INTERNATIONAL MONETARY FUND

CZECH REPUBLIC

Staff Report for the 2011 Article IV Consultation

Prepared by the Staff Representatives for the 2011 Consultation with the Czech Republic

Approved by Juha Kähkönen and David Marston

March 18, 2011

EXECUTIVE SUMMARY

Background: The Czech economy has weathered the global crisis relatively well, with the recovery underway since mid-2009. The government formed in mid-2010 outlined a comprehensive medium-term policy agenda anchored in fiscal consolidation, which has already yielded credibility gains. Monetary policy remains supportive, inflation pressures were fairly subdued until the recent surge in commodity prices, and the banking sector is stable.

Key challenges: With large structural deficits and population aging, public debt is on a rising trend. Monetary policy is complicated by the contrasting influences on inflation of climbing world commodity prices and the still nascent recovery. Sustaining robust productivity and GDP growth in the long run also requires significant policy efforts.

Key policy recommendations: Ensuring debt sustainability and promoting durable growth requires:

- Defining additional fiscal consolidation measures beyond 2011—including through pension, health care, and social benefits reforms—to support the government's medium-term fiscal targets and preserve market credibility.
- Maintaining accommodative monetary policy until the negative output gap narrows considerably, unless a spike in inflation expectations, a substantial widening of the interest rate differential against other advanced countries, or a rapid reduction in labor market slack necessitate earlier action.
- Pursuing productivity-enhancing structural reforms to buttress growth.
- Continuing to monitor risks for the banking sector that may arise from further deterioration of credit portfolios and from foreign parent banks.

The authorities broadly agreed with staff's assessment of the economic situation and the key policy recommendations.

The staff team comprising Ms. Murgašová (head), Messrs. Tchaidze and Vázquez (all EUR), and Mr. Klyuev (RES) visited Prague during February 9–21, 2011. Mr. Kiekens (Executive Director) and Mr. Kollár (Advisor to the Executive Director) joined the discussions. The mission met with Minister of Finance Kalousek, Czech National Bank Governor Singer, other senior officials, as well as representatives of the Parliament, financial and business sectors, academia, and trade unions.

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I. Context

1. **Against the backdrop of a recovery and rising public debt both in the Czech Republic and in Europe, the Article IV discussions focused on the appropriate mix of macroeconomic policies to balance the objectives of supporting growth and fiscal sustainability.**

- *Promoting the recovery in the short term and sustaining robust long-term growth.* The recovery has been supported by external demand and accommodative monetary policy, but comprehensive structural reforms will be needed to buttress long-term growth.

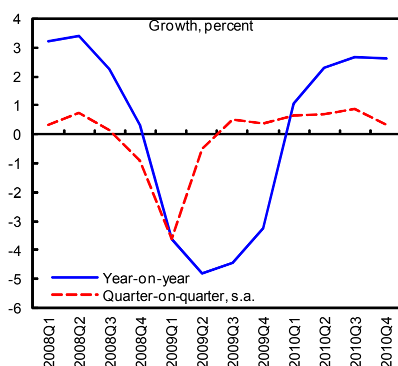
- *Ensuring fiscal sustainability*. In the absence of comprehensive fiscal consolidation over the medium term, debt burden would continue rising and lead to higher interest rates, with detrimental effects for long-term growth.

2. **The coalition government in power since mid-2010 has outlined an ambitious policy agenda.** The government's Policy Statement from August 2010 sets out among its main objectives: (i) reforming public finances to halt the rise in public debt and balance the general government budget by 2016; (ii) increasing transparency of public procurement; and (iii) reducing corruption in the public sector. The legislative agenda for the coming year aims to implement key reforms to address these objectives. Ensuring broad-based support for these reforms may be a challenge.

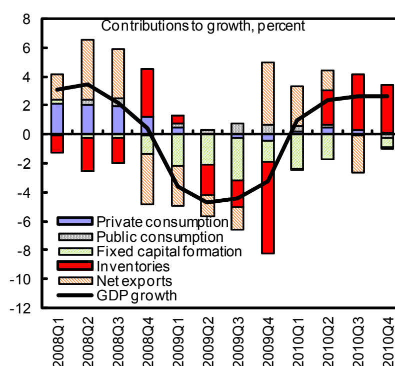
II. Background

3. **The Czech economy has rebounded from the downturn owing to its strong fundamentals and the global recovery.** Low public debt, a comfortable external position, absence of pre-crisis asset bubbles, and a stable financial sector led to a relatively moderate decline in output in 2009 and a subsequent rebound of domestic demand. Deep economic integration with the euro area allowed the Czech economy to benefit from the recovery in trading partner countries, particularly Germany.

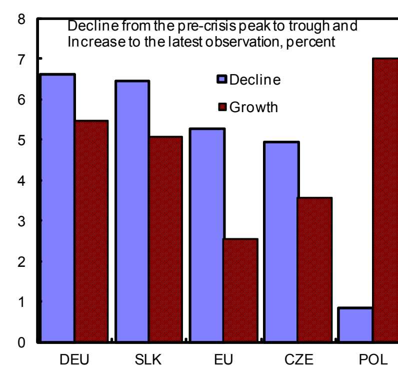
Growth recovery began in mid 2009 ...



... due to strong exports and replenishment of inventories.



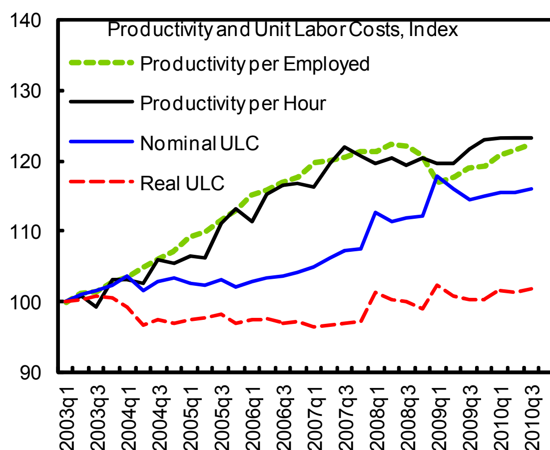
Growth is in line with the EU average.



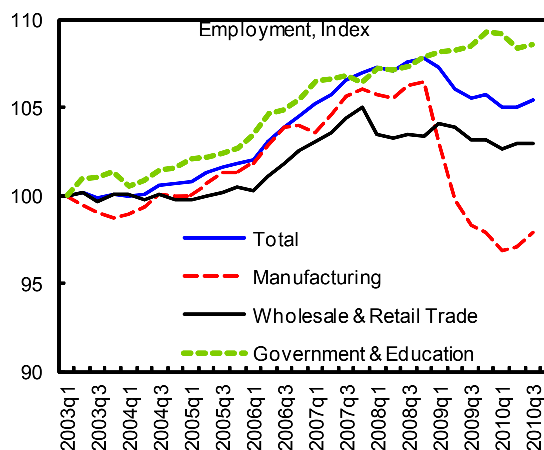
Sources: Czech Statistical Office, WEO, and IMF staff calculations.

4. **Domestic demand has become self-sustaining since mid-2010 (Figure 1).** Net exports led the recovery, followed by rebuilding of inventories and an upturn in private consumption, possibly reflecting pent-up demand. Fixed investment grew moderately in the second half of 2010, mostly on account of one-off factors. GDP grew by 2.3 percent in 2010. Consumer and business confidence have improved and spare capacity has been reduced. Unemployment has declined after peaking in early 2010, the fall in total employment has abated, and productivity has been increasing faster than labor costs. However, corporate credit continues to decline, and employment in some core industries, like manufacturing, is still far from the pre-crisis levels.

With improving productivity, labor costs have slowly started to increase.



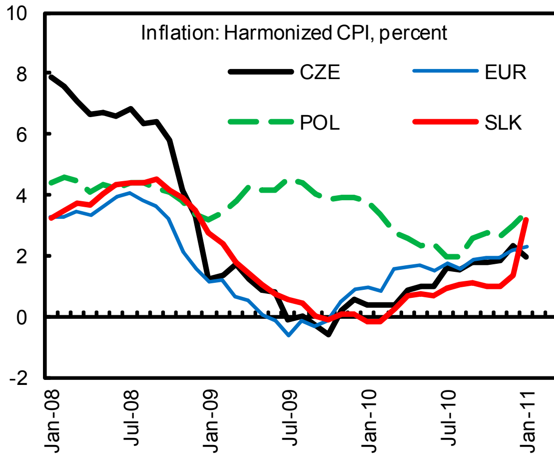
Employment is still far from the pre-crisis levels, especially in manufacturing.



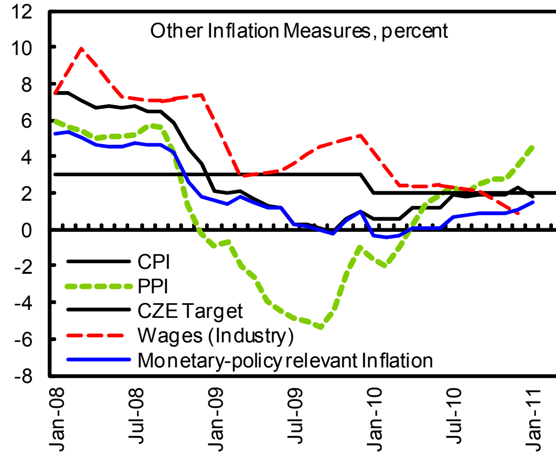
Source: Haver and IMF staff calculations.

5. **Despite accommodative monetary policy, inflationary pressures remained subdued until the recent surge in commodity prices.** After temporarily becoming negative in late 2009, headline CPI inflation has largely remained just below the 2 percent target since mid-2010. This increase reflects growth in regulated prices, indirect tax hikes, and lately the global commodity prices. The latter also raised producer price inflation. Meanwhile monetary-policy relevant inflation—CPI inflation adjusted for the first-round effects of changes in indirect taxes—remains below the target given the still large negative output gap. In this environment, the Czech National Bank (CNB) has maintained the two-week repo interest rate at the record low level of 0.75 percent, after cumulative cuts of 325 basis points between August 2008 and May 2010. In spite of this, asset prices have not recovered to their pre-crisis levels, and real estate prices have continued a moderate downward adjustment (Figure 2).

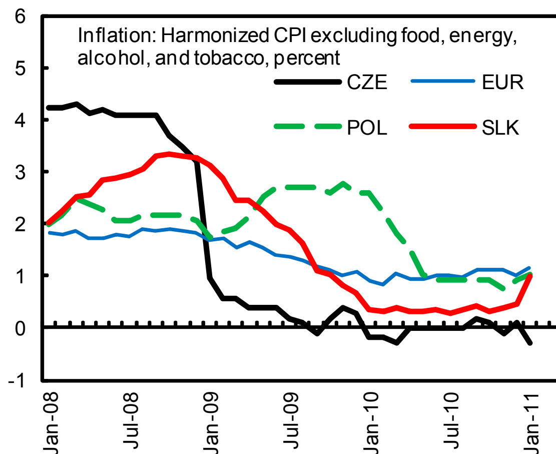
Headline CPI inflation ...



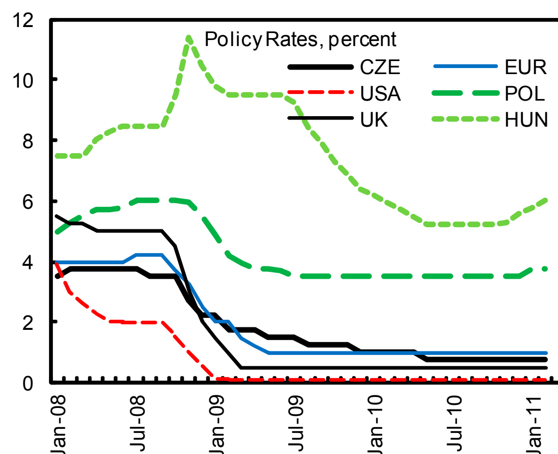
and PPI inflation increased with commodity prices ...



... but core inflation remains subdued ...

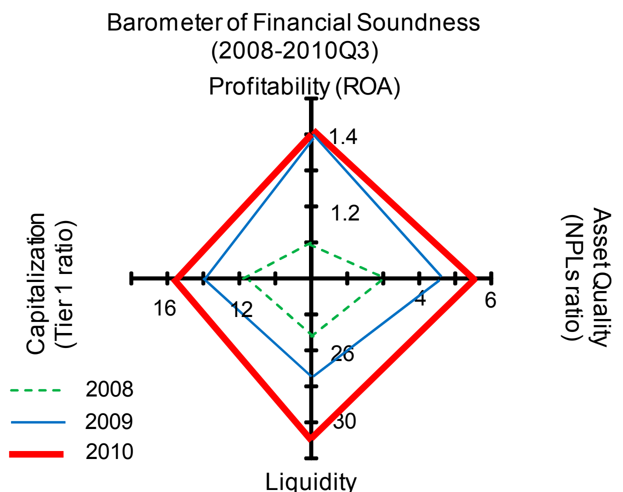


... despite low interest rates.



Source: Haver, Czech Statistical Office, CNB.

