examined above, output reacts more to interest rate changes when the exchange rate channel is shut off than to exchange rate changes when the interest rate does not move (Table 2). Moreover, while the initial response of the exchange rate to an increase in interest rate is strong and consistent with uncovered interest rate parity, it subsequently is reversed as the interest rate effect is outweighed by the decline in output. This suggests that even if the output response to exchange rate changes was significant, the exchange rate channel would not be effective.

26. Several structural features of the Czech economy might explain the weak measured response of output and prices to the exchange rate. First, for much of the sample, strong FDI inflows to the export sector led to strong gains in market shares even while the currency

appreciated. This may have reflected the ongoing response to the opening of the economy in the early 1990s and led to an underestimation of the output response to the exchange rate. Second, the high import content of exports may partially insulate output from exchange rate developments. Third, an imperfect pass-through from the exchange rate to prices may weaken expenditure switching from domestic to foreign goods and moderate the price response to the exchange rate. Factors that could create a low pass-through from exchange rates to consumer prices include: a low short-run elasticity arising from the uncertainty about whether the shock is transitory or persistent, an asymmetric pass-through, or local currency pricing, under which exchange rate fluctuations are absorbed in firms' margins (Devereux and Engel (2002)).

27. To check the sensitivity of the results to changes in monetary policy framework, the VAR was re-estimated for 1998–2002. During this period, monetary policy operated under an inflation targeting framework. Any problem with parameter instability for the interest rate equation should be, to a great extent, avoided by looking at this period on its own. The small sample size constrains the choice of lag length, and the VAR could be estimated with five lags only. Nevertheless, the results are qualitatively similar to the full sample results; however, the response functions exhibit more cyclical patterns around the baseline before fully dying out.

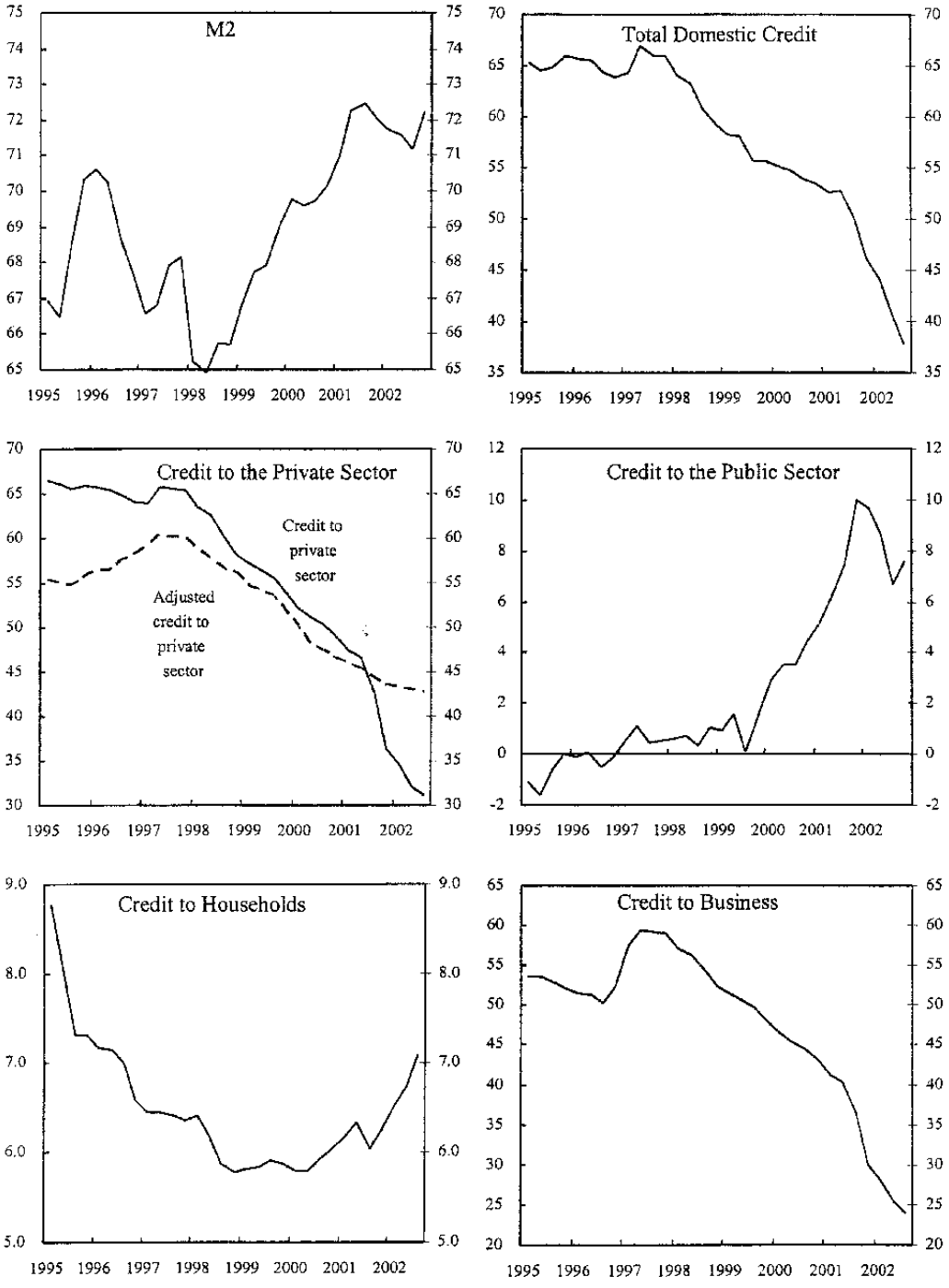
E. Prospective Changes in the Czech MPTM after Euro Adoption

28. This study finds that the direct interest rate channel is the prominent channel of the MPTM in the Czech Republic—a result qualitatively similar to findings for euro area countries. The exchange rate channel is weak due to a weak output response to exchange rate movements and the reversal of the exchange rate response to an interest rate shock after a year. Given the high openness of the economy, finding weak output and moderate price responses to an exchange rate shock is puzzling. While estimation problems may be at play other factors may also be responsible: the high import content of exports and an imperfect pass-through from exchange rate to prices would weaken the exchange rate channel. While empirical validation of these hypotheses for the Czech case is beyond the scope of this study, they would be natural extensions to this work. The failure to detect a credit channel can be explained by the low interest sensitivity of loan supply owing to the segmented nature of the credit market.

29. Looking forward, the Czech MPTM is likely to change with euro adoption and ongoing structural changes in the economy. First, the MPTM is expected to become more similar to that in euro area countries. Adoption of a common monetary policy, convergence of institutional and legal frameworks in a variety of areas, and stronger financial integration will help decrease any asymmetries. Non-policy-driven factors, mainly time preferences and output compositions, are likely to sustain some differences. The exchange rate channel will become less effective with EMU entry, since any given monetary policy shock will induce a smaller response of the effective exchange rate. The credit channel is likely to strengthen for several reasons: a shift towards a new equilibrium for the composition of bank lending toward households and SMEs, unwinding of the current excess liquidity in the banking sector and a stronger pass-through from policy rates to lending rates. In contrast, easier access of both banks and enterprises to international capital markets potentially reduces the strength of

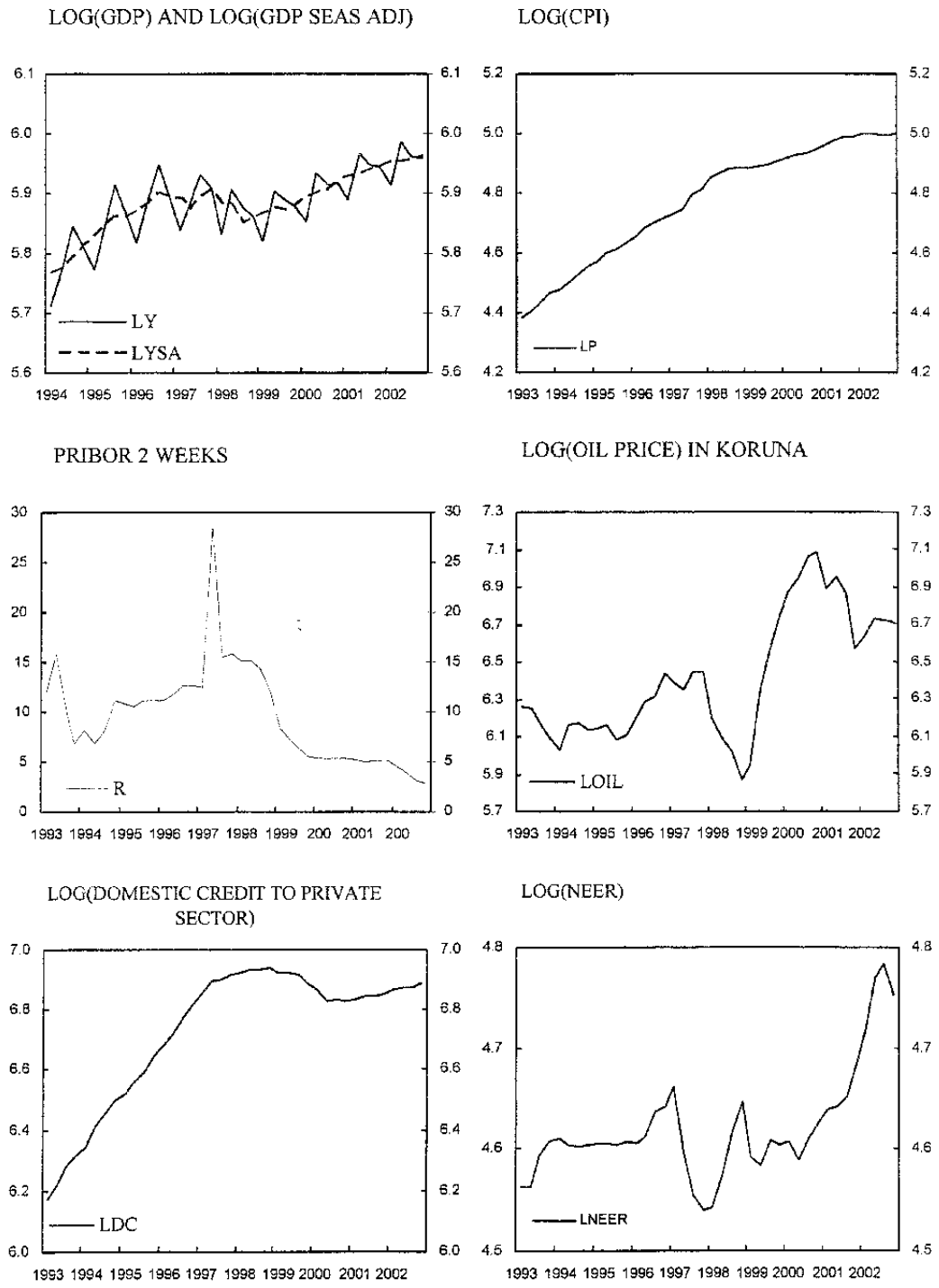
the credit channel. However, a banking system that is over 90 percent foreign-owned and the large share of FDI companies that already have easy access to international capital markets and funds from their mother companies makes it likely that other effects will dominate.

Figure 1. Czech Republic: Quarterly Money and Credit Indicators, 1995–2002
(In percent of GDP)



Sources: CNB; and CSO.

Figure 2. Czech Republic: VAR Variables in Levels, Quarterly Data 1993–2002



Sources: IMF INS database; IMF WEO database; CNB; and CSO.

Figure 3. Czech Republic: Impulse Response Functions to a 100 Basis Point Shock to Interest Rates

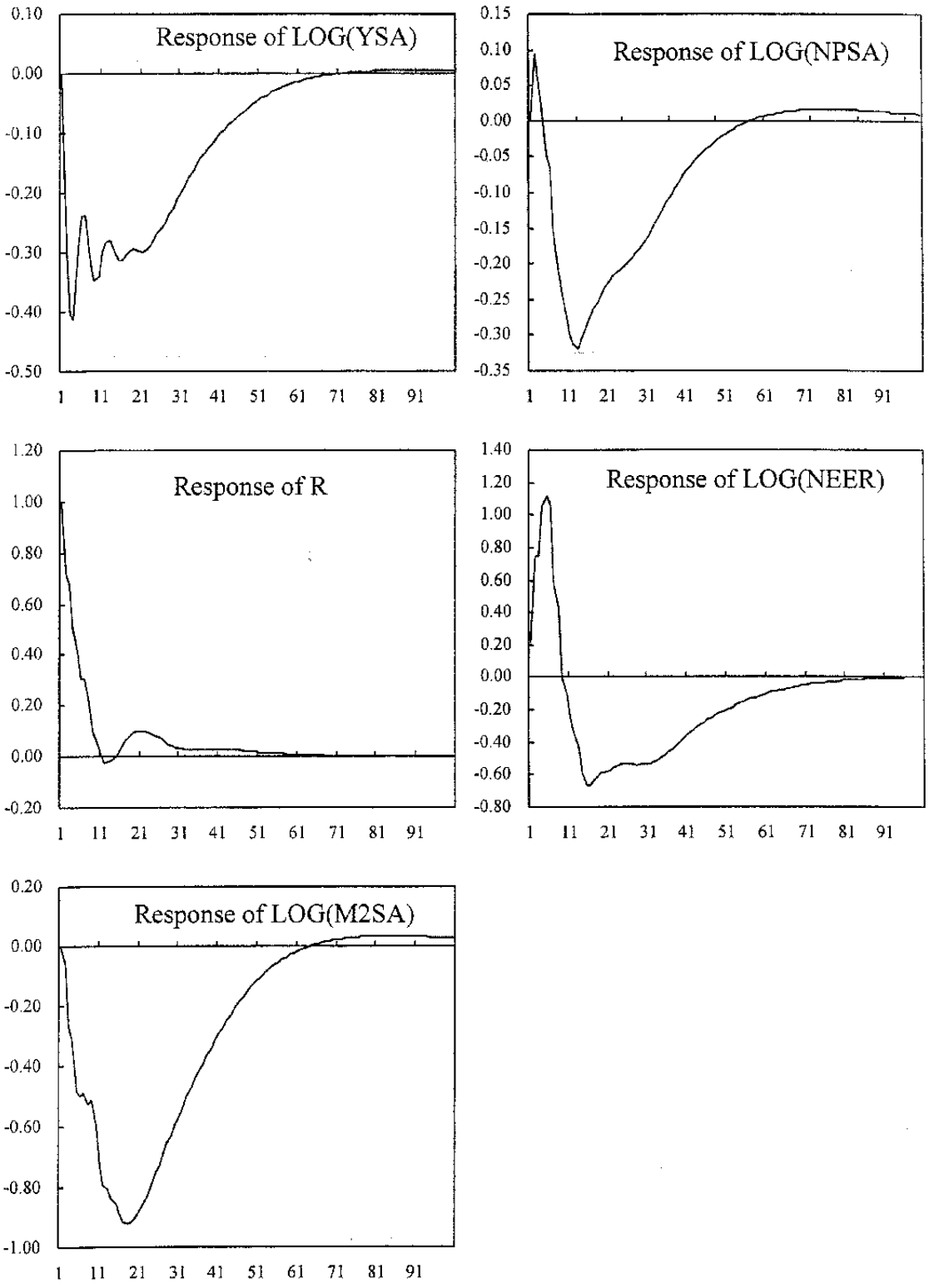


Figure 4. Czech Republic: Impulse Response Functions to a 1 Percentage Point Increase in Nominal Effective Exchange Rate