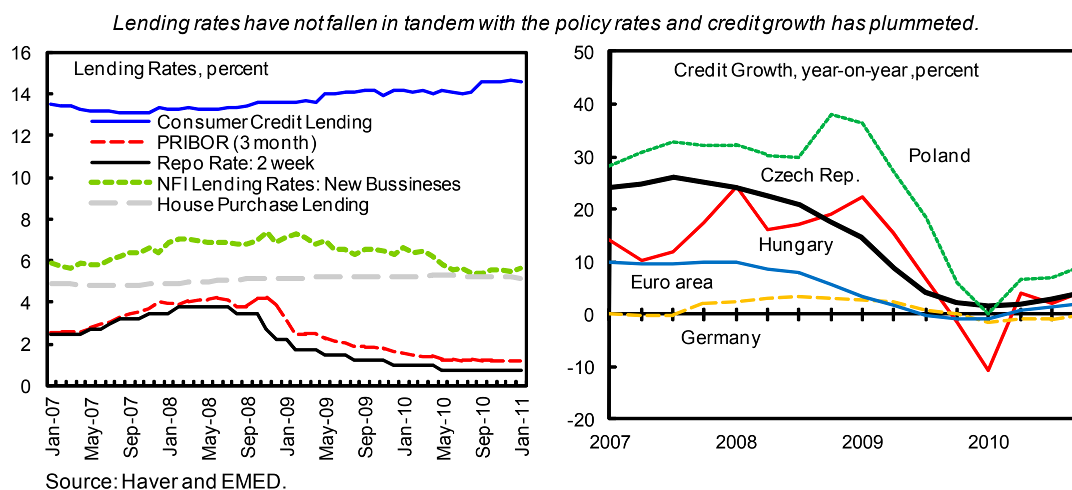
6. **The virtually foreign-owned banking system has been stable throughout the crisis (Figures 5 and 6; Appendix I).** Domestic banks coped well with the weak macroeconomic environment, and no institution required government support or intervention. This resilience reflects the traditional retail business orientation of domestic subsidiaries, prevalence of lending in domestic currency, strong liquidity and capital buffers, and the support to foreign parent banks from the European Central Bank (ECB) and their home governments, which provided a shield against contagion. However, credit growth dropped virtually to zero, with interbank and corporate credit plummeting on



Source: CNB and IMF staff calculations.

weak loan demand and more cautious lending practices. The stock of credit to the private sector stabilized broadly in line with levels in emerging market economies, but substantially below that of other advanced countries (Appendix V).[1] Despite decreasing policy rates, some lending rates failed to decline proportionately, indicating a weakened monetary transmission mechanism.

Lending rates have not fallen in tandem with the policy rates and credit growth has plummeted.



Source: Haver and EMED.

7. **Fiscal consolidation commenced in 2010 and helped yield significant credibility gains (Figure 4, Table 3).** Given the recovery and owing to fears of rising public debt, the 2010 budget included a set of austerity package with revenues accounting for a large majority.[2] In addition, the government resorted to ad hoc expenditure cuts and freezes to compensate for underperformance of corporate income taxes and social security contributions. These efforts and the announcement of medium-term consolidation plans led to an upgrade of Czech Republic's outlook to positive by Standard & Poor's, a decline in spreads on long-term debt, and interest cost savings of 0.5 percent of GDP relative to the budgeted amount. The fiscal measures, the interest savings, and the improving economy helped reduce the deficit to an estimated 4.9 percent of GDP, compared to the target of 5.3 percent of GDP. Despite

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[1] See forthcoming IMF Working Paper "Development of Financial Markets in Central Europe: the Case of the CE4 Countries" by Amat Adarov and Robert Tchaidze; the CE4 countries include the Czech Republic, Hungary, Poland, and Slovakia.

[2] The measures, amounting to 2 percent of GDP against unchanged policies, comprised an increase in VAT rates by one percentage point, an expansion in the base for social security contributions and a postponement of a planned reduction in their rates, higher excise and real estate taxes, and a number of expenditure cuts, mostly in social benefits.

Under unchanged policies, the fiscal balance would have deteriorated in 2010 because of (1) the last step in the phased reduction of the corporate income tax rate to 19 percent; (2) a scheduled reduction in social security contributions; and (3) the absence of one-off factors that improved the 2009 balance (such as the sale of emission permits to foreign buyers).

turmoil in some European sovereign debt markets, the deficit was easily financed, mostly through issuance of domestic bonds.

Fiscal Stance of the General Government, ESA-95, 2007-10 (percent of GDP)

	2007	2008	2009	2010
Revenues	41.8	40.2	40.2	40.8
Expenditures	42.5	42.9	45.9	45.7
Overall Balance	-0.7	-2.7	-5.8	-4.9
Primary Budget Balance	0.5	-1.6	-4.5	-3.7
Structural Balance 1/	-0.5	-2.3	-3.2	-2.8
Change in Primary Balance	2.0	-2.1	-2.9	0.8
(+) Automatic Stabilizers	0.5	-0.2	-2.0	0.4
(+) Change in Structural (= - Fiscal Stimulus)	1.5	-1.8	-0.9	0.3

Source: Ministry of Finance and IMF staff estimates.

1/ Cyclically-adjusted primary balance in percent of potential GDP.

8. **The current account deficit widened in 2010 though competitiveness has not been eroded (Figure 3, Table 2).**[3] Export profitability improved and exports picked up, resulting in sizeable trade surpluses. However, deterioration of the services surpluses to deficits and significant outflows of interest and reinvested earnings widened the current account deficit. After weakening at the peak of the crisis, the koruna resumed its long-term trend appreciation. The real exchange rate is broadly in line with fundamentals.

9. **Capital inflows resumed, but remain below their pre-crisis levels (Figure 3, Table 2).** Yet their composition has changed, and debt flows now exceed equity flows, including FDI. Given the low Czech yields, these inflows seem to be driven by the Czech Republic's strong fundamentals. 2010 also saw a large outflow of other investment, including trade credits and large placements of borrowed funds by some corporates in countries where they plan to expand their business activities**.** External debt increased to around 48 percent of GDP, with short-term debt accounting for one quarter.

10. **Spillovers from the debt turmoil in the euro area periphery have been limited.** Real sector linkages are minor as exports to the periphery are marginal, while the muted reaction of spreads on Czech debt to turmoil in sovereign debt markets is a sign of confidence. Direct holdings of euro periphery sovereign bonds by Czech banks are not material. The risk of contagion via parent banks is limited by the traditional domestic business orientation of Czech subsidiaries and their high capital and liquidity buffers.

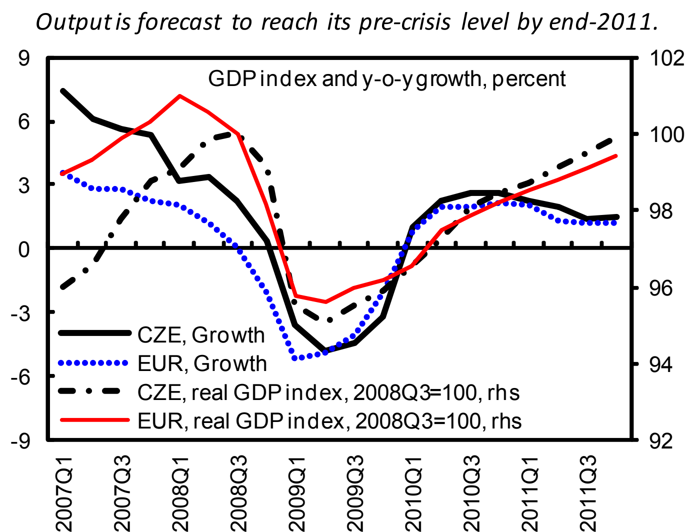
[3] To ensure consistency of reported time series in this Staff Report, the BOP data for trade in goods and services are based on the "border" methodology, used until the March 2011 revisions.

III. MACROECONOMIC OUTLOOK AND RISKS

A. Recovery to Continue Albeit at a Slower Pace

11. **The recovery is expected to slow down in line with developments in the euro area (Table 4).** Staff projects GDP growth of 1.7 percent in 2011, with output reaching its pre-crisis level by year-end. Net exports—closely linked to growth performance in the main trading partner Germany—and fixed investment are expected to drive growth, while consumption expansion should be modest given slow improvements in unemployment and fiscal consolidation. The negative output gap is forecast to narrow only marginally in 2011. The authorities broadly agreed with the assessment of the near-term growth outlook: the CNB's overall growth forecast is similar to staff's, though the Ministry of Finance projects GDP growth of 2.2 percent in 2011, reflecting more optimistic forecast for exports.

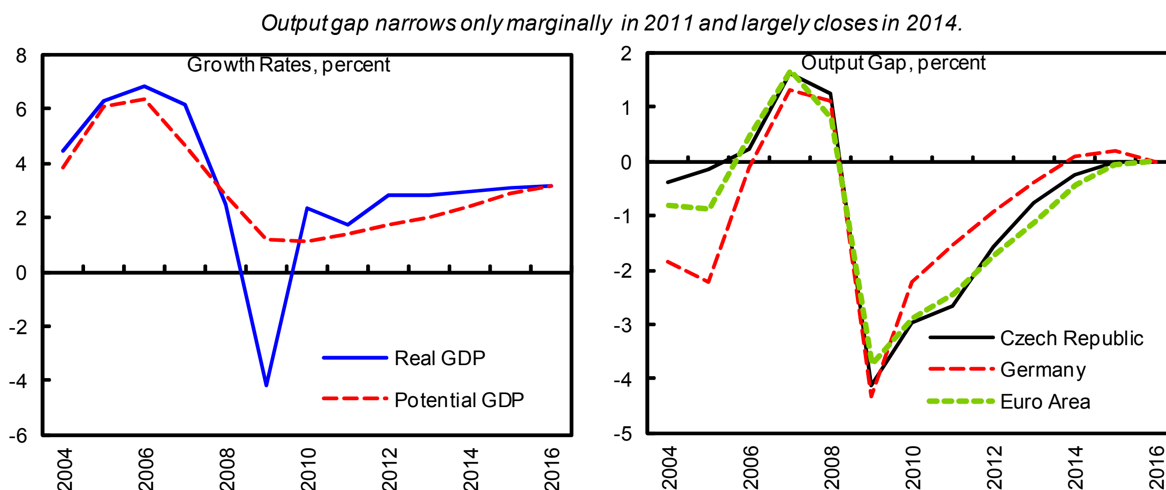
Output is forecast to reach its pre-crisis level by end-2011.



Source: WEO and IMF staff projections and calculations.

Comparison of Macroeconomic Forecasts (percent)				
	GDP Growth		CPI Inflation	
	2011	2012	2011	2012
IMF	1.7	2.9	2.0	2.0
OECD (November)	2.8	3.2	1.9	1.7
EC (November)	2.3	3.1	2.1	2.2
CNB (February)	1.6	3.0	2.0	2.1
MOF (January)	2.2	2.7	2.3	2.4
Consensus (February)	2.2	3.0	2.2	2.4

12. **Risks to the short-term outlook are tilted downward**. Downside risks arise from the possibility of sovereign debt distress in the euro area periphery spreading to core Europe and the lack of progress in formulating medium-term fiscal consolidation plans in major advanced economies. This would lead to lower growth in the euro area and in the Czech Republic. High commodity prices present another downside risk. On the upside, faster improvement in labor market conditions could boost private consumption.



Source: Czech Statistical Office and IMF staff estimates and forecasts.

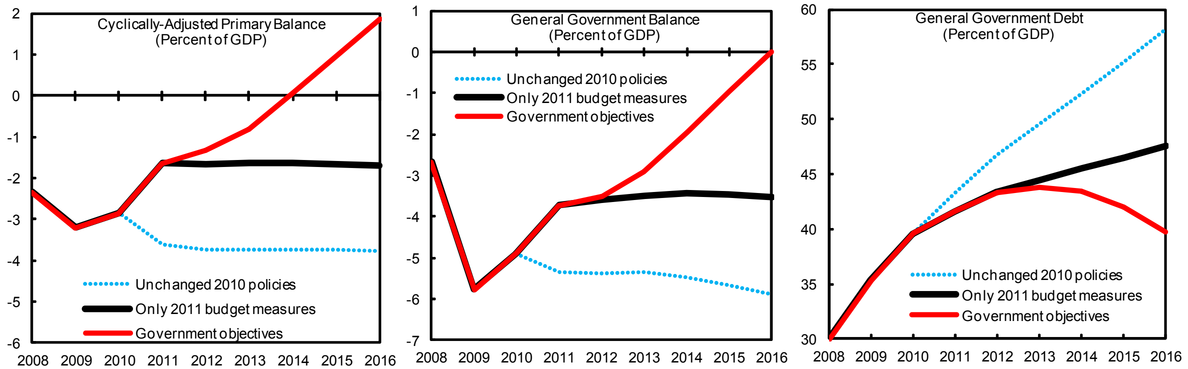
13. **In the medium term growth is expected to remain below the pre-crisis levels.** GDP growth is projected to reach around 3 percent beyond 2011 and output gap is forecast to close around 2014. With income per capita and productivity about 1/3 below the average of the EU-15, there is scope to accelerate growth further. The authorities and staff concurred that this would require structural reforms focused on increasing labor participation and labor market flexibility; enhancing efficiency of higher education, R&D, and the public sector; and further improving the business climate to attract foreign direct investment (Appendix II). The authorities have prepared a comprehensive study on improving competitiveness that will form the basis of reforms in this area.

B. Policy Discussions—Challenges Ahead

Restoring Order in Public Finances

14. **The government's medium-term deficit targets reflect its strong preference to achieve fiscal sustainability.** The opportunity for a fundamental overhaul of public finances was missed during the boom years, and the Czech Republic entered the crisis with a structural deficit and a high share of entitlement expenditures. While the fiscal stimulus and full functioning of automatic stabilizers were appropriate to cushion the economic downturn in 2009, public debt has risen by one third since end-2008. The 2010 austerity package was insufficient to put public finances on a sustainable path. Going forward, the Czech Republic faces one of the worst demographic trends in the OECD, which will increase aging-related fiscal costs to almost one-quarter of GDP by 2060. In view of these pressures, the government intends to reduce the general government deficit below the SGP limit of 3 percent in 2013 and to balance the general government budget by 2016. Staff support these objectives, as they help reverse the rising trend of debt.

Authorities' medium-term fiscal deficit targets would reverse the rising debt burden, substantially reducing it by 2016.



Source: IMF staff calculations.

15. **The 2011 budget implies a significant fiscal consolidation (Table 3).** In staff's view, the largely expenditure-based adjustment is appropriate, but the across-the-board cuts may not necessarily be efficiency-improving.[4] In staff's estimate, the general government fiscal deficit will fall by about 1 percentage point of GDP to 3.7 percent of GDP in 2011. The authorities' deficit target is larger—4.6 percent of GDP—on account of very conservative interest rate assumptions, lower nominal GDP projections, and a worse expected outturn for 2010 at the time of budget preparation. The authorities emphasized their prudent approach to budget planning and their intention to use savings that might materialize for deficit reduction. However, in March the Constitutional Court ruled that the procedure of legislative emergency used to approve some consolidation measures for 2011 (0.6 percent of GDP) is in conflict with the existing law. The government has until end-2011 to hold another vote to keep the legislation in place.