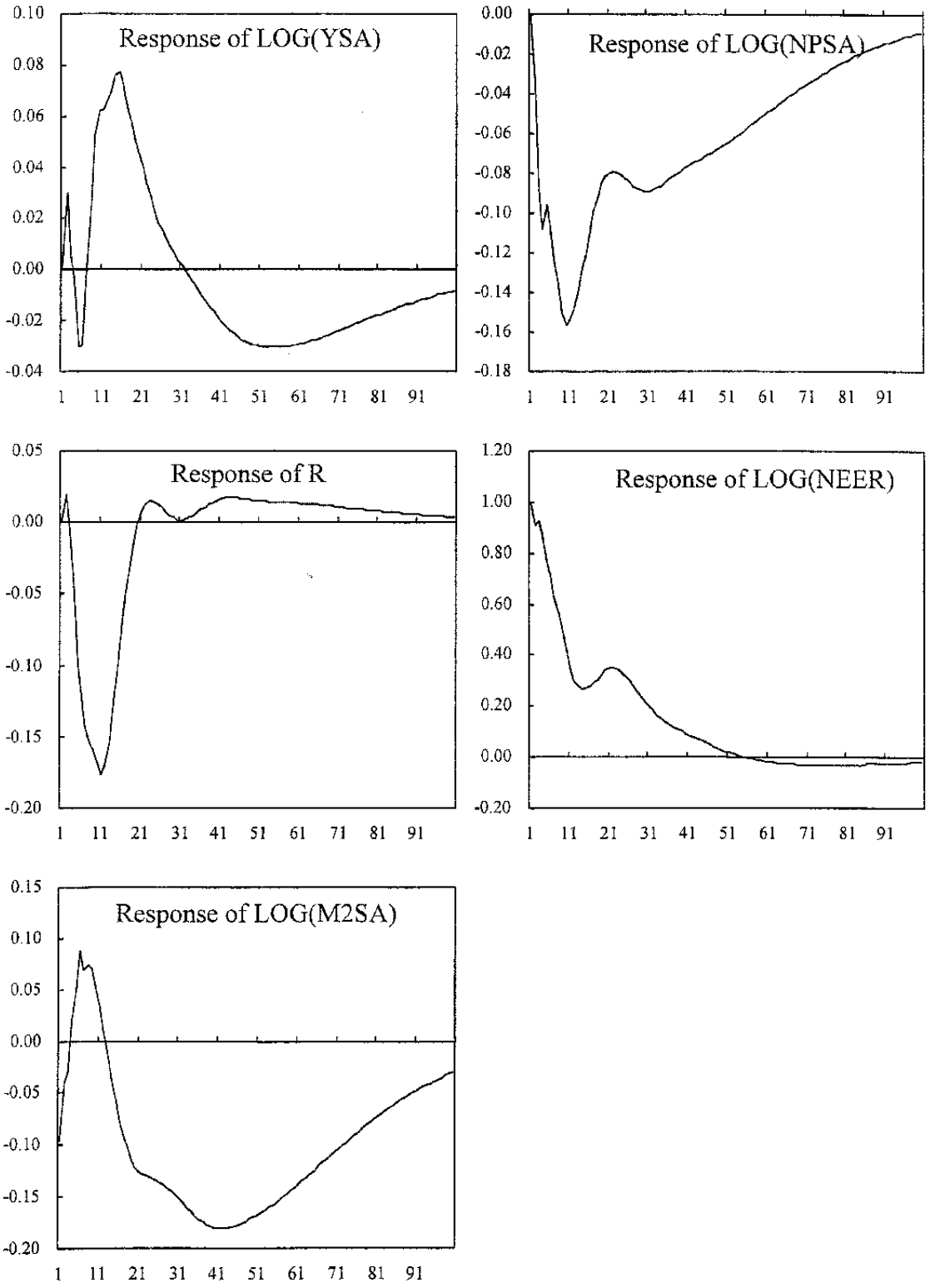
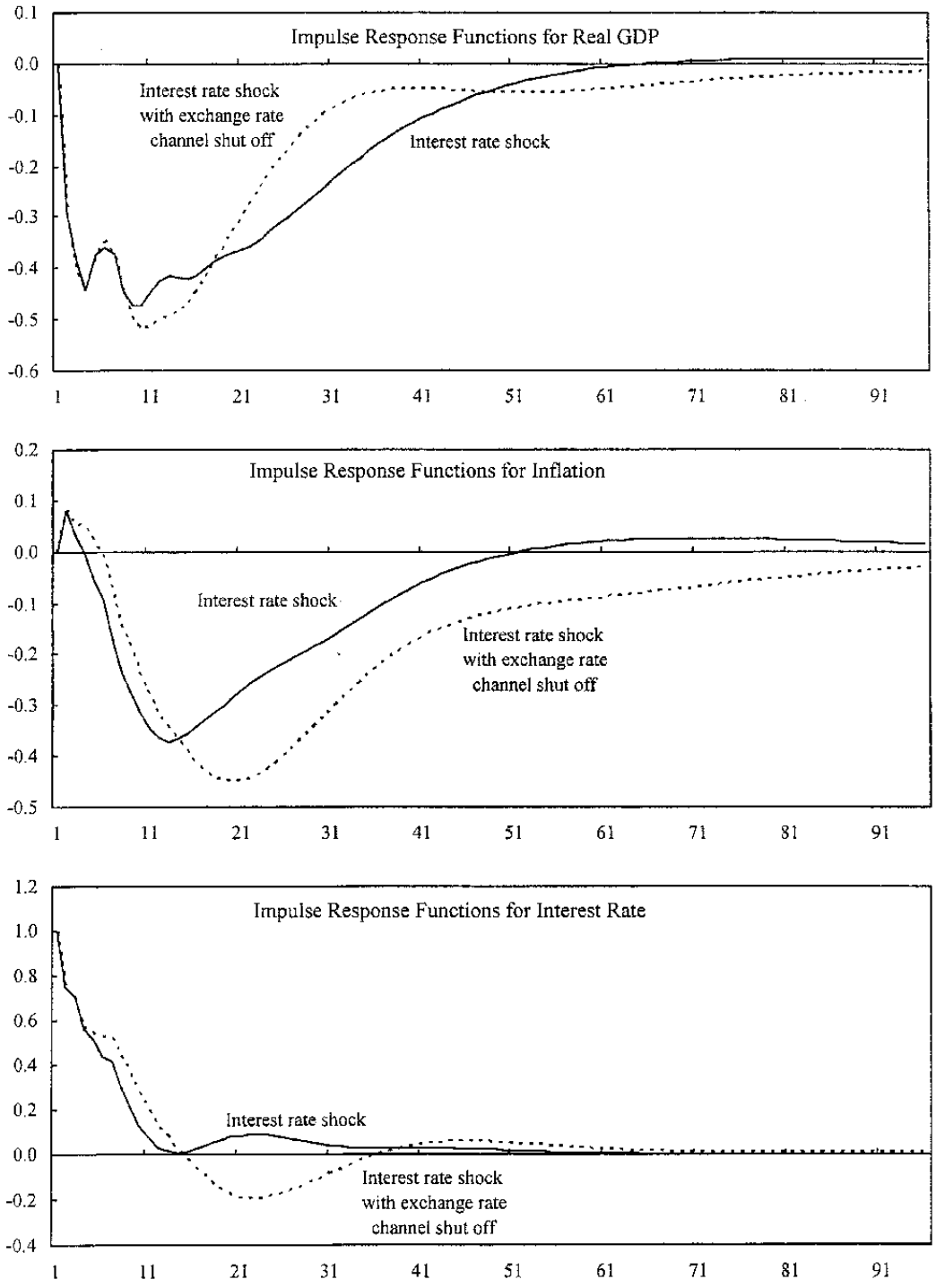
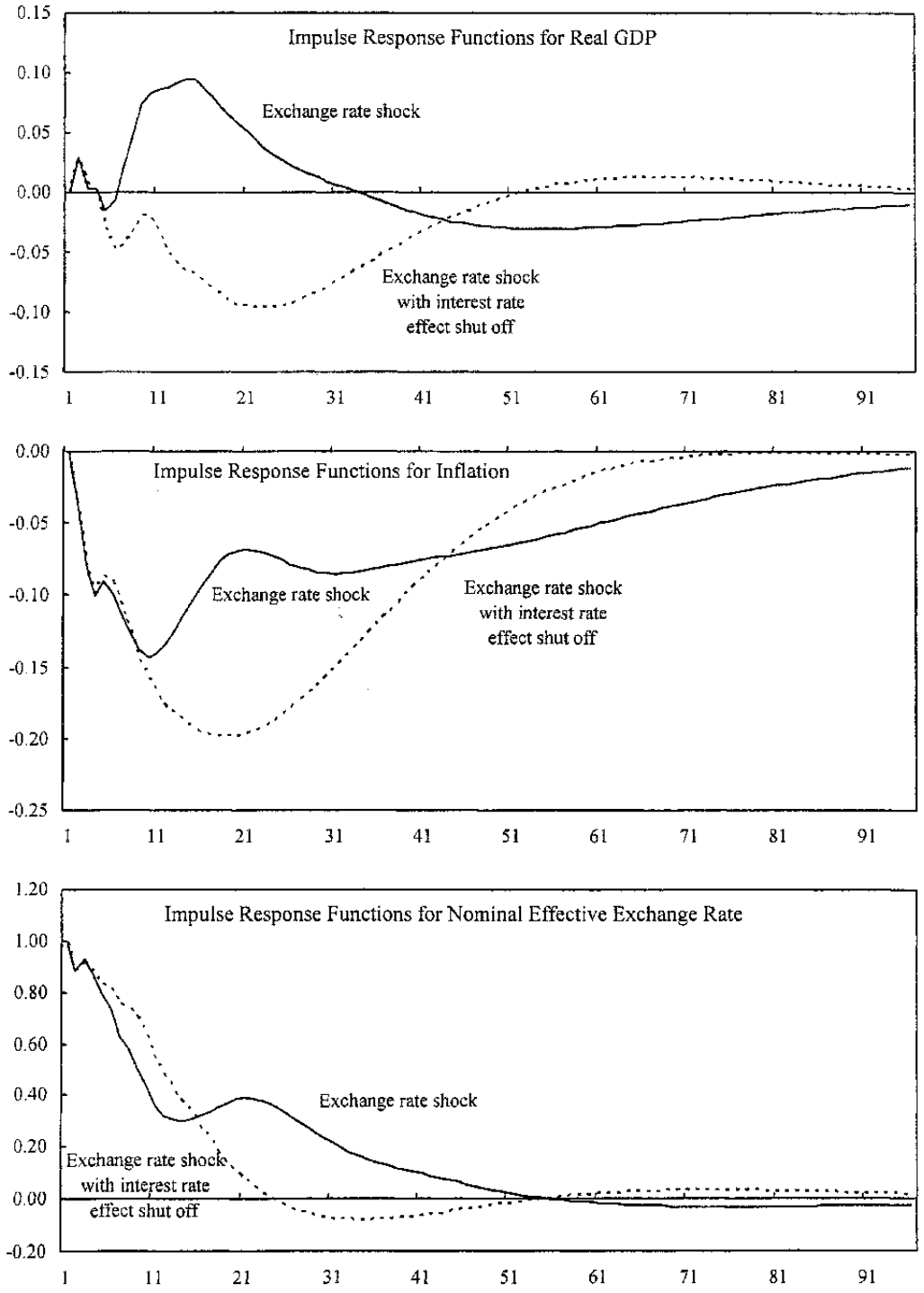


Figure 5. Czech Republic: Counterfactual Experiment: Impulse Responses to an Interest Rate Shock Versus Impulse Responses to the Same Shock when Exchange Rate Channels is Shut Off



Source: IMF staff estimates.