2011 Consolidation Measures
(Fiscal impact in 2011, compared to unchanged policies, percent of GDP)

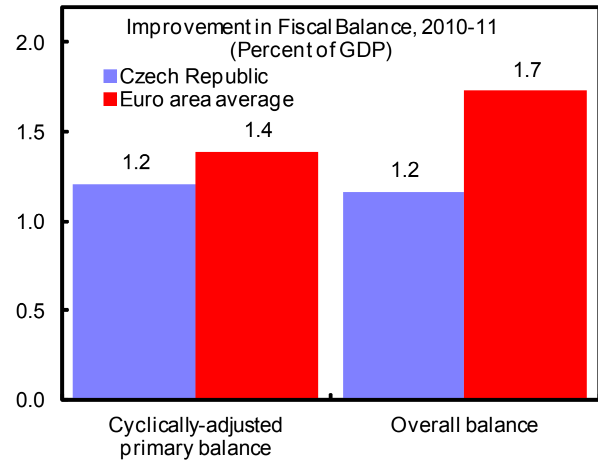
Total	**2.0**
Expenditure cuts	**1.4**
Public sector wage bill	0.3
Social expenditures	0.3
Reductions in non-personnel operational and investment expenditures	0.3
Other	0.5
Revenue increases	**0.5**
Retaining 2010 rules for payroll taxes	0.3
Other	0.2

Source: Ministry of Finance and IMF staff calculations.

[4] For example, the 10 percent wage bill reduction, which is achieved via pay or employment cuts at the discretion of each line ministry, may not necessarily lead to efficiency gains.

16. **In staff's view, the 2011 budget broadly strikes a right balance between adjustment and supporting economic recovery.** This somewhat frontloaded adjustment, estimated by staff at 1.2 percent of GDP, should help retain market confidence in the absence of a credible medium-term consolidation strategy at this time.[5] There is also a case to be made for a substantial portion of the fiscal adjustment to be undertaken early in the legislature. The authorities and staff agreed that given the high degree of openness of the Czech economy and the floating exchange rate regime, the negative impact on growth in 2011 is likely to be limited (0.4 percentage points of GDP in staff estimates—Appendix III), allowing for a substantial correction in the fiscal gap without withdrawing support from the economy too sharply. However, if the economy performs below expectations, automatic stabilizers should be allowed to play out fully. If the government fails to secure the vote necessary to maintain in place the measures originally approved under the procedure of legislative emergency, in staff's view, the government should identify a set of compensating consolidation measures.

Fiscal adjustment is broadly in line with that in the euro area.



Sources: IMF, *Fiscal Monitor,* November 2010 and IMF staff estimates.

17. **Staff urged the authorities to identify and put in place a credible package of medium-term consolidation measures.** To allow the authorities to meet their medium-term deficit targets, additional measures beyond those in the 2011 budget need to be implemented, but these still remain to be designed. Staff encouraged the authorities to specify these concrete steps early to increase the credibility of the adjustment, which, according to staff research,[6] decreases the output cost of fiscal tightening. A comprehensive medium-term consolidation strategy would be preferable to ad hoc revenue increases or across-the-board spending cuts each year. In staff's view, rationalizing entitlements and the generous welfare state is unavoidable to ensure durability of fiscal adjustment. Reducing general transfers or government consumption or raising VAT revenues (e.g., by eliminating the preferential rate) and real estate taxes would be more efficient and have lower negative impact on GDP than

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[5] The improvement in the primary cyclically-adjusted balance by 1.2 percent of GDP in 2011 is somewhat higher than the per annum consolidation needed to balance the budget by 2016 (almost 5 percent of GDP over 6 years).

[6] For example, simulations in Box IV.3 of *G-20 Mutual Assessment Process—IMF Staff Assessment of G-20 Policies* (report prepared for the November 2010 G-20 Summit).

most alternative instruments, such as reducing government investment or increasing payroll taxes (Appendix III).[7] Streamlining public institutions and positions would help lower the overall wage bill without reducing government wages. Strengthening means-testing would improve targeting of social benefits, yield savings, and enhance work incentives. The authorities indicated that they plan reforms in many of these areas and expected relevant legislation to be introduced in the near term.

Fiscal Stance of the General Government with Unchanged Policies after 2011, ESA-95, 2010-16 (percent of GDP)

	2010	2011	2012	2013	2014	2015	2016
Revenues	40.8	41.0	40.8	40.6	40.6	40.6	40.6
Expenditures	45.7	44.7	44.4	44.0	44.0	44.0	44.1
o/w Interest Expenditures	1.2	1.4	1.7	1.9	2.0	2.1	2.1
Overall Balance	-4.9	-3.7	-3.6	-3.5	-3.4	-3.5	-3.5
Structural Balance 1/	-2.8	-1.6	-1.7	-1.6	-1.6	-1.7	-1.7
Primary Budget Balance	-3.7	-2.4	-1.9	-1.6	-1.4	-1.4	-1.4
General Government Debt	39.6	41.7	43.4	44.5	45.6	46.5	47.6

Source: Ministry of Finance and IMF staff estimates.
1/ Cyclically-adjusted primary balance in percent of potential GDP.

18. **The authorities are preparing reforms of the pension and health-care systems needed to achieve long-term fiscal sustainability (Box 1).** Coalition partners recently agreed on broad parameters of a pension reform, and the government plans to secure its legislative approval this year. In staff's view, the main aim should be to ensure long-term sustainability of the pay-as-you-go system (PAYG). A second fully-funded defined-contribution pillar can help diversify sources of retirement income, but—given the limited fiscal space—should not lead to accumulation of additional public debt. Staff also support the proposal for a unification of VAT rates on efficiency grounds, and argue that the rates need to be calibrated to cover all pension-reform related costs. Staff and the authorities agreed on the need to protect vulnerable segments of the population from the impact of an effective VAT hike. The authorities concurred with staff that comprehensive institutional and financing reforms of the health care system will also be critical to maintain the soundness of public finances and noted several initiatives under discussion. They plan to secure the legislative approval of these reforms by end-2012.

[7] See IMF Working Paper No. 11/65 "Effects of Fiscal Consolidation in the Czech Republic" by Vladimir Klyuev and Stephen Snudden.

Box 1. Assessment of Pension Reform Proposals

Coalition partners agreed on key elements of a pension reform, including changes to the PAYG, introduction of a voluntary second fully-funded defined contribution pillar, and higher VAT rates (some elements draw on an earlier proposal by an Expert Advisory Group—Appendix IV). Staff's views are as follows:

The proposed parametric changes will be insufficient to close the PAYG long-term deficit. The plan to continue gradually raising the retirement age past 65 years would cover about 4/5 of the PAYG long-term deficit. In staff's view, further parametric changes, including a lower weight on wages in the pension-indexation formula, would be necessary to close the remaining gap. Staff also recommends accelerating the increase in the retirement age, setting it to 65 years in 2020, in view of the already high PAYG deficits.

Introduction of a voluntary second pillar will erode the PAYG balance. Redirection of a portion of social security contributions to the second pillar will increase the PAYG deficits (i.e. create transition deficits), even though the voluntary nature of the proposed second pillar will likely limit their size. However, in the long run, the pressure on PAYG financing is likely to rise, as high-wage earners are more likely to opt out of the redistributive first pillar. The authorities noted the difficulty of obtaining broad public support for a mandatory second pillar given the negative experience with defined-contribution plans in other countries. Staff also pointed out that careful design of the second pillar's size and institutional arrangements is needed to minimize the operational costs, which could erode the benefits of the pillar.

Other proposed changes would immediately worsen the PAYG finances. In response to the Constitutional Court's ruling that obliges the government to reduce the degree of redistribution within the PAYG by October 2011, the government has proposed to increase pensions of higher-income contributors at the expense of those in the middle-income range in a budgetary-neutral way. However, reduction of the assessment ceiling from 6 to 4 times the average wage—while appropriate on efficiency grounds—and the proposed voluntary redirection of 1 percentage point of social security contributions by employees to support pensions of their parents would worsen PAYG deficits.

Staff support the proposed unification of the VAT rates to cover the transition costs associated with the introduction of the second pillar. The preferential VAT rate is to be raised to 14 percent in 2012, and in 2013 VAT rates are to be unified at 17.5 percent (the top rate is currently at 20 percent). A unified VAT is preferable, because taxing basic goods at a reduced rate is a less efficient way to subsidize low-income households than direct means-tested based support. Staff emphasize that the VAT increase needs to be calibrated so that it covers *all* pension-reform related costs, including the higher compensation of socially vulnerable groups, to avoid pension-reform induced public debt accumulation.

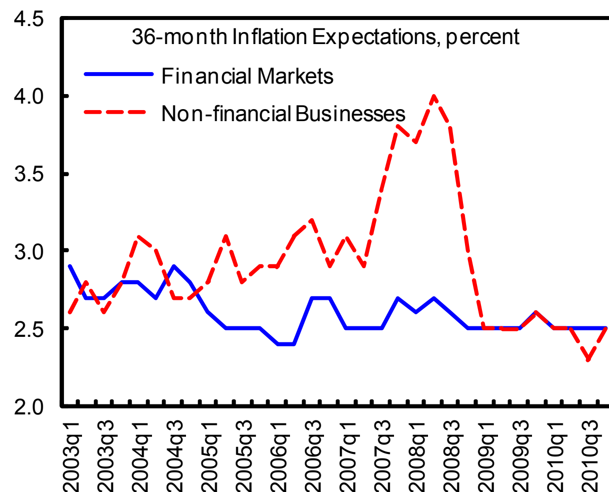
Staff see scope to improve the functioning of the existing third voluntary pension pillar. This pillar has a relatively high rate of participation, but the requirement to post positive profits each year leads to very conservative investment strategies and low asset accumulation. Revising the regulatory framework to facilitate a more diversified asset allocation would promote savings.

19. **The authorities aim to reinforce fiscal institutions.** Their plans include strengthening of fiscal rules, introduction of an act on budgetary discipline and responsibility, and creation of a National Budget Council. Staff support these efforts, as cross-country experience suggests that fiscal responsibility laws and budget rules applying to all levels of government can buttress fiscal discipline and convey a message of fiscal rectitude to markets. In staff's view, a National Budget Council could usefully provide an independent evaluation of fiscal policies, but its autonomy will be essential. The authorities broadly agreed, but expressed concerns about the costs of an independent Council.

Monetary Policy—Balancing Internal and External Considerations

20. **Staff argued that the low-interest-rate policy remains appropriate in light of a sizeable negative output gap and ongoing fiscal consolidation.** CNB's inflation forecast indicates that headline inflation is expected to fluctuate close to the 2 percent target. Staff see inflation risks as broadly balanced, with the impact of fiscal consolidation and exchange rate appreciation on the downside, and rising world commodity and food prices on the upside. Hence a gradual interest rate increase should begin once output gap starts to close significantly, although a rise in inflation expectations or a faster reduction in labor-market slack would require an earlier tightening. Markets expect an interest rate hike around mid-year. Views within the CNB vary—while some agreed with staff, others felt that domestic demand was recovering too fast and the low-interest-rate environment could endanger financial stability, and thus saw merit in earlier tightening.

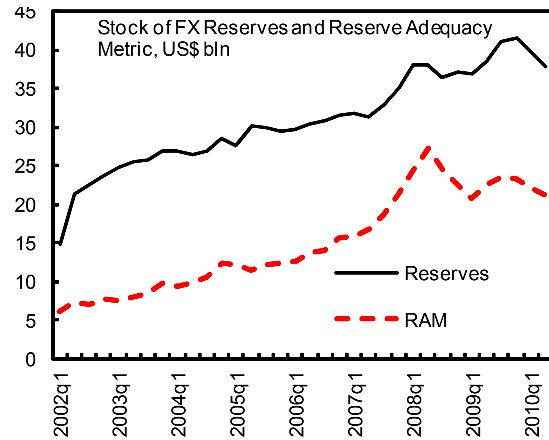
Expectations of inflation in medium term have been stable.



Source: CNB.

21. **In staff's view the tightening cycle should also take into account external conditions.** Staff suggested that in the event of significant capital inflows, with the real exchange rate broadly in line with fundamentals and an adequate amount of reserves,[8] the appropriate policy response would be to allow the koruna to appreciate further, and—if needed—lower policy interest rates. The CNB indicated that the policy response would depend on the circumstances at that time.

The amount of reserves is adequate.



Source: HAVER and IMF staff calculations.

22. **The Czech government does not plan to announce a target date for euro adoption during its term.** The floating exchange rate has served the economy well as a shock absorber during the crisis and remains appropriate.

Maintaining Financial Sector Stability

23. **Banks' financial soundness and liquidity indicators are generally robust (Table 5).**

- ***Liquidity is comfortable and structurally sound, as funding comes mainly from domestic retail deposits.*** With the normalization of market conditions, the CNB started a gradual withdrawal of liquidity-support measures, eliminating the three-month repo facility by end-2010, and extending the two-week repo facility until at least end-2011.

Comparator Bank Financial Indicators, Sep-2010, In Percent

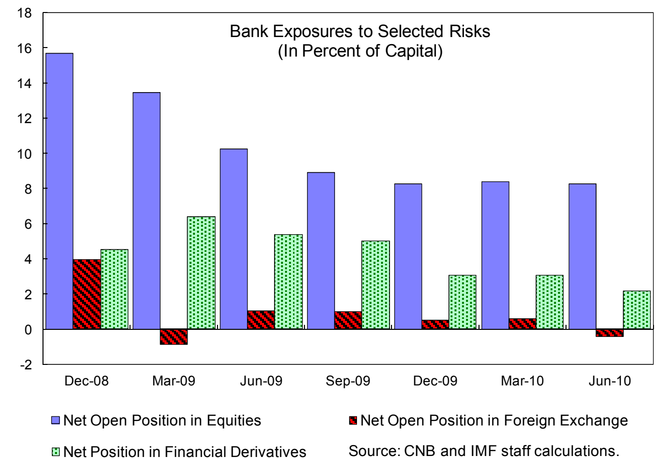
	Non-Performing Loans	Provisions to NPLs	Return on Assets	Capital to Assets	CAR 2/
Czech Rep.	6.6	55.0	1.4	6.6	15.5
Hungary	9.3	53.3	0.4	8.7	13.2
Poland	8.8	53.6	0.9	8.7	13.9
Euro Area 1/	6.6	55.3	0.3	6.8	14.7

Source: CNB and GFSR.
1/ Unweighted Average; excluding Cyprus, Malta, and Slovakia.
2/ Regulatory capital to risk-weighted assets.

[8] The Reserve Adequacy Metric (RAM) is a composite that takes into account developments in exports, broad money, and external liabilities, following the methodology in "Assessing Reserve Adequacy" (www.imf.org, Forthcoming).

- ***Capital adequacy ratios appear appropriate and have strengthened on the back of retained earnings.*** Credit quality has deteriorated and put pressure on banks' profitability, which nonetheless remained positive. Prior to the dividend payments the CNB performs thorough evaluation to ensure that capital and liquidity relocation across borders does not impair the financial situation of domestic subsidiaries.

24. **The CNB and staff agreed that the main risks for the banks stem from possible further worsening of credit quality under an adverse scenario and potential contagion from foreign parent banks.** The CNB noted that credit quality deterioration is slowing down in line with the macroeconomic recovery and the share of NPLs in total loans is unlikely to reach double digits, but credit to construction, transport, and energy sectors required attention. Staff concurred, and noted that risks stemming from reputational and financial contagion from parent banks abroad, while also receding, cannot be entirely ruled out, as the operating environment in the EU remains challenging, some of the parent bank groups have large exposures to sovereign euro area periphery bonds, and gross intra-group exposures are sizeable. The authorities agreed, but stated that intra-group contagion was minimized by the standalone financial position of the Czech subsidiaries, anchored in their domestic retail orientation and their high capital and liquidity buffers. Other risks, including liquidity and market risks, were deemed to be relatively less important.



25. **CNB's stress tests indicate that the banking system is well prepared to absorb losses of severe adverse shocks without threatening financial stability**.[9] These models, which include assessment of concentration risk in credit portfolios in line with previous staff's suggestions, indicate that banks' capital buffers are adequate to absorb credit and market losses associated with

Banking System: Selected Results of Central Bank Stress Test Exercises

	Baseline		Unexpected Recession		Unexpected Recession with Extraordinary Dividends	
	2011	2012	2011	2012	2011	2012
Selected Variables						
GDP	2.7	1.6	2.8	-3.3	2.8	-3.3
Exchange rate	24.6	24	24.6	27.1	24.6	27.1
Inflation	1.3	2.1	1.3	2.1	1.3	2.1
Unemployment	9.4	9.9	9.5	11.5	9.5	11.5
Nominal wage growth	2.9	4.6	2.2	0.5	2.2	0.5
Effective GDP growth in euro area	2.9	2	3.2	-0.5	3.2	-0.5
Credit growth	5.6	7.6	6.3	3.9	6.3	3.9
Estimated Impact						
Average Losses for 2011–12 (CZK billion)		-35		-85		-85
Change in Capital Ratios (p.p.)		-0.45		-5.4		-7.2
Estimated Capital Needs (percent of GDP)		0		0.45		0.77

Source: CNB.

[9] The latest stress test results can be found at: http://www.cnb.cz/en/financial_stability/stress_testing/.

severe but plausible macroeconomic and financial environments, without threatening macro-financial stability.[10] Banks also seem well prepared to absorb credit and market losses stemming from a possible sovereign debt crisis in the euro area periphery as their direct exposures were not material. At the same time, the results highlighted the need to ensure prudent profit repatriation to protect the capital cushions of the domestic banks. Staff welcomed the scope of the exercises and the severity of the stress scenarios, and suggested incorporating an explicit differentiation of exposures vis-à-vis related companies in the models to assess the potential for intra-group contagion, with which the CNB concurred.

26. **Reduction of subsidies to depositors of building societies is a step towards reforming the sector.** Existing regulations limit the scope of operation of building societies to issuance of fixed-rate deposits and providing housing loans. Therefore, some institutions have significant maturity and duration mismatches in their balance sheets, with associated interest and liquidity risks. Staff supported the authorities' plans for a phased introduction of regulatory changes to establish a more level playing field among building societies and commercial banks, increase efficiency in the provision of the financial service, and release scarce public resources that are needed elsewhere. The authorities and staff concurred on the need to remain vigilant about risks associated with the stability of deposits of building societies during the transition.

27. **The impact of ongoing international regulatory initiatives on the domestic banking system is deemed to be low**. While a full impact assessment is pending, banks seem well prepared to undergo a phased implementation of proposed changes to the liquidity and capital regimes. The authorities prefer to incorporate these changes into the supervisory review process (as opposed to introduction of hard ratios under pillar 1), to allow for increased flexibility in their application. They stressed the need to align EC regulations and Basel III proposals to the largest extent possible, and urged a careful calibration of regulatory parameters to avoid unwarranted adverse effects on financial intermediation. The authorities supported the calculation and disclosure of capital buffers at the level of individual legal entities to protect the financial soundness of bank subsidiaries. They saw merit in maintaining the flexibility to resolve problem banks at the level of national authorities, calling against excessive empowering of home supervisors at the expense of host supervisors.

28. **The authorities strengthened the tools to address systemic risk and to deal with weak credit institutions, but there is room to improve the financial safety net in some areas**. The CNB established a separate department in charge of macro-financial stability. A 2009 amendment to the Act on Banks strengthened the CNB's oversight authority over

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[10] The CNB reassessed and recalibrated its battery of stress test models in 2009. The assessment indicated that the models erred on the conservative side (i.e., bank losses were overestimated). The report is available at http://www.cnb.cz/en/financial_stability/fs_reports/fsr_2009-2010/index.html.

banks' liquidity, including special powers to impose temporary across-the-board restrictions on bank activities (covering also foreign bank branches), in response to situations jeopardizing financial stability. In addition, the menu of bank-resolution tools was widened, including by enabling the creation of publicly-owned bridge banks, and entrusting appointed administrators with powers to carry out purchase and assumption operations. In line with EC directives, the payment period for insured deposits will be cut to twenty days starting in June 2011, while the level of bank contributions and the coverage limit were increased in 2010. While welcoming these initiatives, staff saw room to improve the coordination and exchange of information between the CNB and the deposit insurance agency, including the involvement of the latter in war games, which the authorities acknowledged. Staff also saw merit in allowing the use of deposit insurance funds to support bank resolution under a least-cost principle, which was not shared by the authorities.

29. **The prudential and supervisory frameworks are robust, and the incipient work of the supervisory colleges is critical for effective supervision**. The CNB has achieved commendable progress in integrating financial market regulation and supervision of the entire financial industry. Supervision is backed by sound analytical work and rich data reporting from the regulated institutions. A policy of transparent data disclosure by the CNB also supports external surveillance and market discipline. However, given the almost universal presence of large cross-border banks, effective supervision relies critically on close home-host coordination and exchange of information. Participation of the CNB in the incipient work of the supervisory colleges of seven banking groups (involving five home supervisors) is critical to ensure an adequate, comprehensive assessment of banks' risk profiles. The authorities positively assessed the work of the supervisory colleges, but noted that it is too early to assess effectiveness of some of their activities.

Participation of the CNB in Multilateral Agreements for the Supervision of Cross-border Financial Groups

Banking Group	Date	Home Supervisor
Societe Generale	Aug-09	Commission Bancaire (FR)
KBC	Dec-09	Banking, Finance and Insurance Commission (BE)
ING	Dec-09	De Nederlandsche Bank (NL)
UniCredit	Dec-09	Banca d 'Italia (IT)
Erste	Dec-09	Financial Market Authority (AT)
Volksbank	Dec-09	Financial Market Authority (AT)
Raiffeisenbank	Dec-09	Financial Market Authority (AT)

Source: CNB.

IV. Staff Appraisal

30. **The Czech economy has rebounded from the downturn owing to its strong fundamentals and the global recovery, but faces a number of policy challenges.** Large structural deficits together with demographic trends are creating fiscal pressures, and under unchanged policies, would imply a rising public debt burden. Climbing world commodity prices complicate monetary policy in a situation of still nascent recovery and low core inflation. Sustaining robust productivity and GDP growth will require significant policy efforts. The authorities are well aware of these challenges and have prepared an ambitious policy agenda to tackle them, but implementation of the necessary reforms may not be easy.

31. **An accommodative monetary policy remains appropriate in the presence of a large negative output gap and fiscal consolidation.** Appreciation of the koruna and the sizeable output gap are likely to offset effects of rising commodity prices. Thus a gradual increase in policy interest rates should commence once the output gap starts closing at a significant pace, though a rise in inflation expectations or a rapid improvement in labor markets would warrant earlier action. Interest rate differentials against other advanced economies need to be also taken into consideration to avoid sharp changes in capital flows, which affect the exchange rate and inflation in the highly open Czech economy.

32. **Wide-ranging structural reforms are needed to buttress growth.** To close the productivity and income-per-capita gap vis-à-vis EU-15 countries, policies should focus on: increasing labor participation and labor market flexibility; enhancing efficiency in higher education, R&D, and the public sector; and further improving the business climate.

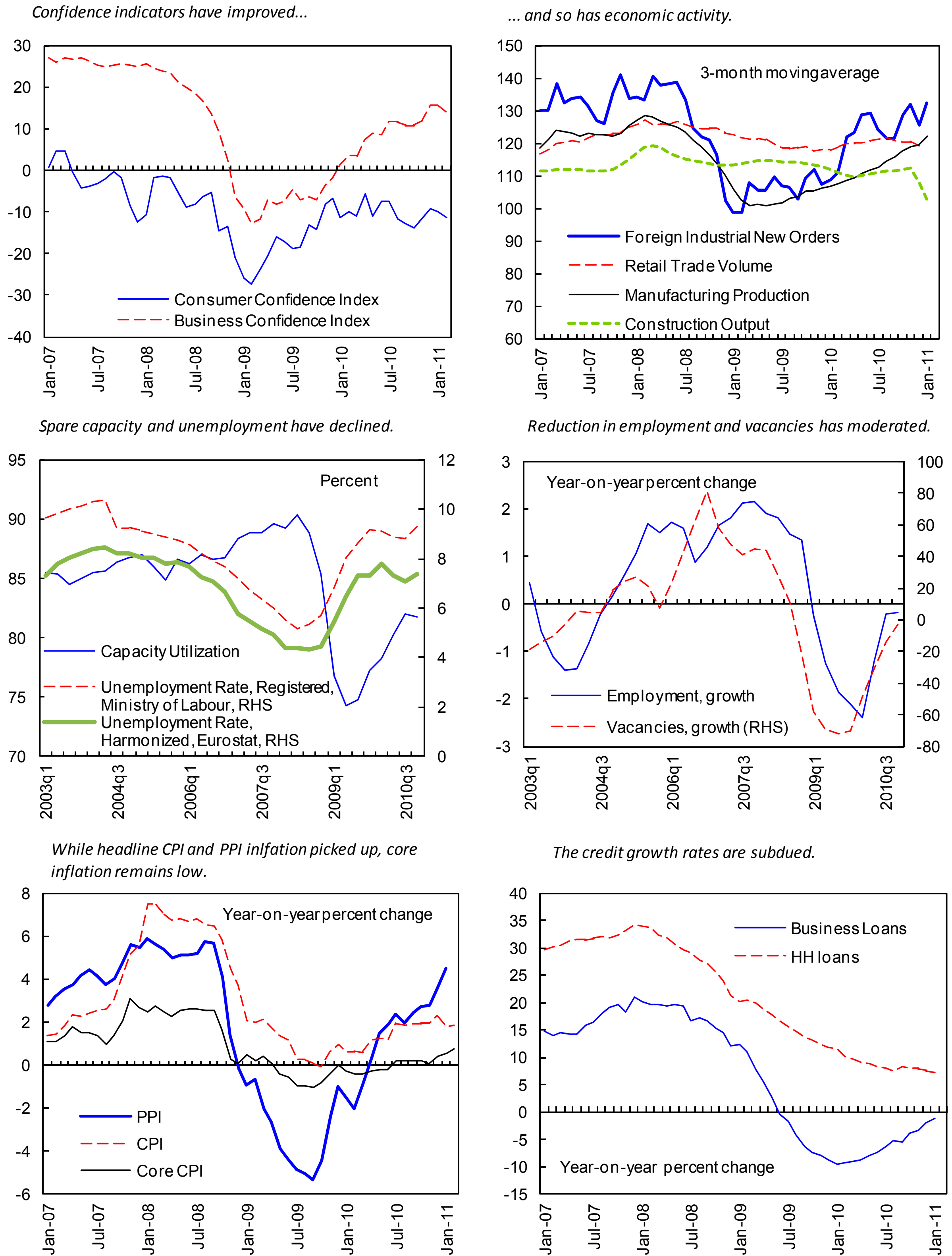
33. **Following initial efforts to reign in the fiscal deficit last year, the 2011 budget is a welcome further step towards consolidation of public finances.** The largely expenditure-based focus of the consolidation is adequate and, given the high degree of openness of the Czech economy, should limit the negative impact on growth.

34. **The authorities' medium-term fiscal targets are appropriate, but to achieve them additional reforms need to be specified and implemented rapidly.** Balancing the budget by 2016 would reverse the rising trend of public debt. To meet this objective, efforts should focus primarily on reducing the high level of entitlement spending and rationalizing the generous welfare state. The pension reform should ensure the long-term sustainability of the PAYG finances and introduce a second pillar without additional accumulation of debt. A broad-based consensus will be necessary to ensure full and successful implementation and durability of these reforms.

35. **The banking sector is stable and well supervised, though possible risks warrant close monitoring.** The Czech banks' high capital and liquidity buffers, and their domestic retail business orientation helped them weather the financial crisis well. Nevertheless, risks of further worsening of credit portfolios and potential contagion from parent banks cannot be precluded, and require continued close monitoring and cross-border supervisory co-operation.