Figure 6. Czech Republic: Counterfactual Experiment: Impulse Responses to an Exchange Rate Shock Versus Impulse Responses to the Same Shock when Interest Rate Effect is Shut Off



Source: IMF staff estimates.

Table 1. Czech Republic: Impulse Response Functions, VAR System Estimated for 1994–2002

Effect of a 100 Basis Point Increase in Interest Rate
(Percent deviation from baseline)

	6 months	12 months	24 months	48 months	Maximum effect	Time of maximum effect (months)
Real GDP	-0.24	-0.28	-0.28	-0.06	-0.41	4
Inflation	-0.06	-0.31	-0.21	-0.03	-0.32	13
Interest rate	0.31	-0.02	0.09	0.02	1.00	1
Nominal effective exchange rate	1.07	-0.34	-0.53	-0.23	1.12	5
Nominal M2	-0.50	-0.80	-0.80	-0.15	-0.92	18

Effect of a 1 Percentage Point Increase in Exchange Rate
(Percent deviation from baseline)

	6 months	12 months	24 months	48 months	Maximum effect	Time of maximum effect (months)
Real GDP	-0.03	0.07	0.02	-0.03	0.08	15
Inflation	-0.11	-0.15	-0.08	-0.07	-0.16	10
Interest rate	-0.12	-0.17	0.01	0.02	-0.18	11
Nominal effective exchange rate	0.71	0.30	0.33	0.04	1.00	1
Nominal M2	0.09	0.01	-0.13	-0.17	-0.18	42

Table 2. Czech Republic: Comparison of Maximum Effects from the Counterfactual Experiments with the Base Shocks

Interest Rate Shock: Maximum Effect when Exchange Rate Channel Shut Off
(Percent deviation from baseline)

	Base shock		Exchange rate channel shut off	
	Maximum effect	Time of maximum effect (months)	Maximum effect	Time of maximum effect (months)
Real GDP	-0.41	4	-0.46	10
Inflation	-0.32	13	-0.39	20

Exchange Rate Shock: Maximum Effect when Interest Rate Response Shut Off
(Percent deviation from baseline)

	Base shock		Interest rate response shut off	
	Maximum effect	Time of maximum effect (months)	Maximum effect	Time of maximum effect (months)
Real GDP	0.08	15	-0.11	24
Inflation	-0.16	10	-0.21	18

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Table 1. Czech Republic: Gross Domestic Product, 1998–2002

	1998	1999	2000	2001	2002
	(In billions of koruny, at current prices)				
Total consumption	1,308.6	1,392.5	1,462.4	1,591.6	1,687.7
Of which:					
Private consumption	952.0	1,006.6	1,059.6	1,140.3	1,183.9
Gross capital formation	552.6	534.1	588.7	642.3	640.5
Gross fixed investment	535.5	528.3	561.5	603.3	599.3
Change in stocks	17.1	5.8	27.2	39.0	41.2
Net export of goods and nonfactor services	-22.1	-24.3	-66.3	-58.7	-52.6
Gross domestic product	1,839.1	1,902.3	1,984.8	2,175.2	2,275.6
	(In billions of koruny, at constant 1995 prices)				
Total consumption	1,023.4	1,042.4	1,059.0	1,102.1	1,150.7
Of which:					
Private consumption	751.2	765.6	783.5	813.0	845.1
Gross capital formation	481.4	467.4	511.2	547.8	554.9
Gross fixed investment	467.9	463.1	487.9	514.9	518.2
Change in stocks	13.5	4.3	23.4	32.9	36.7
Net export of goods and nonfactor services	-90.4	-88.7	-102.9	-137.3	-163.5
Gross domestic product	1,414.4	1,421.0	1,467.3	1,512.6	1,542.2

Source: Czech Statistical Office.

Table 2. Czech Republic: Composition of Gross Domestic Product, 1998–2002

	1998	1999	2000	2001	2002
	(Share in GDP at current prices, in percent)				
Total consumption	71.2	73.2	73.7	73.2	74.2
Of which : Private consumption	51.8	52.9	53.4	52.4	52.0
Gross capital formation	30.0	28.1	29.7	29.5	28.1
Gross fixed investment	29.1	27.8	28.3	27.7	26.3
Change in stocks	0.9	0.3	1.4	1.8	1.8
Net export of goods and nonfactor services	-1.2	-1.3	-3.3	-2.7	-2.3
Gross domestic product	100.0	100.0	100.0	100.0	100.0
	(Share in GDP at constant 1995 prices, in percent)				
Total consumption	72.4	73.4	72.2	72.9	74.6
Of which : Private consumption	53.1	53.9	53.4	53.7	54.8
Gross capital formation	34.0	32.9	34.8	36.2	36.0
Gross fixed investment	33.1	32.6	33.3	34.0	33.6
Change in stocks	1.0	0.3	1.6	2.2	2.4
Net export of goods and nonfactor services	-6.4	-6.2	-7.0	-9.1	-10.6
Gross domestic product	100.0	100.0	100.0	100.0	100.0
	(Percentage change, at constant 1995 prices)				
Total consumption	-2.3	1.9	1.6	4.1	4.4
Of which : Private consumption	-1.8	1.9	2.3	3.8	3.9
Gross capital formation	-2.6	-2.9	9.4	7.2	1.3
Of which : Gross fixed investment	0.7	-1.0	5.3	5.5	0.6
Net export of goods and nonfactor services 1/	1.6	0.1	-1.0	-2.3	-1.7
Gross domestic product	-1.0	0.5	3.3	3.1	2.0

Source: Czech Statistical Office.
1/ Contribution to growth.

Table 3. Czech Republic: Gross Domestic Product by Origin, 1998–2002

	1998	1999	2000	2001	2002
	(In billions of koruny, at current prices)				
Agriculture, hunting, forestry, and fishing	79.7	73.8	79.1	86.9	77.6
Industry 1/	557.8	560.3	593.7	655.1	671.7
Construction	123.4	127.1	130.9	134.7	138.6
Wholesale and retail trade, restaurants, and hotels	272.1	287.8	303.9	338.6	354.4
Transport, storage, and communication	143.5	141.8	149.5	169.1	189.2
Financial services	91.2	86.3	83.0	73.2	85.6
Business services	206.8	212.7	223.2	240.2	264.8
Other services	243.6	272.7	277.0	303.5	326.9
Taxes minus subsidies	189.9	206.0	214.4	223.5	227.4
FISIM (-) 2/	68.9	66.2	69.7	49.5	60.5
Total GDP (at purchasers prices)	1,839.1	1,902.3	1,984.8	2,175.2	2,275.6
	(In billions of koruny, at 1995 prices)				
Agriculture, hunting, forestry, and fishing	69.5	80.2	79.0	78.3	81.8
Industry 1/	454.3	445.0	486.4	489.8	487.6
Construction	67.7	66.4	62.2	54.4	49.9
Wholesale and retail trade, restaurants, and hotels	222.1	222.5	225.2	240.8	260.9
Transport, storage, and communication	113.8	115.7	125.2	144.1	160.9
Financial services	92.0	91.6	83.1	93.7	93.4
Business services	142.7	150.1	161.5	165.3	167.9
Other services	163.9	165.8	156.8	157.5	151.8
Taxes minus subsidies	172.4	174.0	177.4	183.0	184.5
FISIM (-) 2/	84.1	90.1	89.6	94.3	96.6
Total GDP (at purchasers prices)	1,414.4	1,421.0	1,467.3	1,512.6	1,542.2

Source: Czech Statistical Office.

1/ Includes mining, manufacturing industry, electricity, gas, and water.

2/ Financial intermediation services indirectly measured (FISIM), calculated as the difference between interest received and paid by banks.

Table 4. Czech Republic: Industrial Production, 1998–2002 1/
(Annual percent change, at constant prices)

	1998	1999	2000	2001	2002 2/
Mining and quarrying	-5.3	-12.1	9.2	1.9	0.3
Manufacturing	3.0	-2.6	5.0	7.5	5.4
Food products and beverages	-0.1	-0.7	-3.0	0.6	3.5
Textiles and textile products	-1.3	-13.0	11.9	2.1	-1.4
Leather and leather products	-29.4	-4.2	-19.9	-18.2	-27.3
Wood and wood products	-2.4	2.7	15.3	5.3	6.1
Pulp, paper, publishing, and printing	9.9	0.7	1.6	1.1	2.8
Coke, refined petroleum products, and nuclear fuel	-14.8	-13.1	1.3	20.2	3.8
Chemicals and chemical products	3.7	-1.4	-2.3	3.2	0.3
Rubber and plastic products	12.0	10.1	15.5	11.6	18.6
Nonmetallic mineral products	2.0	2.3	5.3	4.1	4.0
Basic metal and metal products	-3.9	-12.2	-3.2	4.2	-1.0
Machinery and equipment, n.e.c.	3.7	-5.9	9.8	17.2	2.6
Electrical and optical equipment	45.1	22.8	11.5	29.5	27.5
Transport equipment	7.4	-5.4	18.4	2.8	3.3
Other manufacturing, n.e.c.	10.9	7.9	15.3	0.3	2.6
Electricity, gas, and water supply	-0.7	-3.8	7.0	1.9	0.2
Industry, total	1.9	-3.1	5.4	6.5	4.8

Source: Czech Statistical Office.
1/ Changes in index of physical production (IPP).
2/ Starting 2002 IPP is calculated based on 2000 weights.

Table 5. Czech Republic: Employment by Sector, 1998–2002 1/

	1998	1999	2000	2001	2002
		(In thousands, annual average)			
Agriculture	210	201	190	178	184
Industry	1,567	1,515	1,480	1,518	1,516
Construction	451	443	439	430	428
Trade and catering	820	798	769	768	796
Transportation and communication	379	371	373	364	370
Financial services	102	99	100	102	96
Real estate	249	257	266	258	271
Public administration	330	336	343	341	327
Education	282	286	299	302	311
Health service	265	277	291	306	306
Other services	193	176	176	179	181
Total employment	4,866	4,764	4,732	4,750	4,796
		(In percent of total employment)			
Agriculture	4.3	4.2	4.0	3.7	3.8
Industry	32.2	31.8	31.3	32.0	31.6
Construction	9.3	9.3	9.3	9.0	8.9
Trade and catering	16.9	16.8	16.3	16.2	16.6
Transportation and communication	7.8	7.8	7.9	7.7	7.7
Financial services	2.1	2.1	2.1	2.1	2.0
Real estate	5.1	5.4	5.6	5.4	5.7
Public administration	6.8	7.1	7.2	7.2	6.8
Education	5.8	6.0	6.3	6.3	6.5
Health service	5.4	5.8	6.1	6.4	6.4
Other services	4.0	3.7	3.7	3.8	3.8
Total employment	100.0	100.0	100.0	100.0	100.0

Source: Czech Statistical Office.
1/ Labor Force Survey.

Table 6. Czech Republic: Average Monthly Earnings, 1998–2002 1/
(In koruny)

	1998	1999	2000	2001	2002
Agriculture	9,232	9,599	10,284	11,227	11,617
Industry	11,879	12,688	13,575	14,547	15,360
Construction	12,146	12,799	13,540	14,629	15,659
Trade and catering	11,903	12,856	14,173	15,451	16,379
Transport and communication	12,625	13,652	14,864	16,059	17,288
Financial services	21,198	23,206	25,484	29,166	31,545
Public administration	12,060	13,642	13,929	15,315	16,958
Education	9,852	11,083	11,280	12,442	13,625
Health service	9,949	11,310	11,743	13,350	15,046
All sectors	11,703	12,677	13,491	14,642	15,683

Source: Czech Statistical Office.
1/ Labor Force Survey.

Table 7. Czech Republic: Developments in Wholesale and Consumer Prices, 1998–2002 1/
(Average 2000 = 100)

	1998	1999	2000	2001	2002
Producer prices (industry)	94.4	95.3	100.0	102.9	102.3
Consumer prices	94.2	96.2	100.0	104.7	106.6
Foodstuffs 2/	104.8	99.0	100.0	105.1	103.0
Alcohol and tobacco	91.7	96.0	100.0	103.2	105.2
Clothing	101.9	101.9	100.0	98.4	95.8
Housing, water, electricity, gas, and other fuels	84.5	92.2	100.0	109.9	116.5
Furnishing, household equipment, and routine maintenance of the house	97.6	99.5	100.0	100.2	100.0
Health	93.5	97.3	100.0	103.2	108.0
Transport	87.0	90.1	100.0	100.3	98.4
Postal services and telecommunications	81.1	93.5	100.0	104.9	108.4
Recreation and culture	95.4	97.5	100.0	105.1	107.3
Education	88.7	95.8	100.0	102.8	106.4
Catering and accommodation services	94.6	97.4	100.0	102.9	106.4
Miscellaneous goods and services	95.5	97.9	100.0	104.6	108.8

Source: Czech Statistical Office.
1/ Period average.
2/ Excluding beverages and tobacco.

Table 8. Czech Republic: Operations of the Consolidated General Government, 1998–2003

	1998	1999	2000	2001	2002	2003	1998	1999	2000	2001	2002	2003
	(In billions of koruny)						(In percent of GDP)					
Total Revenue and Grants	709.3	743.9	780.7	851.1	906.8	953.1	38.6	39.1	39.3	39.1	39.8	40.1
Total Revenue	709.3	743.7	779.5	848.3	904.3	941.8	38.6	39.1	39.3	39.0	39.7	39.7
Current revenue	699.5	734.8	770.0	838.7	893.2	931.9	38.0	38.6	38.8	38.6	39.3	39.3
Tax revenue	652.6	688.2	721.1	782.0	833.0	881.6	35.5	36.2	36.3	36.0	36.6	37.1
Direct taxes	162.5	165.4	174.1	196.4	220.1	240.7	8.8	8.7	8.8	9.0	9.7	10.1
Personal income tax	94.9	95.3	98.3	104.4	114.4	126.8	5.2	5.0	5.0	4.8	5.0	5.3
Corporate profits tax	67.6	70.1	75.8	92.0	105.7	113.9	3.7	3.7	3.8	4.2	4.6	4.8
Indirect taxes	202.9	228.2	234.0	245.5	255.6	260.1	11.0	12.0	11.8	11.3	11.2	11.0
VAT	119.4	138.3	145.9	150.9	154.4	159.2	6.5	7.3	7.4	6.9	6.8	6.7
Excises	67.8	73.1	70.9	76.3	79.5	78.2	3.7	3.8	3.6	3.5	3.5	3.3
Customs duties	13.6	12.1	13.6	10.0	9.8	9.6	0.7	0.6	0.7	0.5	0.4	0.4
Social security contributions	263.1	271.3	287.4	318.9	335.0	358.1	14.3	14.3	14.5	14.7	14.7	15.1
Other tax revenue	24.1	23.3	25.7	21.2	22.3	22.7	1.3	1.2	1.3	1.0	1.0	1.0
Nontax revenue	47.0	46.7	48.9	56.7	60.1	50.3	2.6	2.5	2.5	2.6	2.6	2.1
Capital revenue	9.7	8.8	9.5	9.7	11.2	9.9	0.5	0.5	0.5	0.4	0.5	0.4
Grants	0.0	0.3	1.2	2.8	2.5	11.3	0.0	0.0	0.1	0.1	0.1	0.5
Total expenditure and net lending	737.5	755.0	842.7	903.3	918.6	1143.2	40.1	39.7	42.5	41.5	40.4	48.2
Total expenditure	752.7	796.4	867.6	962.2	1,060.2	1149.5	40.9	41.9	43.7	44.2	46.6	48.4
Current expenditure	659.5	698.8	760.0	850.1	931.7	991.2	35.9	36.7	38.3	39.1	40.9	41.8
Goods and services	152.3	166.7	179.6	183.8	208.5	226.1	8.3	8.8	9.1	8.4	9.2	9.5
Wages and salaries	62.6	69.4	70.3	76.2	83.0	88.7	3.4	3.6	3.5	3.5	3.6	3.5
Other goods and services	89.6	97.2	109.3	107.5	125.4	142.3	4.9	5.1	5.5	4.9	5.5	6.0
Interest payments	21.3	19.5	20.9	20.1	15.7	23.8	1.2	1.0	1.1	0.9	0.7	1.0
Subsidies and other current transfers	485.9	512.6	559.6	646.3	707.4	741.3	26.4	26.9	28.2	29.7	31.1	31.2
Subsidies	139.2	139.1	157.7	209.5	240.0	237.3	7.6	7.3	7.9	9.6	10.5	10.0
To nonfinancial public enterprises	76.2	87.6	91.9	110.9	124.1	149.1	4.1	4.6	4.6	5.1	5.5	6.3
To financial institutions	33.2	17.5	27.4	57.7	79.4	39.1	1.8	0.9	1.4	2.7	3.5	1.6
To other enterprises	29.8	34.1	38.4	40.9	36.5	49.1	1.6	1.8	1.9	1.9	1.6	2.1
Transfers	346.7	373.5	401.8	436.8	467.5	503.9	18.9	19.6	20.2	20.1	20.5	21.2
To households and nonprofit institutions	345.0	371.1	399.1	433.6	464.6	489.5	18.8	19.5	20.1	19.9	20.4	20.6
Abroad	1.7	2.4	2.7	3.2	2.9	14.4	0.1	0.1	0.1	0.1	0.1	0.6
Capital expenditure	93.2	97.6	107.6	112.0	128.5	158.3	5.1	5.1	5.4	5.2	5.6	6.7
Acquisition of fixed capital assets	59.2	60.9	68.2	70.3	71.8	73.1	3.2	3.2	3.4	3.2	3.2	3.1
Capital transfers	34.0	36.7	39.3	41.7	56.7	85.1	1.8	1.9	2.0	1.9	2.5	3.6
Other	3.1	3.1	4.2				0.2	0.2	0.2	0.0	0.0	0.0
Net lending 1/	-15.2	-41.4	-24.9	-58.8	-141.6	-6.2	-0.8	-2.2	-1.3	-2.7	-6.2	-0.3
Overall balance including privatization revenues	-28.2	-11.1	-62.0	-52.2	-11.8	-190.1	-1.5	-0.6	-3.1	-2.4	-0.5	-8.0
Balance excluding privatization revenues, the sale of Russian debt and grants to transformation institutions	-25.2	-57.9	-69.9	-62.4	-96.7	-174.1	-1.4	-3.0	3.5	-2.9	-4.2	-7.3
Memorandum items:												
Privatization revenues 1/ 2/	15.5	54.5	28.0	61.4	128.5	15.0	0.8	2.9	1.4	2.8	5.6	0.6
National Property Fund	15.5	26.0	20.5	59.9	126.6	14.3	0.8	1.4	1.0	2.8	5.6	0.6
Local governments 2/	0.0	28.4	7.5	1.5	1.9	0.7	0.0	1.5	0.4	0.1	0.1	0.0
Grants to transformation institutions 3/	18.4	7.6	20.1	51.1	64.0	31	1.0	0.4	1.0	2.3	2.8	1.3

Source: Czech Ministry of Finance.

1/ Privatization revenues are recorded primarily as capital revenue and negative net lending.

2/ Includes the sale of voting rights by local governments in 1999–2000.

3/ Used to cover costs associated with the rehabilitation of banks and state-owned enterprises.

Table 9. Czech Republic: Operations of the Central State Budget, 1998–2002

	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
	(In billions of koruny)					(In percent of GDP)				
	530.0	562.3	581.7	617.7	673.6	28.8	29.6	29.3	28.4	29.6
Total revenue	521.0	551.2	570.0	617.7	648.4	28.3	29.0	28.7	28.4	28.5
Current revenue	520.8	551.0	569.6	617.2	647.3	28.3	29.0	28.7	28.4	28.4
Tax revenue	507.2	538.1	557.7	596.9	627.0	27.6	28.3	28.1	27.4	27.6
Direct taxes	87.7	86.6	87.1	147.4	159.0	4.8	4.6	4.4	6.8	7.0
Personal income tax	36.3	35.2	34.8	78.5	82.1	2.0	1.9	1.8	3.6	3.6
Corporate income tax	51.3	51.3	52.3	68.8	76.9	2.8	2.7	2.6	3.2	3.4
Social security contributions	203.9	210.9	222.2	242.3	258.5	11.1	11.1	11.2	11.1	11.4
Taxes on property	6.3	6.8	6.0	6.4	7.9	0.3	0.4	0.3	0.3	0.3
Domestic taxes on goods and services	200.8	223.5	230.4	197.0	191.7	10.9	11.8	11.6	9.1	8.4
VAT	119.4	138.3	145.9	121.2	118.4	6.5	7.3	7.4	5.6	5.2
Excises	67.8	73.1	70.9	65.8	68.6	3.7	3.8	3.6	3.0	3.0
Other	8.4	10.2	10.4	4.5	4.7	0.5	0.5	0.5	0.2	0.2
Customs duties	13.6	12.1	13.6	10.0	9.8	0.7	0.6	0.7	0.5	0.4
Other taxes	14.8	17.1	18.0	10.2	0.1	0.8	0.9	0.9	0.5	0.0
Nontax revenue	13.6	12.9	11.9	20.2	19.9	0.7	0.7	0.6	0.9	0.9
Capital revenue	0.2	0.3	0.4	0.5	1.4	0.0	0.0	0.0	0.0	0.1
Grants	9.1	11.1	11.8	0.0	25.2	0.5	0.6	0.6	0.0	1.1
	559.4	592.0	627.8	685.4	719.3	30.4	31.1	31.6	31.5	31.6
Total expenditure	557.6	589.2	627.6	683.7	736.9	30.3	31.0	31.6	31.4	32.4
Current expenditure	507.5	530.8	567.3	634.9	695.7	27.6	27.9	28.6	29.2	30.6
Goods and services	100.7	107.7	110.1	128.6	151.0	5.5	5.7	5.5	5.9	6.6
Wages and salaries	47.4	52.4	52.4	60.2	64.9	2.6	2.8	2.6	2.8	2.9
Employer contributions	16.1	17.9	17.9	20.5	22.2	0.9	0.9	0.9	0.9	1.0
Other purchases of goods and services	37.2	37.4	39.8	47.9	63.9	2.0	2.0	2.0	2.2	2.8
Interest payments	18.9	17.0	19.3	18.6	12.8	1.0	0.9	1.0	0.9	0.6
Subsidies and other current transfers	388.0	406.0	438.0	487.7	531.9	21.1	21.3	22.1	22.4	23.4
To other central government	24.3	27.9	33.2	33.4	34.0	1.3	1.5	1.7	1.5	1.5
To other levels of government	24.9	27.6	30.3	52.8	68.4	1.4	1.5	1.5	2.4	3.0
To nonfinancial public enterprises	57.9	67.5	66.9	51.6	41.7	3.1	3.5	3.4	2.4	1.8
To financial institutions	24.7	5.7	6.5	32.5	52.5	1.3	0.3	0.3	1.5	2.3
To other enterprises	20.4	23.6	26.4	21.0	17.3	1.1	1.2	1.3	1.0	0.8
To households and nonprofit institutions	234.0	251.3	272.0	293.1	315.2	12.7	13.2	13.7	13.5	13.9
Abroad	1.7	2.4	2.7	3.4	2.9	0.1	0.1	0.1	0.2	0.1
Capital expenditure	50.1	58.4	60.3	48.7	41.2	2.7	3.1	3.0	2.2	1.8
Fixed capital	14.6	18.3	23.0	21.6	10.3	0.8	1.0	1.2	1.0	0.5
Capital transfers	33.6	38.4	35.5	25.4	29.7	1.8	2.0	1.8	1.2	1.3
To other levels of government	11.5	12.4	13.8	10.0	11.3	0.6	0.7	0.7	0.5	0.5
To nonfinancial public enterprises	15.0	17.1	13.9	11.0	18.3	0.8	0.9	0.7	0.5	0.8
Other	7.1	8.9	7.8	4.4	0.0	0.4	0.5	0.4	0.2	0.0
Other capital expenditure	1.9	1.7	1.8	1.7	1.2	0.1	0.1	0.1	0.1	0.1
Net lending	1.8	2.8	0.2	1.7	-17.6	0.1	0.1	0.0	0.1	-0.8
	-29.3	-29.6	-46.1	-67.7	-45.7	-1.6	-1.6	-2.3	-3.1	-2.0

Source: Czech Ministry of Finance.

Table 10. Czech Republic: Operations of the Local Authorities, 1998–2002

	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
	(In millions of koruny)					(In percent of GDP)				
Total revenue	157.2	165.6	181.8	192.4	236.6	8.5	8.7	9.2	8.8	10.4
Tax revenue	83.3	87.0	95.8	88.8	109.7	4.5	4.6	4.8	4.1	4.8
Direct taxes	74.8	78.9	87.0	49.0	61.1	4.1	4.1	4.4	2.3	2.7
Corporate income	16.2	18.8	23.5	23.2	28.8	0.9	1.0	1.2	1.1	1.3
Personal income	58.6	60.1	63.5	25.8	32.3	3.2	3.2	3.2	1.2	1.4
Property taxes	4.1	4.2	4.5	4.6	4.6	0.2	0.2	0.2	0.2	0.2
VAT	0.0	0.0	0.0	29.8	36.0	0.0	0.0	0.0	1.4	1.6
Other taxes	4.4	3.9	4.4	5.4	8.0	0.2	0.2	0.2	0.2	0.4
Nontax revenue	27.0	28.6	30.9	27.2	30.1	1.5	1.5	1.6	1.2	1.3
Transfers 1/	37.4	41.4	46.1	67.3	87.1	2.0	2.2	2.3	3.1	3.8
Capital revenue	9.5	8.5	9.1	9.1	9.7	0.5	0.4	0.5	0.4	0.4
Total expenditure	158.0	173.0	190.4	204.4	241.8	8.6	9.1	9.6	9.4	10.6
Current expenditure	106.1	118.7	129.0	140.3	172.4	5.8	6.2	6.5	6.5	7.6
On goods and services	66.5	72.9	79.8	66.2	74.8	3.6	3.8	4.0	3.0	3.3
Wages and salaries	18.3	20.7	21.6	18.7	16.0	1.0	1.1	1.1	0.9	0.7
Employer contributions	4.5	5.2	5.4	4.6	5.1					
Other	48.2	52.2	58.2	47.5	53.6	2.6	2.7	2.9	2.2	2.4
Interest payments	2.3	2.3	1.7	1.9	2.1	0.1	0.1	0.1	0.1	0.1
Transfers	37.2	43.5	47.5	72.2	95.6	2.0	2.3	2.4	3.3	4.2
To enterprises	9.0	9.8	10.7	12.7	15.4	0.5	0.5	0.5	0.6	0.7
To subsidized organizations	17.5	19.1	20.3	45.1	64.4	1.0	1.0	1.0	2.1	2.8
To households and nonprofit institutions	7.2	9.6	11.7	10.4	14.9	0.4	0.5	0.6	0.5	0.7
To other levels of government	0.9	0.8	1.0	0.5	0.9	0.0	0.0	0.0	0.0	0.0
Capital expenditure	53.4	56.8	62.9	65.1	69.4	2.9	3.0	3.2	3.0	3.1
Fixed assets	42.7	45.6	51.3	55.0	59.4	2.3	2.4	2.6	2.5	2.6
Nonproduced assets	1.2	1.4	2.4	2.4	2.6	0.1	0.1	0.1	0.1	0.1
Capital transfers	10.7	11.2	11.6	10.1	10.1	0.6	0.6	0.6	0.5	0.4
Overall balance	-0.8	-7.4	-8.6	-11.9	-5.3	0.0	-0.4	-0.4	-0.5	-0.2

Sources: Czech Ministry of Finance; and IMF staff estimates.