36. **It is recommended that the Article IV consultations with the Czech Republic remain on a standard 12-month cycle.**

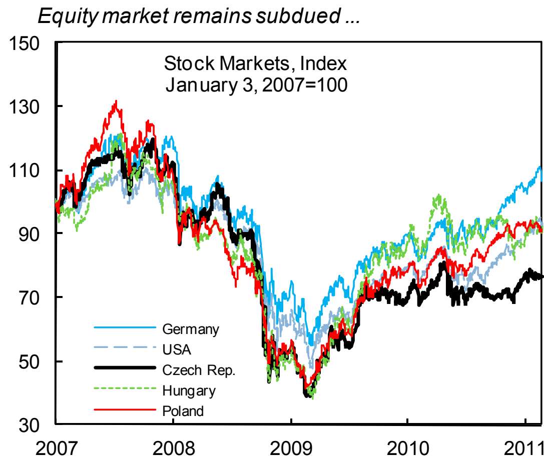
Figure 1. Czech Republic: Short-Term Indicators of Real Activity



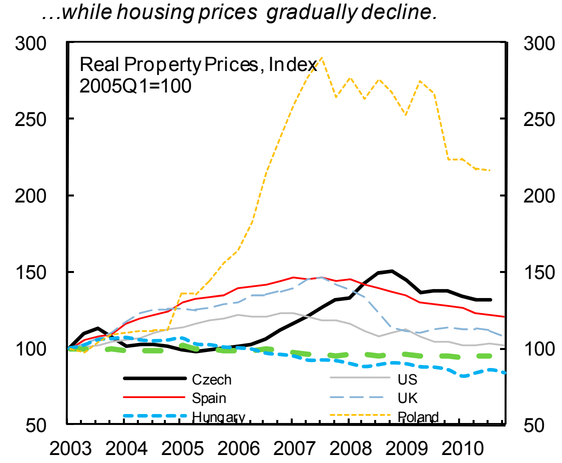
Source: HAVER, Eurostat, EMED, and IMF staff calculations.

Figure 2. Czech Republic: Financial Markets

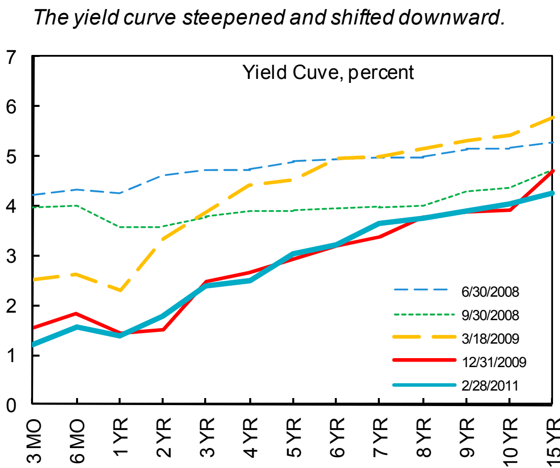
Equity market remains subdued ...



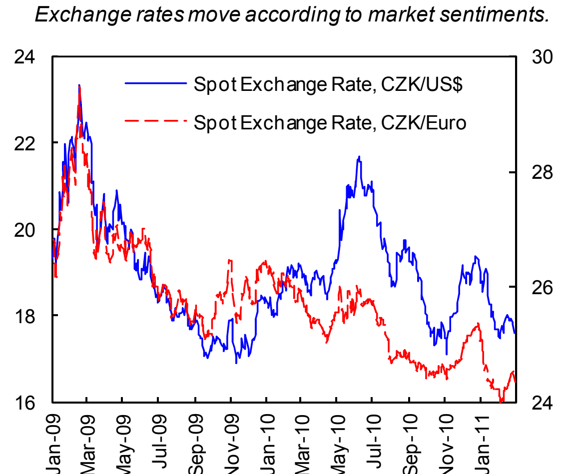
...while housing prices gradually decline.



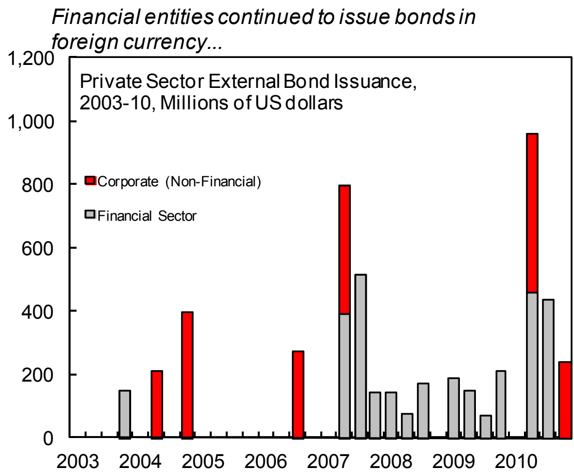
The yield curve steepened and shifted downward.



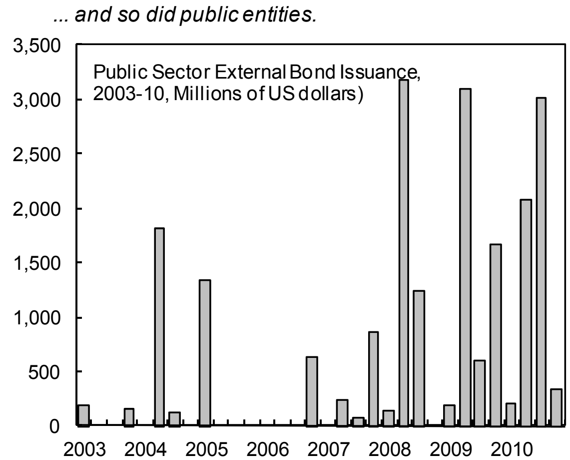
Exchange rates move according to market sentiments.



Financial entities continued to issue bonds in foreign currency...



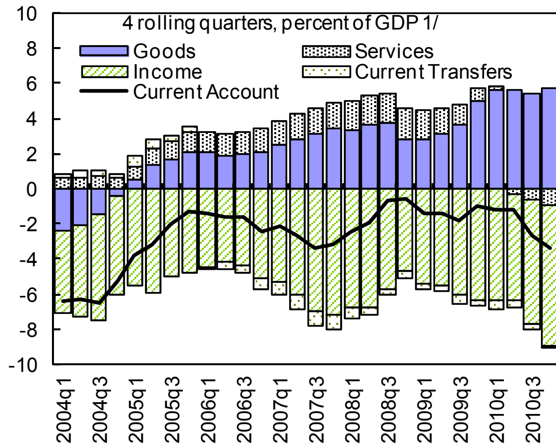
... and so did public entities.



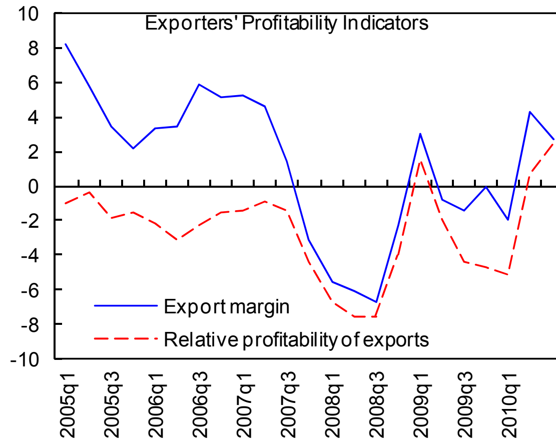
Sources: Bloomberg; Dealogic; Haver; BIS; and Global Insight.

Figure 3. Czech Republic: External Sector

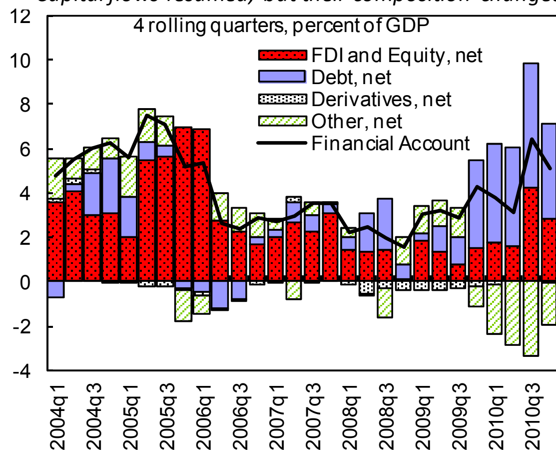
Current account deficit widened.



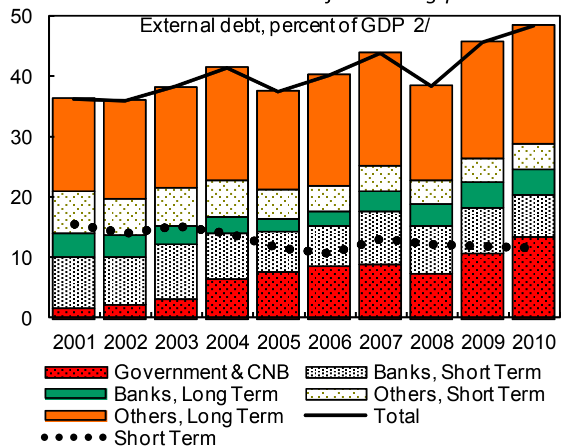
Export profitability improved.



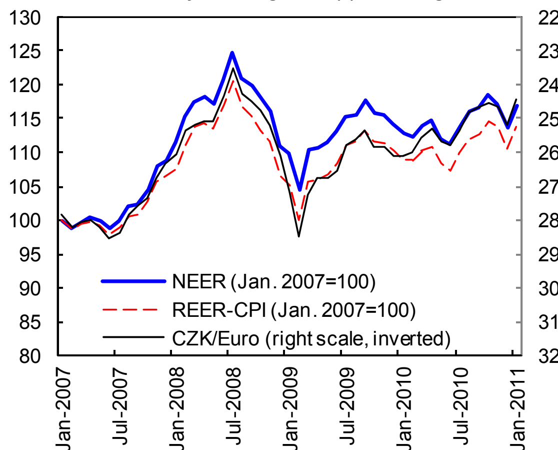
Capital flows resumed, but their composition changed.



External debt rose on account of increasing public debt.



Koruna has been following the appreciating trend...



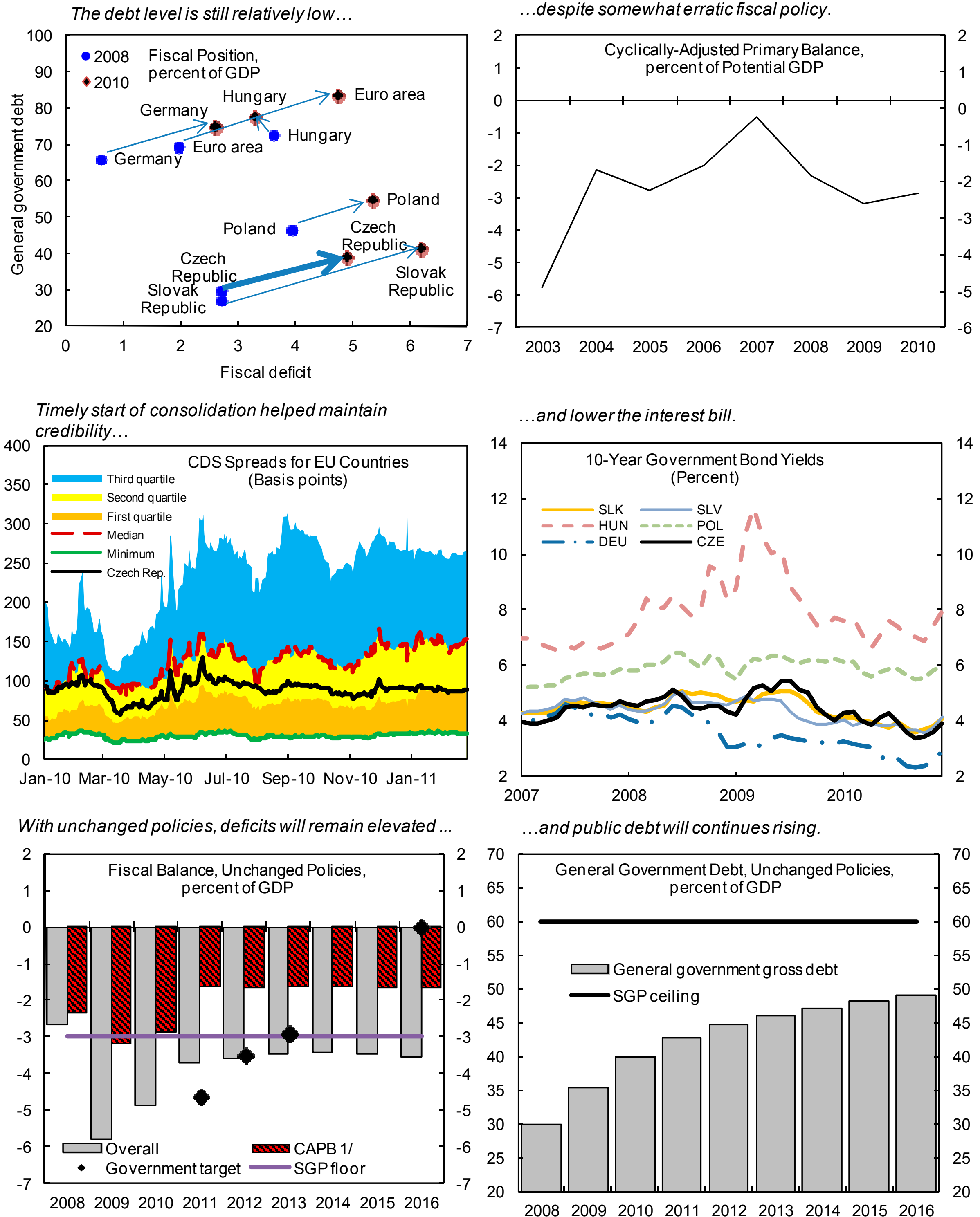
... but remains broadly in line with fundamentals.