1/ Includes transfers from the central government, extrabudgetary funds, and the National Property Fund.

Table 11. Czech Republic: Operations of the Extrabudgetary Funds, 1999–2002 1/

	1999	2000	2001	2002	1999	2000	2001	2002
	(In billions of koruny)				(In percent of GDP)			
Total revenue and grants	5.8	8.5	35.2	31.9	0.3	0.4	1.6	1.4
Own revenue	5.8	5.4	30.8	28.9	0.3	0.3	1.4	1.3
Grants	0.0	3.1	4.3	3.0	0.0	0.2	0.2	0.1
Total expenditure and net lending	3.8	17.9	10.8	-8.3	0.2	0.9	0.5	-0.4
Current expenditure	17.8	28.0	50.2	79.1	0.9	1.4	2.3	3.5
Of which :								
subsidies to nonfinancial enterprises	0.8	4.5	20.4	21.0	0.0	0.2	0.9	0.9
Of which : subsidies to subsidized organizations including universities	0.0	3.7	13.4	15.9	0.0	0.2	0.6	0.7
subsidies to financial institutions	8.0	6.3	25.0	26.9	0.4	0.3	1.1	1.2
Capital expenditure	3.3	9.0	20.6	36.1	0.2	0.5	0.9	1.6
Net lending	-17.3	-19.2	-60.0	-123.6	-0.9	-1.0	-2.8	-5.4
Overall balance	2.0	-9.4	24.3	40.2	0.1	-0.5	1.1	1.8

Source: Czech Ministry of Finance.

1/ Includes the Czech Land Fund, and the following State Funds: the State Fund for Environmental Protection, the State Cultural Fund, the State Fund for the Development of Czech Cinematography, the State Fund for Soil Fertilization; since 2000 the State Fund for Housing Development; and since 2001 the State Fund for Transportation and the State Agricultural Intervention Fund. Until 2001 it also includes the National Property Fund.

Table 12. Czech Republic: Functional Classification of Consolidated General Government Expenditure, 1999–2002

	1999	2000	2001	2002	1999	2000	2001	2002
	(In millions of koruny)				(In percent of GDP)			
Total expenditure (excluding lending)	796.4	867.6	962.2	1,060.2	41.9	43.7	44.2	46.6
General public services	43.6	49.7	54.2	57.9	2.3	2.5	2.5	2.5
Defense	33.9	36.7	37.1	40.6	1.8	1.8	1.7	1.8
Public order and safety	38.1	41.3	43.4	48.6	2.0	2.1	2.0	2.1
Education	81.0	81.7	92.3	102.3	4.3	4.1	4.2	4.5
Health	124.1	130.4	145.5	155.4	6.5	6.6	6.7	6.8
Social security and welfare	269.2	290.7	309.1	331.6	14.1	14.6	14.2	14.6
Housing and community amenities	58.8	63.5	59.5	62.6	3.1	3.2	2.7	2.7
Recreational, cultural, and religious affairs	18.4	20.8	22.7	25.0	1.0	1.0	1.0	1.1
Economic affairs and services	111.2	118.0	154.9	178.2	5.8	5.9	7.1	7.8
Fuel and energy	3.0	3.0	2.9	2.1	0.2	0.2	0.1	0.1
Agriculture, forestry, fishing, hunting	19.0	20.1	22.3	24.7	1.0	1.0	1.0	1.1
Mining, manufacturing, construction	2.8	2.6	3.4	3.6	0.1	0.1	0.2	0.2
Transportation and communication	59.5	63.0	72.6	87.6	3.1	3.2	3.3	3.8
Other economic affairs and services	26.9	29.3	53.8	60.2	1.4	1.5	2.5	2.6
Other expenditures 1/	17.9	34.8	43.3	58.2	0.9	1.8	2.0	2.6

1/ Adjusted for employer contributions at the same level of government.

Table 13. Czech Republic: Outstanding Debt and Loans Guaranteed by the State Government, 1998–2002

	1998	1999	2000	2001	2002
			(In billions of koruny)		
Outstanding debt of the state government (end-period)	**194.7**	**228.4**	**289.3**	**345.0**	**395.9**
Securities	170.8	208.2	270.8	337.7	388.3
Treasury bills	99.8	130.1	165.3	186.6	164.1
Treasury bonds	70.0	77.0	104.3	149.6	222.6
Other securities	1.0	1.1	1.2	1.5	1.6
Direct credits	23.9	20.2	18.5	7.3	7.6
Loan guarantees outstanding (end-period)	**280.4**	**257.3**	**245.7**	**456.6**	**491.5**
Under the Act on the Budgetary Regulations No. 576/1990	193.4	148.30	135.6	164.8	201.0
Signed agreements	175.8	148.30	135.6	164.8	201.0
Environmental projects	24.2	14.60	14.7	12.0	8.1
Infrastructure	64.4	44.10	45.8	52.4	53.5
Export promotion	0.0	0.00	0.0	0.0	0.0
Banking sector	53.5	41.80	44.0	65.1	110.2
Other	33.7	47.70	31.0	35.3	29.2
Unsigned agreements	17.6	0.00	0.0	0.0	0.0
Export Promotion under the Act No. 58/1995	87.0	109.00	110.1	136.1	160.4
Czech Consolidation Agency under the Act No. 239/2001	0.0	0.00	0.0	155.7	130.1
			(In percent of GDP)		
Outstanding debt (end-period)	**10.6**	**12.1**	**14.6**	**15.9**	**17.4**
Securities	9.3	11.0	13.6	15.5	17.1
Treasury bills	5.4	6.9	8.3	8.6	7.2
Treasury bonds	3.8	4.1	5.3	6.9	9.8
Other securities	0.1	0.1	0.1	0.1	0.1
Direct credits	1.3	1.1	0.9	0.3	0.3
Loan guarantees outstanding	**15.3**	**13.6**	**12.4**	**21.0**	**21.6**
Under the Act on the Budgetary Regulations No. 576/1990	10.5	7.9	6.8	7.6	8.8
Signed agreements	9.6	7.9	6.8	7.6	8.8
Environmental projects	1.3	0.8	0.7	0.6	0.4
Infrastructure	3.5	2.3	2.3	2.4	2.4
Export promotion	0.0	0.0	0.0	0.0	0.0
Banking sector	2.9	2.2	2.2	3.0	4.8
Other	1.8	2.5	1.6	1.6	1.3
Unsigned agreements	1.0	0.0	0.0	0.0	0.0
Export Promotion under the Act No. 58/1995	4.7	5.8	5.5	6.3	7.0
Czech Consolidation Agency under the Act No. 239/2001	0.0	0.0	0.0	7.2	5.7
Memorandum item:					
Outstanding debt of the general government (in billions of koruny)	240.0	275.2	332.4	404.5	444.3

Source: Czech Ministry of Finance.

Table 14. Czech Republic: Functional Classification of Subsidies from the State Budget, 1998–2003
(In billions of koruny)

	1998	1999	2000	2001	2002	2003 Budget
Total subsidies 1/	49.1	34.0	38.4	67.0	77.1	70.6
Producer	14.7	13.7	17.7	19.4	14.0	14.2
Agriculture and foodstuffs	10.3	9.8	13.7	15.4	10.5	10.8
Fund for Market Regulation 2/	1.1	3.0	2.4	4.2	2.9	4.7
Other	8.5	5.9	10.6	11.0	7.4	6.0
Forestry and water	0.7	0.9	0.7	0.2	0.2	0.1
Mining	4.4	3.9	4.0	4.0	3.5	3.4
Uranium	1.3	1.1	1.1	1.4	...	...
Coal and ore	3.1	2.7	2.8	2.6	...	...
Residential heating	0.1	0.0	0.0	0.0	0.0	0.0
Transportation	5.9	6.2	6.9	0.7	2.4	8.5
Railways	5.8	6.1	6.8	0.6	2.2	8.4
Bus, urban transport, and airlines	0.1	0.1	0.1	0.1	0.2	0.1
Housing	0.0	0.0	0.0	0.0	0.0	0.0
Energy savings	0.1	0.1	0.0	0.0	0.0	0.0
Export promotion	0.3	0.1	0.9	0.2	0.2	0.7
Called loan guarantees	6.7	1.0	1.9	0.6	3.0	9.3
Employment of handicapped	0.3	0.3	0.3	0.0	0.0	0.0
Small business development	0.8	1.3	1.9	1.7	1.2	1.4
Other noninvestment	20.2	11.3	8.8	14.1	10.6	16.5
Private education	1.5	1.7	1.5	0.0	0.0	2.7
Offsetting trade embargo	0.1	0.1	0.0	0.0	0.0	0.1
Property detriment	3.6	1.4	1.4	1.6	1.1	0.9
Other	15.0	8.1	5.9	12.5	9.5	12.9
Operations of state financial assets	...	...	...	30.3	45.6	20.0
Memorandum item:						
Total subsidies (percent of GDP)	2.7	1.8	1.9	3.1	3.4	3.0

Source: Czech Ministry of Finance.

1/ Differences from the totals in Table 11 are due to classification.

2/ Includes transfers to and deficit of the Fund for Market Regulation in agriculture.

Table 15. Czech Republic: Transfers to Households, 1999–2003

	1999	2000	2001	2002	2003 Budget	1999	2000	2001	2002	2003 Budget
	(In billions of koruny)					(In percent of GDP)				
Pensions	177.9	186.9	201.1	213.6	225.9	9.4	9.4	9.2	9.4	9.5
Old age	127.5	136.6	146.8	...	...	6.7	6.9	6.7	...	...
Disability	32.5	32.9	35.0	...	...	1.7	1.7	1.6	...	...
Widow	15.4	15.3	16.9	...	...	0.8	0.8	0.8	...	...
Other 1/	2.5	2.1	2.4	...	...	0.1	0.1	0.1	...	...
Sickness and maternity	19.3	27.3	29.7	32.7	34.3	1.0	1.4	1.4	1.4	1.4
Other state benefits 2/	3.8	4.3	4.9	5.4	6.2	0.2	0.2	0.2	0.2	0.3
Social state support	30.9	31.7	31.9	33.7	34.6	1.6	1.6	1.5	1.5	1.5
Per child allowances	12.5	12.7	12.7	13.4	13.9	0.7	0.6	0.6	0.6	0.6
Parental allowances	7.7	7.7	7.7	8.0	8.2	0.4	0.4	0.4	0.4	0.3
Others (including housing)	10.4	11.3	11.5	12.3	12.5	0.5	0.6	0.5	0.5	0.5
Special housing benefits	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Benefits provided by local authorities	9.3	11.3	11.7	13.3	14.2	0.5	0.6	0.5	0.6	0.6
Of which :										
Provided by municipalities	8.0	9.9	10.1	11.6	14.2	0.4	0.5	0.5	0.5	0.6
State policy of employment	7.6	9.1	9.5	9.7	10.4	0.4	0.5	0.4	0.4	0.4
Of which :										
Unemployment benefits	5.7	5.7	5.2	6.2	6.3	0.3	0.3	0.2	0.3	0.3
Total	249.2	270.8	288.8	308.4	325.6	13.1	13.6	13.3	13.6	13.7
Memorandum item:										
Nominal GDP	1,902	1,985	2,175	2,276	2,374	100.0	100.0	100.0	100.0	100.0

Sources: Czech Ministry of Finance; and Ministry of Labor and Social Affairs.

1/ Includes orphan pensions.

2/ Includes special allowances for soldiers, policemen, etc.