Estimates of REER Misalignment, 2010

Macroeconomic Balance Approach	-7%
External Sustainability Approach	-10%
Equilibrium Real Exchange Rate Approach	11%
Overall Assessment (Fall 2010)	About 0%
Overall Assessment (Spring 2010)	About 0%

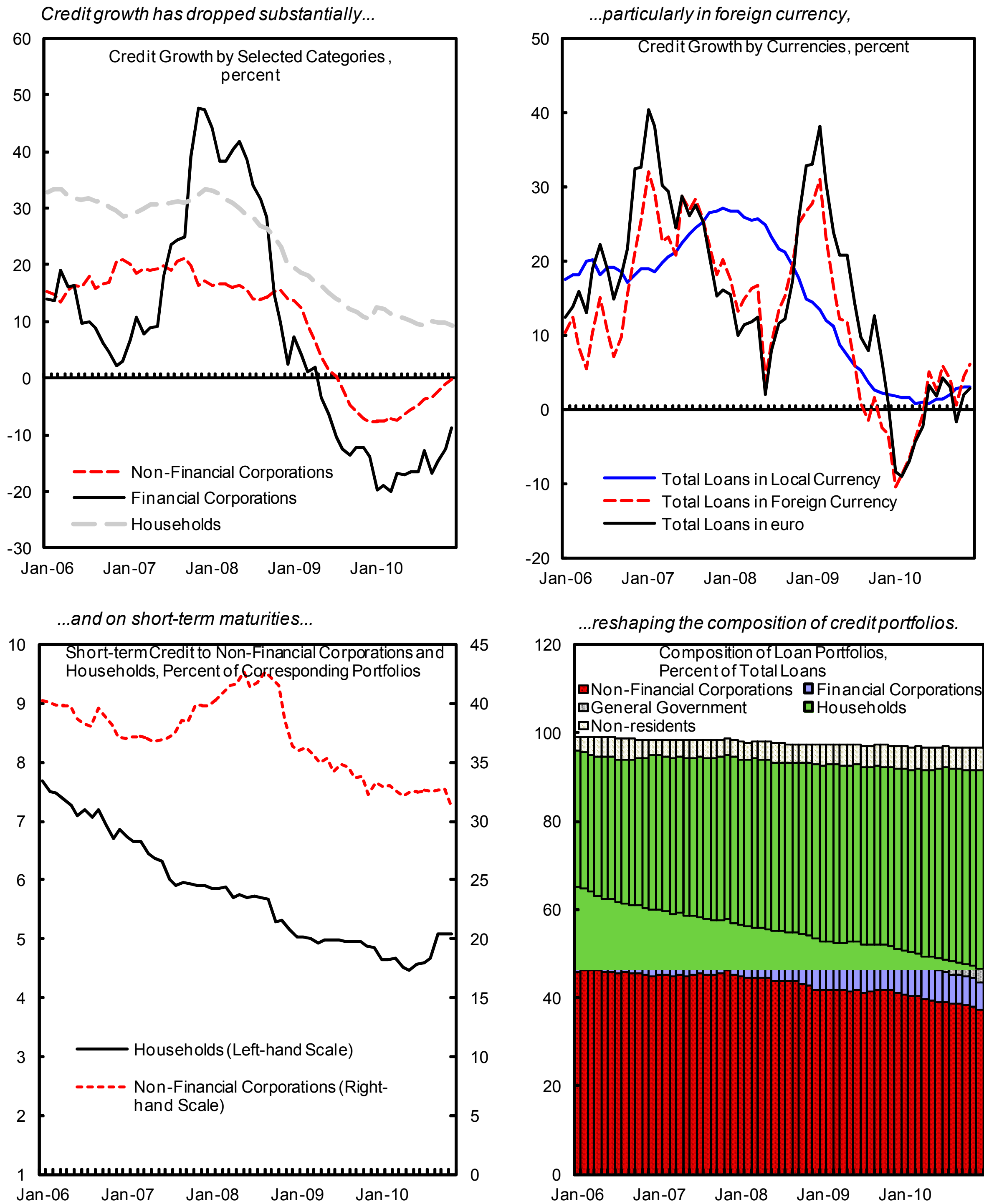
Source: CNB, OECD, HAVER, and IMF staff calculations.
1/ To ensure consistency of reported time series in this Staff Report, the BOP data for trade in goods and services are based on the “border” methodology, used until the March 2011 revisions.
2/ 2010 refers to the Q3 data.

Figure 4. Czech Republic: Fiscal Developments and Prospects



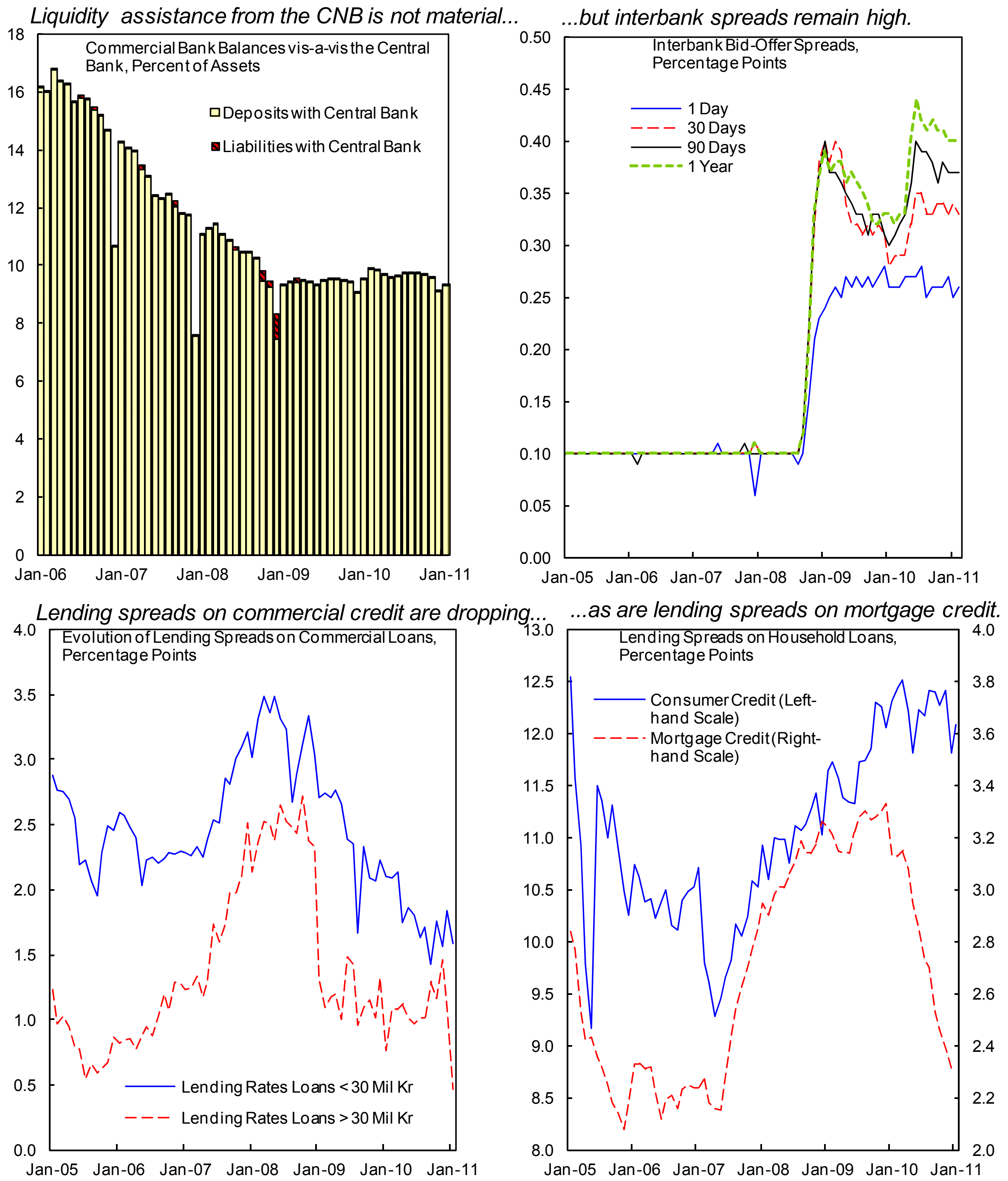
Sources: Eurostat; Bloomberg, and IMF staff estimates.
1/ Cyclically-adjusted primary balance.

Figure 5. Czech Republic: Evolution of Bank Credit



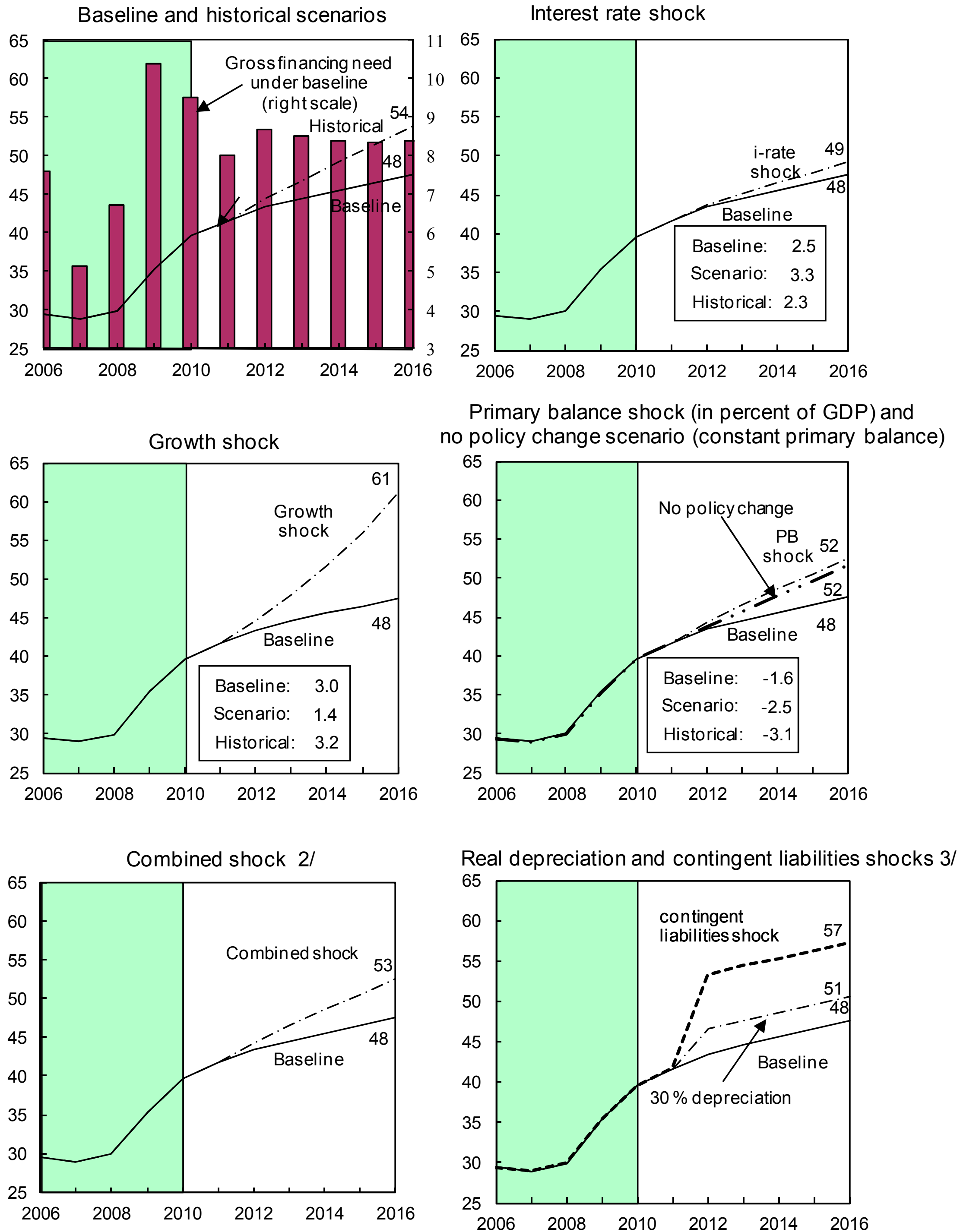
Source: CNB and IMF staff calculations.

Figure 6. Czech Republic: Selected Financial Indicators



Source: CNB and IMF staff calculations.

Figure 7. Czech Republic: Public Debt Sustainability: Bound Tests 1/
(Public debt in percent of GDP)



Sources: International Monetary Fund, country desk data, and staff estimates.
1/ Shaded areas represent actual data. Individual shocks are permanent one-half standard deviation shocks. Figures in the boxes represent average projections for the respective variables in the baseline and scenario being presented. Ten-year historical average for the variable is also shown.
2/ Permanent 1/4 standard deviation shocks applied to real interest rate, growth rate, and primary balance.
3/ One-time real depreciation of 30 percent and 10 percent of GDP shock to contingent liabilities occur in 2010, with real depreciation defined as nominal depreciation (measured by percentage fall in dollar value of local currency) minus domestic inflation (based on GDP deflator).