Table 16. Czech Republic: Monetary Survey, 1998–2003

	1998	1999	2000	2001	2002				2003
					Mar.	Jun.	Sep.	Dec.	Mar.
Net foreign assets 1/	425.3	570.4	673.1	800.6	764	857.3	897.7	912.9	906.0
Net domestic assets	816.1	767.1	739.2	795.4	818	723.2	707.9	734.4	715.8
Domestic credit	1,079.8	1,058.5	1,068.8	1,011.9	974	863.0	822.3	911.1	909.2
Total credit to the private sector	1,046.7	1,001.0	963.9	775.4	754	716.1	711.2	721.2	729.0
Of which : in foreign exchange	199.7	176.4	144.2	114.2	102	92.0	92.4	101.2	93.0
Net credit to government	42.4	67.7	103.8	246.2	228	175.5	134.0	207.4	197.2
Net credit to National Property Fund	-9.3	-10.2	1.1	-9.7	-8	-28.6	-22.9	-17.5	-17.0
Other assets, net	-263.7	-291.4	-329.6	-216.5	-156	-139.8	-114.4	-176.7	-193.4
Broad money 2/	1,241.4	1,337.5	1,412.3	1,596.0	1,582	1,580.5	1,605.6	1,647.3	1,621.8
Currency outside banks	127.2	157.9	171.8	180.4	183	188.5	192.2	197.8	205.9
Demand deposits	276.8	289.9	325.9	403.2	386	429.0	455.2	494.5	477.7
Households	144.1	162.6	195.0	230.2	246	267.3	278.4	270.9	295.2
Enterprises 2/ 3/	132.7	127.3	130.9	173.0	140	161.7	176.8	223.6	182.5
Time and savings deposits	672.5	653.1	645.0	742.2	763	746.9	742.0	729.6	717.1
Households	550.4	537.6	549.8	596.6	597	594.8	581.3	568.0	561.3
Enterprises 3/	122.1	115.5	95.2	145.6	166	152.1	160.7	161.6	155.8
Foreign currency deposits	138.4	145.3	155.6	157.4	149	134.7	137.8	145.8	141.5
Households	73.6	80.8	83.7	91.5	87	77.3	79.1	79.4	77.8
Enterprises 3/	64.8	64.5	71.9	65.9	62	57.4	58.7	66.4	63.7
Memorandum items:									
Money multiplier	5.4	6.3	6.4	6.8	6.8	6.6	6.4	6.5	6.4
Velocity of broad money 4/	1.4	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.3
Credit to the private sector	-4.7	-4.4	-3.7	-18.9	-21.7	-25.4	-11.4	-7.0	-3.3
Adjusted 5/	2.7	-3.9	-2.5	-1.5	0.5	1.5	2.5	3.5	5.5
Broad money	5.4	7.7	5.6	14.3	9.8	4.4	4.8	3.2	2.5
Net foreign assets	25.6	34.1	18.0	28.6	11.0	17.5	20.6	14.0	18.6
Net domestic assets	-2.8	-6.0	-3.6	3.5	8.7	-7.8	-10.2	-7.7	-12.5
Domestic credit	-3.6	-2.0	1.0	-3.4	-9.5	-20.7	-20.0	-10.0	-6.7
Total credit to private sector	-4.7	-4.4	-3.7	0.0	-21.7	-25.4	-11.4	-7.0	-3.3
Other assets, net	-6.0	10.5	13.1	-20.6	-51.7	-53.9	-52.2	-18.4	23.7

Sources: Czech National Bank; and IMF staff estimates.

1/ Net foreign assets are evaluated at current exchange rates.

2/ Adjusted for the float.

3/ Including insurance companies.

4/ Velocity is the ratio of quarterly nominal GDP annualized over end-of-period broad money.

5/ Adjusted to account for removal of KoB's status as a banking institution in September 2001, exchange rate effects on foreign-currency-denominated loans, loan write-offs, and transfer of IPB loans to CKA.

Table 17. Czech Republic: Sources and Uses of Reserve Money, 1998-2003
(End-of-period balances in billions of koruny)

	1998	1999	2000	2001				2002				2003
				Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.
I. Sources												
Reserve money	231.8	211.3	221.7	219.3	221.6	224.0	236.1	233.2	239.1	251.7	252.7	252.9
External sector	299.9	343.2	361.1	361.2	365.2	366.2	405.2	417.3	567.6	602	602.0	600.7
Net CNB assets to National Bank of Slovakia	26.1	26.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0
Net credit to government (excluding securities)	-36.1	-35.6	-46.0	-23.3	-11.2	-12.4	-57.4	-32.2	-13.3	-14.7	-49.9	-11.0
Credit to the private sector	32.7	45.3	42.5	42.0	41.8	53.4	52.4	51.9	51.4	51	49.2	48.4
Other assets, net	78.6	68.1	116.2	123.8	126.2	112.4	108.7	122.6	103.8	109.8	108.3	120.4
Refinancing operations	-169.5	-211.0	-251.3	-283.5	-299.9	-290.6	-263.2	-326.6	-470.3	-496.4	-455.2	-505.6
Refinancing credits	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stand-by operations	0.0	-24.7	-0.8	-1.0	-0.4	-5.0	-9.6	0.0	0.0	0.0	-1.6	0.0
II. Uses												
Reserve money	231.8	211.3	221.7	219.3	221.6	224.0	236.1	233.2	239.1	251.7	252.8	252.9
Currency	145.2	185.1	195.1	189.7	194.1	196.6	205.9	202.0	208.3	213.2	224.4	227.4
Reserves	86.6	26.3	26.6	29.6	27.5	27.4	30.3	31.2	30.8	38.4	28.4	25.6
Required reserves	84.5	25.5	27.0	28.2	29.2	27.2	28.4	27.6	28.0	28.1	28.5	28.3
Excess reserves	2.1	0.8	-0.4	1.4	-1.7	0.2	1.9	3.6	2.8	10.3	-0.1	-2.8

Source: Czech National Bank.

Table 18. Czech Republic: Structure of Domestic Currency Deposits, 1998–2003

	1998	1999	2000	2001	2002				2003
					Mar.	Jun.	Sep.	Dec.	Mar.
Total	1,022.0	1,023.7	1,054.2	1,241.7	1,298.7	1,456.1	1,477.1	1,467.3	1,436.6
By maturity 1/									
Short term	816.7	826.9	853.0	1,026.4	1,075.7	1,221.7	1,250.3	1,236.5	1,203.1
Medium term	140.0	186.4	167.6	179.6	181.2	188.0	178.6	219.6	222.2
Long term	65.4	10.4	33.7	35.7	41.8	45.9	48.2	11.2	11.3
By maturity (share of total deposits)									
Short term	79.9	80.8	80.9	82.7	82.8	83.9	84.6	84.3	83.7
Medium term	13.7	18.2	15.9	14.5	14.0	12.9	12.1	15.0	15.5
Long term	6.4	1.0	3.2	2.9	3.2	3.2	3.3	0.8	0.8
By type of holder									
Nonfinancial organizations	188.0	173.2	174.4	230.7	203.7	218.8	225.8	273.3	234.5
Financial institutions	51.5	56.5	39.4	63.8	78.6	69.7	83.7	82.8	72.0
Public organizations	61.7	68.2	72.7	81.2	130.4	266.9	266.4	228.1	228.2
Nonprofit organizations	13.0	11.7	11.9	22.2	22.8	23.8	26.2	25.9	26.9
Small enterprises	34.7	34.2	37.7	45.8	50.4	56.8	59.7	52.2	58.5
Households	659.8	666.0	706.9	781.0	792.5	805.3	800.0	786.7	798.0
Nonresidents	11.0	12.5	10.8	15.2	19.0	13.4	13.5	15.1	13.6
Others	2.4	1.5	0.5	1.9	1.3	1.3	1.8	3.2	4.7

Source: Czech National Bank.

1/ Short term: up to and including one year; medium term: more than one and up to and including four years; long term: over four years.

Table 19. Czech Republic: Distribution of Bank Credits to the Nongovernment Sector, 1998–2003
(In billions of koruny, end of period)

	1998	1999	2000	2001	2002				2003
					Mar.	Jun.	Sep.	Dec.	Mar.
Total credits 1/	897.4	869.7	866.3	825.8	811.7	806.6	798.1	800.4	808.0
By maturity 2/									
Short term	359.0	330.3	312.9	289.6	261.4	234.4	228.4	225.0	211.7
Medium term	195.6	228.7	201.3	185.7	246.1	249.1	251.5	254.6	263.7
Long term	316.4	310.3	352.3	350.2	304.2	323.0	318.2	320.8	332.6
By sector									
Nonfinancial corporations	674.3	637.1	591.7	424.2	407.5	376.8	360.4	344.8	351.6
Financial institutions	66.5	77.1	105.8	95.8	98.5	91.3	92.7	93.9	94.1
Public sector	14.2	15.4	33.4	159.0	153.8	175.9	172.6	169.7	161.6
Households	103.7	108.9	120.3	137.0	142.9	153.1	163.1	177.5	186.4
Nonresidents	36.2	29.8	13.6	5.5	6.0	6.7	6.8	10.7	10.4
Others	2.5	1.5	1.6	4.3	3.1	2.8	2.6	3.9	3.9
By branch of industry									
Agriculture, hunting, and fishing	25.6	24.8	20.8	16.8	15.9	16.8	17.8	17.5	17.4
Forestry and logging	1.3	1.1	1.0	1.0	0.9	0.8	0.8	1.1	1.1
Mining and quarrying	11.6	9.1	7.4	8.6	7.7	9.0	8.4	6.7	8.1
Manufacturing	222.0	209.7	194.1	135.2	134.7	124.2	121.4	115.6	119.0
Production and distribution of electricity	30.4	38.0	35.0	30.4	27.4	26.5	27.9	25.6	25.6
Construction	29.6	25.7	18.8	12.0	12.5	13.8	13.0	11.3	13.5
Trade, sales, catering, and accommodation	184.2	165.6	147.0	115.1	110.6	109.0	107.4	100.5	104.3
Transport, storage, tourism, and communications	28.7	25.8	26.6	26.7	25.9	22.7	23.7	26.5	26.5
Others	363.9	369.9	415.6	479.9	476.0	483.9	477.7	495.5	492.4

Source: Czech National Bank.

1/ Excludes foreign currency-denominated credits.

2/ Short term: up to and including one year; medium term: more than one and up to and including four years; long term: over four years.

Table 20. Czech Republic: Distribution of Classified Loans by Type, 1999–2003 1/

	1999	2000	2001	2002	2003 Mar.
		(In billions of koruny, end of period)			
Total	283.3	245.1	199.3	147.2	137.8
Watch	88.6	83.5	71.1	71.3	67.8
Sub-standard	38.2	53.4	31.9	27.5	29.3
Doubtful	37.9	26.8	29.4	11.7	9.3
Loss	118.6	81.4	67.0	36.6	31.4
		(In percent of total classified loans)			
Total	100.0	100.0	100.0	100.0	100.0
Watch	31.3	34.1	35.7	48.5	49.2
Sub-standard	13.5	21.8	16.0	18.7	21.2
Doubtful	13.4	10.9	14.8	7.9	6.8
Loss	41.9	33.2	33.6	24.9	22.8
		(In percent of total loans)			
Total	31.9	28.9	20.8	15.8	15.0
Watch	10.0	9.8	7.4	7.6	7.4
Sub-standard	4.3	6.3	3.3	3.0	3.2
Doubtful	4.3	3.2	3.1	1.3	1.0
Loss	13.3	9.6	7.0	3.9	3.4

Source: Czech National Bank.
1/ Banks with license as of March 31, 2003.

Table 21. Czech Republic: Lending and Deposit Rates of Commercial Banks, 1998–2003 1/
(In percent per annum)

		All Loans				New Loans				Deposits					
		Total	Short term	Medium term	Long term	Total	Short term	Medium term	Long term	Total	Demand	Term Deposits			
												Total	Short	Medium	Long
1998	March	13.45	13.47	14.31	12.75	16.13	16.23	17.11	14.12	8.47	2.06	11.06	11.87	12.22	4.93
	June	13.46	14.08	13.91	12.37	15.95	16.02	15.17	16.22	8.40	2.04	10.98	11.97	11.88	4.69
	September	12.72	13.37	13.24	11.58	14.57	14.55	14.48	15.02	8.18	1.91	10.55	11.42	11.69	4.57
	December	10.51	10.61	10.66	10.29	10.81	11.65	7.36	11.74	6.66	1.88	8.73	9.15	10.94	4.20
1999	March	9.23	9.31	9.53	8.92	9.74	9.53	10.56	11.13	4.93	1.87	6.11	6.49	6.17	3.91
	June	8.48	8.54	8.79	8.18	9.12	8.94	9.71	10.45	4.28	1.77	5.33	5.58	5.58	3.77
	September	8.27	8.35	8.40	8.09	8.03	7.67	9.87	9.57	3.95	1.81	4.93	5.08	5.43	3.69
	December	7.69	7.40	8.31	7.58	6.69	6.74	5.07	10.20	3.74	1.65	4.73	4.82	5.56	3.65
2000	March	7.30	7.08	8.13	7.06	7.14	6.89	9.40	7.11	3.63	1.69	4.47	4.56	4.90	3.64
	June	7.24	6.88	8.30	7.04	6.80	6.85	5.55	8.08	3.41	1.65	4.25	4.37	4.42	3.55
	September	7.07	6.72	7.97	6.94	6.84	6.54	8.82	7.51	3.32	1.65	4.16	4.26	4.38	3.52
	December	6.93	6.56	7.75	6.83	6.83	6.51	8.01	8.08	3.02	1.46	3.87	3.95	3.94	3.47
2001	March	6.66	6.10	7.51	6.74	6.18	5.92	7.59	7.15	3.02	1.54	3.74	3.83	3.58	3.39
	June	6.92	6.42	7.69	6.96	6.27	5.97	8.11	7.16	2.97	1.51	3.72	3.82	3.55	3.31
	September	7.93	7.38	8.70	7.98	6.57	6.21	8.39	7.65	3.01	1.59	3.72	3.82	3.68	3.30
	December	7.04	6.18	7.72	7.37	5.90	5.59	7.49	7.06	2.61	1.39	3.30	3.35	3.05	3.21
2002	January	6.76	5.85	7.44	7.06	5.73	5.42	7.74	7.05	2.64	1.57	3.24	3.26	2.97	3.33
	February	6.59	5.54	7.35	6.96	5.08	4.92	5.77	7.20	2.44	1.39	3.04	3.00	2.72	3.32
	March	6.63	5.70	7.30	6.96	5.33	5.01	7.84	6.81	2.46	1.45	3.02	2.98	2.72	3.32
	April	6.48	5.53	6.88	6.88	5.10	4.92	5.30	6.74	2.39	1.41	2.96	2.90	2.65	3.31
	May	6.40	5.40	6.97	6.72	4.90	4.58	5.67	6.24	2.26	1.35	2.80	2.67	2.75	3.28
	June	6.28	5.23	6.99	6.56	5.05	4.62	6.27	6.30	2.40	1.40	2.94	2.85	3.06	3.28
	July	6.15	4.99	6.93	6.44	4.53	4.22	6.32	5.60	2.24	1.30	2.76	2.62	3.02	3.26
	August	6.06	4.89	6.81	6.39	4.43	4.02	6.09	6.68	1.92	1.26	2.31	2.05	2.54	3.26
	September	5.96	4.97	6.46	6.34	4.53	4.06	6.26	6.44	2.02	1.23	2.49	2.32	2.49	3.25
	October	5.86	4.77	6.41	6.26	4.58	4.01	6.78	6.64	1.90	1.18	2.34	2.12	2.43	3.23
	November	5.76	4.60	6.29	6.23	4.20	3.70	6.37	5.37	1.72	1.15	2.08	1.80	2.11	3.21
	December	5.77	4.72	6.25	6.18	4.19	3.77	5.92	4.97	1.76	1.09	2.23	1.98	2.15	3.12
2003	January	5.70	4.60	6.10	6.10	3.99	3.76	4.66	6.50	1.80	1.10	2.20	2.00	2.10	3.20
	February	5.60	4.40	6.00	6.10	3.88	3.59	5.08	5.87	1.60	1.00	2.10	1.80	1.70	3.20
	March	5.50	4.30	5.90	6.00	3.87	3.61	4.65	5.62	1.60	1.10	2.00	1.70	1.60	3.10
	April	5.50	4.30	5.80	6.00	3.94	3.63	4.94	5.56	1.60	1.00	2.00	1.70	1.60	3.10

Source: Czech National Bank.
1/ Short term: up to and including one year; medium term: more than one and up to and includng four years; long term: over four years.

Table 22. Czech Republic: Selected Interest Rates, 1998 2003
(In percent per annum)

		Discount Rate 1/	Lombard Rate 1/	2-week Repo Rate 1/	2-week Repo Rate (Average) 2/	Interbank 3/				Credits 4/			Deposits 4/	
						Overnight	7-day	30-day	3-month	Total Enterprises	Non-financial institutions	Households	Total	Households
1998	Mar.	13.00	19.00	15.00	14.84	13.91	14.95	15.18	15.52	11.97	...	9.35	8.47	9.05
	Jun.	13.00	19.00	15.00	15.00	13.63	15.26	15.63	15.81	11.91	...	9.49	8.40	8.88
	Sep.	11.50	16.00	13.50	13.91	14.05	13.99	13.90	13.82	11.48	...	9.50	8.18	8.61
	Dec.	7.50	12.50	9.50	10.41	10.84	10.56	10.46	10.08	10.34	...	9.56	6.66	7.48
1999	Mar.	6.00	10.00	7.50	7.70	7.75	7.78	7.70	7.58	9.23	...	9.08	4.93	5.13
	Jun.	6.00	10.00	6.00	6.83	6.84	6.92	6.92	6.95	8.48	...	9.04	4.28	4.46
	Sep.	5.50	8.00	6.00	6.02	5.99	6.12	6.17	6.29	8.27	...	9.00	3.95	4.10
	Dec.	5.00	7.50	5.25	5.25	5.21	5.32	5.59	5.58	7.69	...	9.05	3.74	4.06
2000	Mar.	5.00	7.50	5.25	5.25	5.25	5.30	5.31	5.35	7.30	...	9.10	3.63	3.75
	Jun.	5.00	7.50	5.25	5.25	5.27	5.28	5.30	5.33	7.24	...	8.89	3.41	3.55
	Sep.	5.00	7.50	5.25	5.25	5.26	5.29	5.31	5.34	7.07	...	8.91	3.32	3.45
	Dec.	5.00	7.50	5.25	5.25	5.23	5.29	5.32	5.42	6.93	...	8.95	3.02	3.23
2001	Mar.	4.00	6.00	5.00	5.00	4.98	5.04	5.04	5.05	6.66	6.47	8.35	3.02	3.07
	Jun.	4.00	6.00	5.00	5.00	4.89	5.04	5.06	5.09	6.92	6.60	9.55	2.97	2.98
	Sep.	4.25	6.25	5.25	5.25	5.01	5.31	5.32	5.41	7.93	7.81	9.94	3.01	2.97
	Dec.	3.75	5.75	4.75	4.75	4.63	4.79	4.77	4.69	7.04	6.84	8.94	2.61	2.71
2002	Jan.	3.50	5.50	4.50	4.66	4.52	4.69	4.66	4.55	6.76	6.55	8.91	2.64	2.61
	Feb.	3.25	5.25	4.25	4.25	4.25	4.30	4.30	4.30	6.59	6.33	9.03	2.44	2.38
	Mar.	3.25	5.25	4.25	4.25	4.26	4.29	4.29	4.30	6.63	6.32	9.29	2.46	2.35
	Apr.	2.75	4.75	3.75	4.18	4.18	4.21	4.21	4.21	6.48	6.26	9.12	2.39	2.34
	May	2.75	4.75	3.75	3.75	3.75	3.80	3.80	3.81	6.40	6.12	9.12	2.26	2.19
	Jun.	2.75	4.75	3.75	3.75	3.75	3.78	3.78	3.78	6.28	5.92	9.04	2.40	2.25
	Jul.	2.00	4.00	3.00	3.61	3.62	3.57	3.44	3.37	6.15	5.71	9.05	2.24	2.19
	Aug.	2.00	4.00	3.00	3.00	3.01	3.04	3.05	3.06	6.06	5.58	9.00	1.92	1.95
	Sep.	2.00	4.00	3.00	3.00	3.02	3.02	3.01	2.99	5.96	5.48	9.02	2.02	1.91
	Oct.	2.00	4.00	3.00	3.00	3.01	2.99	2.94	2.82	5.86	5.28	9.04	1.90	1.87
	Nov.	1.75	3.75	2.75	2.75	2.75	2.78	2.78	2.77	5.76	5.15	9.00	1.72	1.75
	Dec.	1.75	3.75	2.75	2.75	2.75	2.76	2.73	2.63	5.77	5.19	9.03	1.76	1.78
2003	Jan.	1.50	3.50	2.50	2.74	2.71	2.75	2.74	2.66	5.69	5.10	8.90	1.77	1.71
	Feb.	1.50	3.50	2.50	2.50	2.50	2.51	2.51	2.45	5.58	4.94	8.75	1.64	1.60
	Mar.	1.50	3.50	2.50	2.50	2.50	2.50	2.49	2.39	5.52	4.79	8.70	1.63	1.58
	Apr.	1.50	3.50	2.50	2.50	2.50	2.50	2.50	2.45	5.48	4.73	8.64	1.56	1.56
	May	1.50	3.50	2.50	2.50	2.49	2.50	2.50	2.45	5.39	4.71	8.58	1.53	1.55

1/ End of period.
2/ Average rate on 91-day bills.
3/ Offer rates.
4/ Weighted average on total outstanding stocks.

Table 23. Czech Republic: Minimum Reserve Requirements, 1996–2003
(In percent of eligible deposits, beginning of period)

Category of Deposits	1996 Aug. 1/	1997 May 1/	1998 Jul. 1/	1999 Jan. 1/	1999 Oct. 2/	2000	2001	2002	2003 3/
Demand deposits	11.5	9.5	7.5	5.0	2.0	2.0	2.0	2.0	2.0
Savings and time deposits	11.5	9.5	7.5	5.0	2.0	2.0	2.0	2.0	2.0
Remuneration (per annum) 4/	0.0	0.0	0.0	0.0	0.0	0.0	...	...	... 5/
Maintenance period 6/	fortnight	fortnight	fortnight	fortnight	fortnight	fortnight	fortnight	fortnight	fortnight

Source: Czech National Bank.

1/ A lower rate of 4 percent applies to deposits of nonbanks with building societies, and with the Czech and Moravian Guarantee Bank.

2/ The rate applies to the entire banking sector.

3/ End March.

4/ A penalty of three times the discount rate is applied on shortfalls in required reserve obligations.

5/ Since July 2001, remuneration is equal to the CNB's two-week repo rate.

6/ Required reserves are calculated on deposits in the three-week period ending three weeks before the maintenance period. Within limits, averaging is allowed during the maintenance period: for banks whose required reserves are less than CZK 1 billion, a daily balance of up to CZK 100 million in excess of the minimum required reserve may be averaged out. For other banks, daily balances of up to 10 percent in excess of the minimum required reserves may be used for averaging purposes. On shortfalls, a penalty rate of three times the discount rate is applied.

Table 24. Czech Republic: Balance of Payments, 1998–2002 1/
(In millions of U.S. dollars)

	1998	1999	2000	2001	2002
Current account	-1,255	-1,462	-2,718	-3,273	-4,523
Trade balance	-2,603	-1,903	-3,131	-3,068	-2,286
Exports	25,853	26,265	29,052	33,378	38,198
Imports	28,456	28,167	32,183	36,446	40,484
Services balance	1,919	1,200	1,414	1,524	668
Receipts	7,646	7,048	6,862	7,090	7,061
Transportation	1,389	1,547	1,392	1,511	1,728
Travel	3,871	3,154	2,982	3,106	2,941
Other	2,385	2,347	2,488	2,473	2,391
Payments	5,726	5,848	5,448	5,566	6,393
Transportation	706	782	714	804	896
Travel	1,894	1,496	1,279	1,388	1,575
Other	3,126	3,570	3,455	3,374	3,922
Factor income and unrequited transfers	-571	-759	-1,001	-1,729	-2,904
Capital account	2	-2	-5	-9	-4
Financial account	2,923	3,080	3,836	4,544	11,198
Direct investment 2/	3,591	6,234	4,943	5,476	9,029
Portfolio investment 2/	1,069	-1,395	-1,767	916	-1,428
Of which:					
Debt creating	-130	-107	-1,239	58	-914
Financial derivatives 2/			-36	-85	-131
Other long-term capital 2/	-1,987	-728	-127	-77	850
Short-term capital 2/	250	-1,032	823	-1,686	2,877
Errors and omissions	270	36	-295	502	-45
Overall balance	1,941	1,651	819	1,765	6,627
Gross official reserves (- increase)	-1,941	-1,651	-819	-1,765	-6,627

Source: Czech National Bank.

1/ Includes transactions in convertible and nonconvertible currencies, and transactions with Slovakia; based on new customs methodology.

2/ Reported on a net basis.

Table 25. Czech Republic: Geographical Composition of Exports and Imports, 1999–2002 1/

	(In millions of U.S. dollars)				(In percent)			
	1999	2000	2001	2002 Prelim.	1999	2000	2001	2002 Prelim.
Exports	26,288	29,045	33,380	38,316	100.0	100.0	100.0	100.0
Of which:								
OECD	21,543	26,104	30,153	34,392	82.0	89.9	90.3	89.8
Developed market economics	19,599	21,720	25,086	28,773	74.6	74.8	75.2	75.1
EU	18,192	19,917	23,013	26,209	69.2	68.6	68.9	68.4
EFTA	478	519	609	789	1.8	1.8	1.8	2.1
Developing economies	865	1,110	1,116	1,336	3.3	3.8	3.3	3.5
European transition economies and CIS countries	5,732	6,125	7,070	7,951	21.8	21.1	21.2	20.8
CEFTA	4,676	4,906	5,671	6,357	17.8	16.9	17.0	16.6
Other transition economies and economies with a state trading system	92	90	108	170	0.4	0.3	0.3	0.4
Unspecified	0	0	0	86	0.0	0.0	0.0	0.2
Imports	28,151	32,176	36,448	40,494	100.0	100.0	100.0	100.0
Of which:								
OECD	22,570	27,064	30,429	32,858	80.2	84.1	83.5	81.1
Developed market economies	20,780	23,110	26,047	28,101	73.8	71.8	71.5	69.4
EU	18,079	19,962	22,527	24,378	64.2	62.0	61.8	60.2
EFTA	693	817	950	1,029	2.5	2.5	2.6	2.5
Developing economies	1,271	1,493	1,980	2,948	4.5	4.6	5.4	7.3
European transition economies and CIS countries	5,449	6,772	7,245	7,476	19.4	21.0	19.9	18.5
CEFTA	3,691	4,121	4,578	4,898	13.1	12.8	12.6	12.1
Other transition economies and economies with a state trading system	610	752	1,119	1,928	2.2	2.3	3.1	4.8
Unspecified	0	0	0	0	0.0	0.0	0.0	0.0

Source: Czech Statistical Office

1/ Data for 1999–2002 are according to the new methodology, effective July 1, 2000.

Table 26. Czech Republic: Commodity Composition of Exports, 1998–2002

SITC 1/	Description	(In millions of U.S. dollars)					(In percent)				
		1998	1999	2000	2001	2002 Prelim.	1998	1999	2000	2001	2002 Prelim.
0	Food and live animals	940	733	885	967	1,033	3.4	2.9	2.9	2.7	2.5
1	Beverages and tobacco	309	219	225	246	285	1.1	0.9	0.7	0.7	0.7
2	Crude materials inedible, except fuels	974	957	1,061	1,084	1,163	3.5	3.8	3.5	3.0	2.8
3	Minerals, fuels, lubricants, and related materials	897	739	919	1,072	1,195	3.2	2.9	3.1	3.0	2.9
4	Animal and vegetable oils, and fats	45	27	34	40	32	0.2	0.1	0.1	0.1	0.1
5	Chemicals	2,170	1,867	2,135	2,294	2,482	7.9	7.4	7.1	6.4	6.0
6	Manufactured goods, classified chiefly by material	7,447	6,605	7,650	8,682	9,755	26.9	26.0	25.4	24.3	23.5
7	Machinery and transport equipment	11,229	10,755	13,371	16,891	20,620	40.6	42.4	44.5	47.4	49.6
8	Miscellaneous manufactured articles	3,590	3,432	3,769	4,350	4,961	13.0	13.5	12.5	12.2	11.9
9	Miscellaneous transactions and commodities not classified	33	26	27	35	63	0.1	0.1	0.1	0.1	0.2
Total	SITC 0-9	27,633	25,359	30,076	35,662	41,590	100.0	100.0	100.0	100.0	100.0

Source: Czech Statistical Office.