Table 1. Czech Republic: Selected Economic Indicators, 2006-12

	2006	2007	2008	2009	2010	2011	2012
					Est.	Staff Proj.	
Real economy (change in percent)							
Real GDP	6.8	6.1	2.5	-4.1	2.3	1.7	2.9
Domestic demand	5.4	5.2	1.2	-3.7	1.1	1.0	2.2
CPI (year average)	2.5	2.9	6.3	1.0	1.6	2.0	2.0
PPI (year average)	1.5	4.1	4.5	-3.1	1.3	…	…
Unemployment rate (in percent)	7.1	5.3	4.4	6.7	7.3	7.1	6.9
Gross national savings (percent of GDP)	24.3	23.7	24.7	20.6	19.9	20.7	20.9
Gross domestic investments (percent of GDP)	26.8	27.0	25.3	21.7	22.3	22.4	22.1
Public finance (percent of GDP)							
General government revenue	41.1	41.8	40.2	40.2	40.8	41.0	40.8
General government expenditure	43.7	42.5	42.9	45.9	45.7	44.7	44.4
Net lending / Overall balance	-2.6	-0.7	-2.7	-5.8	-4.9	-3.7	-3.6
General government debt	29.4	29.0	30.0	35.4	39.6	41.7	43.4
Money and credit (end of year, percent change)							
Broad money (M3)	12.9	16.1	13.7	0.2	1.2	…	…
Private sector credit (percent change, eop)	20.5	26.6	16.1	0.8	3.0	…	…
Interest rates (in percent, year average)							
Three-month interbank rate	2.3	3.1	4.0	2.2	1.3	…	…
Ten-year government bond	3.8	4.3	4.6	4.7	3.7	…	…
Balance of payments (percent of GDP)							
Trade balance (goods and services) 1/	3.4	4.8	4.7	5.7	4.6	5.7	6.3
Current account balance	-2.5	-3.3	-0.6	-1.1	-2.4	-1.8	-1.2
Gross international reserves (US$ billion)	31.5	34.9	37.0	41.6	43.7	46.2	48.7
Reserve cover (in months of imports of goods and services)	3.6	3.2	2.8	4.1	3.8	3.9	4.1
Exchange rate							
Nominal effective exchange rate (index, 2000=100)	105.2	108.1	121.6	116.3	118.7	n.a.	n.a.
Real effective exchange rate (index, CPI-based; 2000=100)	105.6	108.8	125.5	120.4	122.1	n.a.	n.a.

Sources: Czech Statistical Office; Czech National Bank; Ministry of Finance; HAVER, and IMF staff estimates and projections.
1/ For the purpose of ensuring time-consistency, the BOP data for trade in goods and services are based on "border" methodology, used until the March 2011 revisions.

Table 2. Czech Republic: Balance of Payments, 2006–12

	2006	2007	2008	2009	2010	2011	2012
						Staff proj.	
	(billions of US$)						
Current account balance	-3.6	-5.7	-1.3	-2.1	-4.7	-3.7	-2.7
Trade Balance 1/	2.8	5.9	6.3	9.5	10.5	14.9	16.5
Exports	95.1	122.7	146.2	112.6	125.8	132.7	133.6
Imports	92.3	116.8	139.9	103.1	115.3	117.8	117.1
Nonfactor Services 1/	2.0	2.4	3.9	1.3	-1.8	-3.0	-2.1
Receipts	13.9	16.9	21.8	20.3	22.0	23.1	23.3
Payments	11.9	14.5	17.9	19.0	23.8	26.1	25.4
Factor Income (net)	-7.5	-12.7	-10.5	-12.2	-13.4	-14.7	-15.8
Transfers	-0.9	-1.4	-1.0	-0.8	-0.1	-0.8	-1.3
Capital account	0.4	1.0	1.8	2.1	1.8	2.0	2.0
Financial account	4.1	5.5	1.2	2.3	7.4	1.6	0.6
Direct investment, net	4.0	9.0	2.3	1.4	5.0	2.2	1.7
Portfolio investment, net	-1.1	-2.7	0.0	6.0	8.1	4.4	4.4
Other Investment and Financial derivatives, net	1.3	0.1	1.4	-2.1	-3.6	-2.4	-2.9
Errors and omissions	-0.9	-0.8	-1.7	-2.3	-4.4	0.0	0.0
Change in reserves 2/	-0.1	-0.9	-2.4	-3.1	-2.1	-2.5	-2.5
Memorandum items:							
Current account, percent of GDP	-2.5	-3.3	-0.6	-1.1	-2.4	-1.8	-1.2
Trade balance, percent of GDP	2.0	3.4	2.9	5.0	5.5	7.1	7.3
Foreign direct investment, net, percent of GDP	2.8	5.1	1.0	0.7	2.6	1.1	0.8
Gross official reserves	31.5	34.9	37.0	41.6	43.7	46.2	48.7
in months of the current year's imports	3.6	3.2	2.8	4.1	3.8	3.9	4.1
as a ratio to the short-term debt	2.1	1.5	1.4	1.7	1.7	1.7	1.8
External debt, percent of GDP	40.1	43.6	38.5	45.5	47.4	45.8	43.7

Sources: Czech Statistical Office; Czech National Bank; and IMF staff estimates and projections.

1/ To ensure consistency of reported time series in this Staff Report, the BOP data for trade in goods and services are based on the “border” methodology, used until the March 2011 revisions.

2/ Changes in reserves reflect off-market conversion of large privatization receipts, EU transfers, and sales of accumulated interest.

Table 3. Czech Republic: Consolidated General Government Budget, 2006-12 1/
(on ESA-95 basis)

	2005	2006	2007	2008	2009	2010	2011	2012
						Est	Proj.	
	(In percent of GDP)							
Total revenue	41.4	41.1	41.8	40.2	40.2	40.8	41.0	40.8
Current taxes on income, wealth, etc	9.2	9.2	9.4	8.0	7.4	7.4	8.0	8.0
Personal income tax	4.6	4.2	4.3	3.7	3.6	3.7	4.0	3.8
Corporate Income tax	4.5	4.8	5.0	4.2	3.6	3.6	3.6	3.6
Social contributions	16.2	16.3	16.3	16.2	15.4	15.6	15.6	15.6
Taxes on production and imports	11.5	10.9	11.2	11.0	11.4	11.8	11.6	11.5
VAT	7.1	6.5	6.4	6.9	7.0	7.2	7.1	7.0
Excise	3.7	3.8	4.0	3.4	3.8	3.9	3.8	3.8
Capital taxes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Property income	0.7	0.8	0.8	0.8	0.9	0.8	0.8	0.8
Other	3.9	3.9	4.1	4.2	5.1	5.2	4.9	4.8
Total expenditure	45.0	43.7	42.5	42.9	45.9	45.7	44.7	44.4
Final consumption expenditure	22.1	21.3	20.3	20.4	22.0	21.9	20.2	20.0
Collective consumption	11.0	10.6	10.0	10.1	10.8	10.6	9.2	9.1
Individual consumption	11.0	10.7	10.3	10.3	11.3	11.2	11.0	10.9
Social transfers in kind	5.6	5.4	5.3	5.4	6.0	5.8	5.8	5.7
Transfers of individual non-market goods or services	5.4	5.3	5.0	4.9	5.2	5.4	5.3	5.2
Social benefits other than social transfers in kind	12.6	12.6	12.8	12.8	13.9	14.0	13.7	13.5
Interest	1.2	1.1	1.1	1.1	1.3	1.2	1.4	1.7
Subsidies	1.8	1.9	1.8	1.7	2.1	2.0	2.2	2.2
Gross fixed capital formation	4.9	5.0	4.7	4.9	5.2	5.5	5.4	5.4
Other expenditure	2.4	1.8	1.8	2.0	1.4	1.1	1.7	1.6
Net lending	-3.6	-2.6	-0.7	-2.7	-5.8	-4.9	-3.7	-3.6
Financing	3.6	2.6	0.7	2.7	5.8	4.9	3.7	3.6
Debt Instruments	1.7	2.1	2.3	2.1	5.0	4.7	3.7	3.7
Financial assets and non-debt liabilities 2/	1.9	0.8	-1.9	0.8	1.1	-0.2	-0.3	-0.3
o/w Privatization 2/	3.2	0.0	0.4	0.6	0.0	0.0	0.0	0.0
Adjustments 3/	0.0	-0.3	0.2	-0.3	-0.4	0.4	0.3	0.2
Memorandum items:								
General government debt	29.7	29.4	29.0	30.0	35.4	39.6	41.7	43.4
Primary balance	-2.4	-1.5	0.5	-1.6	-4.5	-3.7	-2.4	-1.9
Cyclically adjusted balance 4/	-3.5	-2.7	-1.2	-3.1	-4.2	-3.8	-2.8	-3.0
Cyclically adjusted primary balance 4/	-2.8	-2.0	-0.5	-2.3	-3.2	-2.8	-1.6	-1.7
Output gap 4/	-0.2	0.2	1.6	1.3	-4.1	-3.0	-2.7	-1.6

Sources: Ministry of Finance and IMF staff estimates and projections.
1/ On accrual basis. Includes financial transactions and broader coverage of institutions (such as the Czech Consolidation Agency and the Railways) that is excluded from the GFS-86 fiscal accounts.
2/ (+) sign means financing through decrease in assets.
3/ Adjustments for cash-accrual differences, valuation changes and other discrepancies.
4/ Staff estimates of output gap.

Table 4. Czech Republic: Medium-term Macroeconomic Scenario, 2005–16

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Real sector	(change, percent, unless stated otherwise)											
Real GDP	6.3	6.8	6.1	2.5	-4.1	2.3	1.7	2.9	2.9	3.0	3.1	3.2
Private Consumption	2.5	5.1	5.0	3.6	-0.2	0.4	0.9	2.3	2.8	3.1	3.2	3.2
Public Consumption	2.9	1.2	0.5	1.1	2.6	0.3	-1.9	0.7	0.7	0.9	1.0	1.0
Investment	-0.8	9.6	9.4	-2.8	-15.8	4.7	3.3	3.0	3.0	3.0	3.0	3.0
o/w fixed investment	1.8	6.0	10.8	-1.5	-7.9	-4.6	3.0	3.3	3.2	3.2	3.2	3.1
contribution of inventories (percent)	-0.8	1.1	-0.2	-0.4	-2.4	2.4	0.1	0.0	0.0	0.0	0.0	0.0
Exports, goods and services	11.6	15.8	15.0	6.0	-10.8	18.0	10.3	6.3	5.3	5.1	5.2	5.2
Imports, goods and services	5.0	14.3	14.3	4.7	-10.6	18.0	9.0	5.8	5.1	4.9	5.0	5.0
contribution of net exports (percent)	5.1	1.2	0.7	1.4	-0.4	0.4	1.6	0.9	0.5	0.4	0.5	0.6
CPI inflation	1.8	2.5	2.9	6.3	1.0	1.6	2.0	2.0	2.0	2.0	2.0	2.0
GDP deflator	-0.3	1.1	3.4	1.8	2.5	-1.1	2.6	2.1	2.2	2.1	2.0	2.0
Unemployment (percent of labor force)	7.9	7.1	5.3	4.4	6.7	7.3	7.1	6.9	6.5	6.5	6.5	6.5
Output gap 1/	-0.2	0.2	1.6	1.3	-4.1	-3.0	-2.7	-1.6	-0.8	-0.2	0.0	0.0
Gross domestic savings 2/	24.4	24.3	23.7	24.7	20.6	19.9	20.7	20.9	20.9	20.6	20.3	20.1
Public 2/	13.3	13.6	15.2	13.4	10.4	11.2	12.5	12.8	12.5	12.5	12.4	12.3
Private 2/	11.1	10.7	8.6	11.3	10.2	8.7	8.2	8.2	8.4	8.1	7.9	7.8
Gross capital formation 2/	25.7	26.8	27.0	25.3	21.7	22.3	22.4	22.1	21.7	21.4	21.0	20.7
Public finances 3/	(in percent of GDP)											
Revenues	41.4	41.1	41.8	40.2	40.2	40.8	41.0	40.8	40.6	40.6	40.6	40.6
Expenditures	45.0	43.7	42.5	42.9	45.9	45.7	44.7	44.4	44.0	44.0	44.0	44.1
Net lending	-3.6	-2.6	-0.7	-2.7	-5.8	-4.9	-3.7	-3.6	-3.5	-3.4	-3.5	-3.5
Cyclically-adjusted deficit 1/	-3.5	-2.7	-1.2	-3.1	-4.2	-3.8	-2.8	-3.0	-3.2	-3.3	-3.5	-3.5
General government debt	29.7	29.4	29.0	30.0	35.4	39.6	41.7	43.4	44.5	45.6	46.5	47.6
Balance of payments	(in percent of GDP)											
Current account balance	-1.3	-2.5	-3.3	-0.6	-1.1	-2.4	-1.8	-1.2	-0.8	-0.8	-0.7	-0.6
Trade balance 4/	2.0	2.0	3.4	2.9	5.0	5.5	7.1	7.3	7.2	7.1	7.0	6.8
Services balance 4/	1.2	1.4	1.4	1.8	0.7	-0.9	-1.4	-0.9	-0.4	0.0	0.3	0.5
Net factor income	-4.8	-5.2	-7.3	-4.9	-6.4	-6.9	-7.1	-6.9	-6.9	-7.1	-7.2	-7.2
Current transfers	0.3	-0.6	-0.8	-0.5	-0.4	0.0	-0.4	-0.6	-0.7	-0.7	-0.7	-0.7
Capital account balance	0.2	0.3	0.6	0.8	1.1	0.9	1.0	0.9	0.8	0.7	0.7	0.6
Financial account balance	2.2	3.1	3.8	1.4	2.3	4.7	1.8	1.2	0.8	0.8	0.7	0.6
Direct investment, net	9.3	2.8	5.1	1.0	0.7	2.6	1.1	0.8	0.5	0.1	-0.1	-0.1
Portfolio investment, net	-2.7	-0.8	-1.5	0.0	3.2	4.2	2.1	1.9	1.8	1.6	1.5	1.4
Other investment & derivatives, net	-1.5	0.9	0.1	0.6	-1.1	-1.9	-1.2	-1.3	-1.2	-0.8	-0.5	-0.5
Errors and omissions, net	-0.9	-0.7	-0.5	-0.8	-1.2	-2.3	0.0	0.0	0.0	0.0	0.0	0.0
Change in reserves (- increase) 5/	-3.1	-0.1	-0.5	-1.1	-1.6	-1.1	-1.2	-1.1	-1.0	-0.9	-0.9	-0.8

Sources: Czech Statistical Office, Czech National Bank, Ministry of Finance, and IMF staff estimates and projections.

1/ In percent of potential GDP.

2/ In percent of GDP.

3/ On ESA-95 basis.

4/ To ensure consistency of reported time series in this Staff Report, the BOP data for trade in goods and services are based on the "border" methodology, used until the March 2011 revisions.