1/ Standard International Trade Classification.

Table 27. Czech Republic: Commodity Composition of Imports, 1998–2002

SITC 1/	Description	(In millions of U.S. dollars)					(In percent)				
		1998	1999	2000	2001	2002 Prelim.	1998	1999	2000	2001	2002 Prelim.
0	Food and live animals	1,421	1,329	1,300	1,411	1,654	5.0	4.7	4.0	3.9	4.1
1	Beverages and tobacco	248	227	191	191	201	0.9	0.8	0.6	0.5	0.5
2	Crude materials inedible, except fuels	1,121	898	1,020	1,053	1,166	4.0	3.2	3.2	2.9	2.9
3	Minerals, fuels, lubricants, and related materials	1,866	1,890	3,107	3,306	3,061	6.6	6.7	9.7	9.1	7.6
4	Animal and vegetable oils, and fats	88	72	68	83	92	0.3	0.3	0.2	0.2	0.2
5	Chemicals	3,489	3,464	3,604	3,971	4,530	12.3	12.3	11.2	10.9	11.2
6	Manufactured goods, classified chiefly by material	5,999	5,930	6,681	7,366	8,338	21.2	21.1	20.8	20.2	20.6
7	Machinery and transport equipment	10,970	11,087	12,868	15,381	17,155	38.7	39.4	40.0	42.2	42.4
8	Miscellaneous manufactured articles	3,111	3,245	3,324	3,678	4,275	11.0	11.5	10.3	10.1	10.6
9	Miscellaneous transactions and commodities not classified	14	9	11	9	8	0.0	0.0	0.0	0.0	0.0
Total	SITC 0-9	28,328	28,151	32,175	36,448	40,481	100.0	100.0	100.0	100.0	100.0

Source: Czech Statistical Office.

1/ Standard International Trade Classification.

Table 28. Czech Republic: Inward Foreign Direct Investment by Industry and Country, 1998–2002
(In millions of U.S. dollars)

	1998	1999	2000	2001	2002 Prelim.
Nonmanufacturing					
Agriculture, hunting, and forestry	8	6	8	29	11
Mining and quarrying	17	249	77	36	-245
Electricity, gas, and water supply	237	333	206	270	343
Construction	48	15	100	78	90
Trade, hotels, and restaurants	835	1,469	549	704	439
Transport, storage, and communications	351	197	255	825	4,549
Financial intermediation	557	1,505	934	1,584	1,841
Real estate and business activities	340	421	749	456	546
Education	0	0	1	1	0
Health and social work	21	4	17	2	14
Other social and personal services	20	117	40	4	24
Total	**2,434**	**4,316**	**2,936**	**3,988**	**7,611**
Manufacturing					
Food and tobacco	127	359	176	246	272
Textiles, wearing apparel, and leather	99	46	68	103	59
Wood, paper, and publishing	85	208	51	150	154
Refined petroleum and chemicals	59	394	298	109	188
Nonmetallic products	175	315	115	153	96
Basic metals and metal products	318	185	250	86	269
Machinery and equipment	336	452	1,052	807	642
Recycling and other manufacturing	85	49	39	-1	14
Total	**1,284**	**2,008**	**2,050**	**1,653**	**1,694**
Country					
Western Europe					
Austria	415	833	738	264	989
Belgium	47	1,378	53	161	167
Denmark	25	43	103	157	19
France	142	232	232	1,539	406
Germany	958	1,300	1,322	1,313	4,725
Italy	27	47	36	-2	83
Netherlands	838	1,131	1,036	948	1,667
Sweden	-70	127	148	21	59
Switzerland	112	354	228	175	-116
United Kingdom	347	104	158	434	252
Canada	-5	11	155	73	-24
United States	535	581	303	245	270
Japan	23	5	46	29	143
Other	324	179	428	284	665
Total	**3,718**	**6,324**	**4,986**	**5,641**	**9,305**

Source: Czech National Bank.

Table 29. Czech Republic: External Debt in Convertible and Nonconvertible Currencies, 1998–2002
(In millions of U.S. dollars, end of period)

	1998	1999	2000	2001	2002 Prelim.
Debt in convertible currencies	24,047	22,613	21,372	22,374	26,281
Long term	14,955	13,838	12,280	12,843	15,613
By debtor:					
CNB	367	348	5	4	4
Commercial banks	4,468	3,577	2,532	2,438	2,656
Government	1,104	898	787	851	1,583
Other sectors	9,017	9,015	8,956	9,551	11,371
By creditor:					
Foreign banks	8,331	7,154	6,048	6,324	7,410
Governments	148	118	90	66	58
Multilateral institutions	1,643	1,618	1,786	1,955	2,319
Suppliers and direct investors	2,433	2,608	2,633	2,922	3,247
Other investors	2,402	2,340	1,722	1,577	2,580
Short term	9,092	8,775	9,092	9,531	10,668
By debtor:					
CNB	1	1	0	2	2
Commercial banks	6,477	6,393	5,983	5,307	5,888
Government	1	0	56	13	25
Other sectors	2,613	2,381	3,053	4,209	4,753
By creditor:					
Foreign banks	5,882	5,609	5,377	5,299	5,512
Suppliers and direct investors	2,259	2,273	2,829	3,207	4,027
Other investors	951	892	885	1,025	1,129
Debt in nonconvertible currencies	301	248	237	0	0
Long term	298	248	237	0	0
Short term	4	0	0	0	0
Total external debt	24,348	22,861	21,608	22,374	26,281
Long term	15,253	14,086	12,516	12,843	15,613
Short term	9,095	8,775	9,092	9,531	10,668

Source: Czech National Bank.

Table 30. Czech Republic: External Debt Service Obligations in Convertible Currencies, 2000–27
Based on Medium- and Long-Term Debt Outstanding at end-2002
(In millions of U.S. dollars)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011–27
Principal	3,569	2,597	3,113	2,997	2,531	2,328	1,679	1,256	1,137	1,516	577	1,592
By creditor	3,569	2,597	3,113	2,997	2,531	2,328	1,679	1,256	1,137	1,516	577	1,592
Foreign banks	1,931	1,301	2,164	1,367	1,318	1,201	976	824	529	417	299	478
Official	16	133	15	14	15	14	15	0	0	0	0	0
Multilateral institutions	51	49	489	449	315	306	220	180	133	172	94	450
Suppliers	1,242	940	400	1,028	689	474	388	214	160	81	160	53
Other	329	174	45	139	194	333	80	38	315	846	24	611
By debtor	3,569	2,597	3,113	2,997	2,531	2,328	1,679	1,256	1,137	1,516	577	1,592
Banks	2,260	658	951	355	352	290	96	93	358	573	87	456
CNB	324	1	1	1	1	1	1	0	0	0	0	0
Commercial banks	1,936	657	950	354	351	289	95	93	358	573	87	456
Official	48	164	47	147	155	110	117	22	3	462	27	539
Corporations and other	1,261	1,775	2,115	2,495	2,024	1,928	1,466	1,141	776	481	463	597
By instrument	3,569	2,597	3,113	2,997	2,531	2,328	1,679	1,256	1,137	1,516	577	1,592
Financial credit	1,108	762	2,324	1,694	1,517	1,457	1,190	1,000	861	590	393	929
Commercial banks	1,060	597	561	199	174	188	70	88	258	210	85	456
CNB	0	1	1	1	1	1	1	0	0	0	0	0
Government	48	164	47	50	49	50	49	4	3	5	7	97
Corporations	...	...	1,715	1,444	1,293	1,218	1,070	908	600	375	301	376
Bonds	324	174	...	125	189	329	77	39	116	846	24	610
Commercial banks	0	0	0	5	42	33	0	3	100	363	2	0
CNB	324	0	0	0	0	0	0	0	0	0	0	0
Government	0	0	0	97	106	60	68	18	0	457	20	442
Corporations and other	0	174	0	23	41	236	9	18	16	26	2	168
Export credit	624	60	78	0	10	7	3	2	0	0	0	0
Commercial banks	624	60	78	0	10	7	3	2	0	0	0	0
CNB	0	0	0	0	0	0	0	0	0	0	0	0
Deposits	252	0	311	150	125	61	22	0	0	0	0	0
Commercial banks	252	0	311	150	125	61	22	0	0	0	0	0
Trade credit	1,261	1,601	400	1,028	690	474	387	215	160	80	160	53
Corporations	1,261	1,601	400	1,028	690	474	387	215	160	80	160	53

Source: Czech National Bank.

Table 30. Czech Republic: External Debt Service Obligations in Convertible Currencies, 2000-27
Based on Medium- and Long-Term Debt Outstanding at end-2002 (concluded)
(In millions of U.S. dollars)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011–27
Interest	860	880	1,006	595	520	410	313	244	185	140	66	113
By creditor	860	880	1,006	595	520	410	313	244	185	140	66	113
Foreign banks	142	169	406	297	239	182	132	90	58	38	22	9
Official	6	5	4	3	2	1	1	0	0	0	0	0
Multilateral institutions	16	15	55	74	59	46	34	25	18	14	9	26
Suppliers	473	362	128	107	79	47	39	26	17	12	6	1
Other	223	329	413	114	141	134	107	103	92	76	29	77
By debtor	860	880	1,006	595	520	410	313	244	185	140	66	113
Banks	225	324	315	74	76	68	59	58	46	30	4	5
CNB	21	0	0	0	0	0	0	1	0	0	0	0
Commercial banks	204	324	315	74	76	68	59	58	46	30	4	5
Official	63	75	121	57	68	60	52	46	45	45	21	65
Corporations and other	572	481	570	464	376	282	202	140	94	65	41	43
By instrument	860	880	1,006	595	520	410	313	244	185	140	66	113
Financial credit	108	85	446	385	312	245	184	134	86	53	32	35
Commercial banks	93	73	78	39	35	32	29	30	18	9	4	5
CNB	0	0	0	0	0	0	0	1	0	0	0	0
Government	15	12	13	15	12	9	5	3	3	3	3	21
Corporations	...	...	355	331	265	204	150	101	65	41	25	9
Bonds	222	324	411	96	123	116	89	84	82	75	28	77
Commercial banks	61	227	216	28	35	34	29	28	28	21	0	0
CNB	21	0	0	0	0	0	0	0	0	0	0	0
Government	48	63	108	42	56	51	47	43	42	42	18	44
Corporations and other	92	34	87	26	32	31	13	13	12	12	10	33
Export credit	21	4	2	0	2	1	0	0	0	0	0	0
Commercial banks	21	4	2	0	2	1	0	0	0	0	0	0
CNB	0	0	0	0	0	0	0	0	0	0	0	0
Deposits	29	20	19	7	4	1	1	0	0	0	0	0
Commercial banks	29	20	19	7	4	1	1	0	0	0	0	0
Trade credit	480	447	128	107	79	47	39	26	17	12	6	1
Corporations	480	447	128	107	79	47	39	26	17	12	6	1
Total debt service	4,429	3,477	4,119	3,592	3,051	2,738	1,992	1,500	1,322	1,656	643	1,705

Source: Czech National Bank.

Table 31. Czech Republic: International Investment Position, 1998-2002
(In millions of U.S. dollars, end of period)

	1998	1999	2000	2001	2002
Assets	36,426	37,465	38,304	42,609	52,514
Direct investment abroad	804	698	738	1,136	1,569
Equity capital	734	623	656	1,038	1,443
Other capital	70	75	82	98	126
Portfolio investment	1,202	2,900	4,772	5,106	9,102
Equity securities	449	1,843	2,439	1,894	2,869
Debt securities	752	1,057	2,333	3,212	6,233
Financial derivatives			168	435	1,036
Other investment	21,804	21,042	19,488	21,469	17,098
Long term	9,624	8,981	8,347	8,553	5,960
CNB	875		9	9	9
Commercial banks	2,145	2,499	1,998	2,197	2,255
Government	5,902	5,843	5,839	5,811	3,223
Other sectors	702	640	502	537	472
Short term	12,180	12,061	11,141	12,916	11,138
CNB			1	1	13
Commercial banks	9,118	9,342	8,307	9,919	7,094
gold and foreign exchange 1/	5,887	6,087	6,055	7,092	5,409
Government				2	77
Other sectors	3,062	2,719	2,833	2,993	3,955
Reserves	12,617	12,825	13,139	14,464	23,709
Gold 1/	12	19	123	123	154
SDR			0	1	5
Reserve position in the Fund			3	151	235
Foreign exchange	12,605	12,806	12,985	14,181	22,777
Other reserve assets			28	8	538
Liabilities	40,361	40,548	43,379	49,340	66,014
Direct investment in the Czech Republic	14,375	17,552	21,644	27,092	39,395
Equity capital	12,220	14,964	18,571	23,099	34,731
Other capital	2,155	2,588	3,073	3,993	4,664
Portfolio investment	5,565	4,602	4,353	4,974	6,673
Equity securities	3,793	2,724	3,059	3,551	4,250
Debt securities	1,771	1,878	1,294	1,423	2,423
Financial derivatives			140	317	752
Other investment	20,422	18,394	17,242	16,957	19,194
Long term	12,008	10,539	9,318	9,173	10,586
Short term	8,413	7,856	7,924	7,785	8,609
Net investment position	-3,935	-3,083	-5,074	-6,731	-13,501

Source: Czech National Bank.
1/ Valuation of gold: at US$42.22 per Troy ounce (until December 31, 1999), at market price (since March 31, 2000).