5/ Changes in reserves reflect off-market conversion of large privatization receipts, EU transfers, and sales of accumulated interest. The projected increase in serves in 2008-12 is based on the expected increase in EU-fund transfers and the level of absorption of these transfers.

Table 5. Selected Bank Financial Soundness Indicators, 2005–10
(In Percent)

	2005	2006	2007	2008	2009	Sep-10
Solvency						
Regulatory Capital to Risk-Weighted Assets	11.9	11.4	11.5	12.3	14.1	15.6
Tier 1 Capital Adequacy	11.3	10.0	10.3	11.7	12.7	14.2
Leverage Ratio 1/	13.4	13.5	14.6	13.8	12.8	12.5
Profitability						
Return on Assets	1.4	1.2	1.3	1.2	1.5	1.4
Return on Equity	25.3	22.5	24.4	21.7	25.8	23.1
Liquidity						
Liquid Assets to Total Assets	32.8	30.4	24.0	23.1	25.3	28.1
Liquid Assets to Deposits	50.5	45.5	36.5	35.9	38.0	41.3
Loans to Deposits	60.8	67.7	73.8	79.1	75.5	73.0
Loans to Assets	39.5	45.2	48.4	50.8	50.3	49.8
Net Open Position in Foreign Exchange to Capital	0.5	0.2	0.3	0.1	0.2	1.9
External Debt to Total Liabilities	10.2	9.8	11.9	14.8	11.8	10.9
Asset Quality						
Sectoral Breakdown of Loans						
Non-financial Corporations	44.6	44.9	41.7	40.9	37.2	36.3
Households	32.2	35.0	37.5	38.9	42.7	44.3
Sole Traders	2.8	2.5	2.2	2.1	2.0	1.9
Other (incl. non-residents)	20.4	17.5	18.7	18.1	18.0	17.5
Non-Performing Loans to Gross Loans	3.9	3.7	2.8	3.3	5.4	6.6
Non-financial Corporations	5.1	4.4	3.1	4.2	7.9	9.0
Households	3.2	2.9	2.7	2.7	3.8	5.1
Mortgage Loans	1.7	1.6	1.5	1.6	2.5	3.2
Consumer Loans	8.2	7.1	7.3	6.6	8.3	11.8
Sole Traders	10.7	9.2	7.2	8.2	10.8	12.3
Loan Loss Provisions to Non-Performing Loans	64.5	61.3	70.2	67.4	56.9	55.0
Aggregate Loan to Value for Mortgage Loans	42.6	41.2	45.9	46.3	56.6	55.9
Memorandum Items:						
Financial Sector Assets to GDP	127.0	127.5	136.9	144.3	149.5	…
Banking Sector Assets to GDP	99.0	97.8	106.1	109.6	112.9	…

Source: CNB.

1/ Total assets as a multiple of equity.

Table 6. Financial Indicators of Non-Financial Corporations and Households, 2005–10
In Percent

	2005	2006	2007	2008	2009	Sep-10
Non-Bank Financial Corporations						
Share in Financial Sector Assets	25.9	26.7	25.8	25.0	22.8	…
Total Premiums to GDP	3.9	3.8	3.8	3.8	4.0	4.2
Solvency of Insurance Companies: Life Insurance	342	314	285	249	295	…
Solvency of Insurance Companies: Non-Life Insurance	387	368	394	460	450	…
Change in Financial Investment of Insurance Companies	7.8	2.3	4.3	6.6	5.1	1.7
Return on Equity of Insurance Companies	13.5	24.6	21.2	14.6	21.0	16.9
Claim Settlement Costs to Net Technical Provisions (life)	12.1	10.3	12.8	14.8	15.0	11.0
Claim Settlement Costs to Net Technical Provisions (non-life)	71.6	70.8	60.8	59.8	63.2	50.4
Change in Assets Managed by Pension Funds	20.9	18.2	14.6	14.7	12.6	2.4
Return on Equity of Pension Funds	…	47.3	109.3	18.4	19.2	24.2
Growth of Loans from Non-Bank Financial Corporations engaged in lending	…	7.3	20.8	8.4	-17.1	-12.2
o/w to Non-Financial Corporations	…	5.8	14.7	12.8	-15.5	7.7
o/w to Households	…	9.3	29.8	3.5	-18.8	-37.2
Non-Financial Corporations						
Return on Equity	9.2	10.2	11.2	9.4	8.8	…
Debt to Total Liabilities	44.7	45.7	47.1	47.3	46.8	…
Debt to GDP	44.0	43.2	42.2	46.1	45.8	45.8
Loans from Czech Banks to GDP	17.6	19.7	21.0	23.0	21.6	21.2
Loans from Czech Non-bank Financial Corporations to GDP	4.8	4.7	4.9	5.3	4.6	4.9
Other Debt (incl. financing from abroad) to GDP	21.6	18.8	16.2	17.8	19.7	19.6
Profits to Interest Expenses	10.8	13.5	11.6	10.4	9.0	…
Average 12M Default Rate of Corporations 5/	1.5	1.7	2.1	3.5	6.5	5.6
Households 1/						
Debt to gross disposable income	34.0	40.3	48.1	52.1	54.3	…
Debt to financial assets	22.9	26.3	30.6	33.4	33.6	33.3
Net financial assets (total financial assets − total liabilities, percent of GDP)	56.7	54.6	53.0	51.4	54.9	56.4
Debt to GDP	17.6	20.4	24.5	27.5	29.7	30.3
Loans from Czech Banks to GDP	12.7	15.4	18.9	21.9	24.8	25.9
Loans from Czech Non-bank Financial Corporations to GDP	3.1	3.1	3.7	3.8	3.1	1.8
Loans from Czech Banks to Sole Traders	1.1	1.1	1.1	1.2	1.2	1.1
Loans from Czech Non-bank Financial Corporations to Sole Traders	0.4	0.4	0.5	0.4	0.4	0.4
Other Debt (incl. financing from abroad) to GDP	0.3	0.3	0.3	0.2	0.4	1.0
Interest Expenses to Gross Disposable Income	1.1	1.3	1.4	1.5	1.1	…
Average 12M Default Rate of Households 5/	…	…	…	3.3	4.8	5.0
Memorandum items:						
Real estate market						
Growth in Residential Property Prices 2/	5.98	10.50	18.30	8.90	-8.00	…
Growth of Apartment Prices 3/	0.2	13.4	23.2	19.6	-8.8	-3.3
Apartment Price to Average Annual Wages	3.9211	4.2044	5.1420	5.2457	4.2654	4.1
Apartment Prices to Rent 4/	15.4	17.3	22.9	23.8	23.0	22.5

Source: CNB.

1/ Including sole traders except 12M default.

2/ Transfer (realised) prices; Estimate for 2010 H1; only for family houses and apartments (around 74.4% of index).

3/ Supply prices according to CZSO, year on year.

4/ Source: IRI.

5/ 12M Default Rates for 2010 are preliminary.

Table 7. Czech Republic: Public Sector Debt Sustainability Framework, 2006-16
(In percent of GDP, unless otherwise indicated)

	Actual					Projections						
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	**Debt-stabilizing primary balance 9/**
Baseline: Public sector debt 1/	29.4	29.0	30.0	35.4	39.6	**41.7**	**43.4**	**44.5**	**45.6**	**46.5**	**47.6**	**-0.6**
o/w foreign-currency denominated	3.4	3.2	2.6	4.2	5.7	6.3	6.6	6.8	7.0	7.2	7.3	
Change in public sector debt	-0.2	-0.5	1.0	5.4	4.2	2.1	1.7	1.2	1.0	1.0	1.0	
Identified debt-creating flows (4+7+12)	-1.7	-2.9	3.3	5.5	4.0	1.8	1.6	1.5	1.1	1.0	1.0	
Primary deficit	1.5	-0.5	1.6	4.5	3.7	2.4	1.9	1.6	1.4	1.4	1.4	
Revenue and grants	41.1	41.8	40.2	40.2	40.8	41.0	40.8	40.6	40.6	40.6	40.6	
Primary (noninterest) expenditure	42.6	41.4	41.8	44.6	44.5	43.3	42.7	42.2	42.0	41.9	42.0	
Automatic debt dynamics 2/	-1.4	-1.9	0.1	1.6	1.0	-0.3	-0.3	-0.3	-0.2	-0.2	-0.2	
Contribution from interest rate/growth differential 3/	-1.1	-1.5	-0.1	1.8	0.8	-0.3	-0.3	-0.3	-0.2	-0.2	-0.2	
Of which contribution from real interest rate	0.8	0.2	0.5	0.6	1.6	0.4	0.8	0.9	1.0	1.2	1.2	
Of which contribution from real GDP growth	-1.9	-1.6	-0.7	1.3	-0.8	-0.7	-1.1	-1.2	-1.3	-1.4	-1.4	
Contribution from exchange rate depreciation 4/	-0.4	-0.5	0.3	-0.2	0.3	...	...	...	...	...	...	
Other identified debt-creating flows	-1.7	-0.5	1.5	-0.5	-0.8	-0.2	0.0	0.1	-0.2	-0.2	-0.2	
Privatization receipts (negative)	-3.0	0.0	-0.3	-0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recognition of implicit or contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Other (specify, e.g. bank recapitalization)	1.3	-0.5	1.9	0.1	-0.7	-0.2	0.0	0.1	-0.2	-0.2	-0.2	
Residual, including asset changes (2-3) 5/	1.4	2.4	-2.3	-0.1	0.2	0.2	0.1	-0.3	0.0	0.0	0.0	
Public sector debt-to-revenue ratio 1/	71.6	69.2	74.5	88.1	97.1	101.7	106.3	109.8	112.3	114.8	117.3	
Gross financing need 6/	7.6	5.1	6.7	10.4	9.5	8.0	8.7	8.5	8.4	8.4	8.4	
in billions of U.S. dollars	10.8	8.9	14.6	19.8	18.3	16.8	19.8	21.1	22.7	24.6	26.8	
Scenario with key variables at their historical averages 7/						**41.7**	**44.4**	**46.8**	**49.2**	**51.6**	**53.9**	**-1.0**
Scenario with no policy change (constant primary balance) in 2011-2016						**41.7**	**43.8**	**45.7**	**47.6**	**49.6**	**51.5**	**-0.6**
Key Macroeconomic and Fiscal Assumptions Underlying Baseline												
Real GDP growth (in percent)	6.8	6.1	2.5	-4.1	2.3	1.7	2.9	2.9	3.0	3.1	3.2	
Average nominal interest rate on public debt (in percent) 8/	4.0	4.2	3.9	4.3	3.4	3.6	4.2	4.5	4.7	4.8	4.8	
Average real interest rate (nominal rate minus change in GDP deflator, in p	2.9	0.8	2.0	1.7	4.5	1.0	2.1	2.3	2.5	2.8	2.8	
Nominal appreciation (increase in US dollar value of local currency, in perc	16.3	16.5	-7.4	9.2	-6.2	...	...	...	...	...	...	
Inflation rate (GDP deflator, in percent)	1.1	3.4	1.8	2.5	-1.1	2.6	2.1	2.2	2.1	2.0	2.0	
Growth of real primary spending (deflated by GDP deflator, in percent)	3.9	3.0	3.6	2.3	2.0	-0.9	1.5	1.5	2.5	3.0	3.3	
Primary deficit	1.5	-0.5	1.6	4.5	3.7	2.4	1.9	1.6	1.4	1.4	1.4	

1/ Gross debt of the general government.

2/ Derived as $[(r - \pi(1+g) - g + \alpha\varepsilon(1+r)]/(1+g+\pi+g\pi))$ times previous period debt ratio, with r = interest rate; π = growth rate of GDP deflator; g = real GDP growth rate; α = share of foreign-currency denominated debt; and ε = nominal exchange rate depreciation (measured by increase in local currency value of U.S. dollar).

3/ The real interest rate contribution is derived from the denominator in footnote 2/ as r - π (1+g) and the real growth contribution as -g.

4/ The exchange rate contribution is derived from the numerator in footnote 2/ as $\alpha\varepsilon(1+r)$.

5/ For projections, this line includes exchange rate changes.

6/ Defined as public sector deficit, plus amortization of medium and long-term public sector debt, plus short-term debt at end of previous period.

7/ The key variables include real GDP growth; real interest rate; and primary balance in percent of GDP.

8/ Derived as nominal interest expenditure divided by previous period debt stock.

Appendix I. Resilience of the Czech Financial Sector

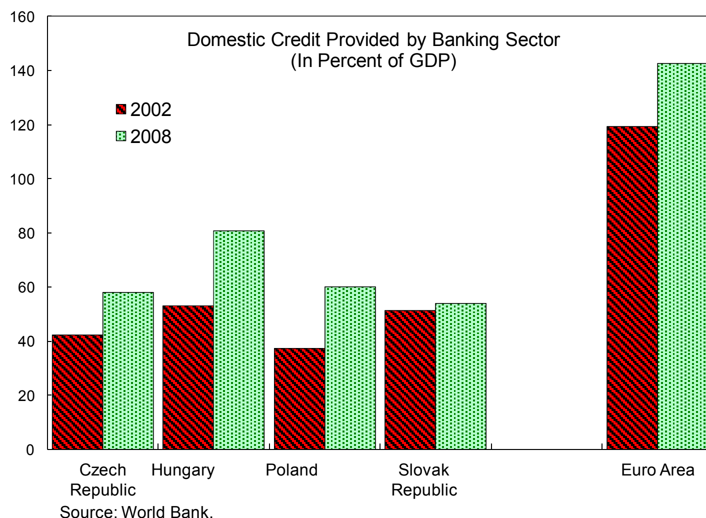
Banking system

The banking system has been stable throughout the global financial crisis. Domestic banks coped well with the weak macroeconomic environment and no institution had to be intervened or bailed out. This resilience was due to the conservative, inward retail orientation of domestic banks, prevalence of lending in domestic currency, and strong liquidity and funding profiles. In addition, provision of emergency liquidity by the ECB, combined with support to troubled parent banks by their home governments, helped shield Czech subsidiaries from induced financial distress.[1] There were no changes in ownership, and foreign banks continue holding 97 percent of system assets.

Selected Indicators of Commercial Banks

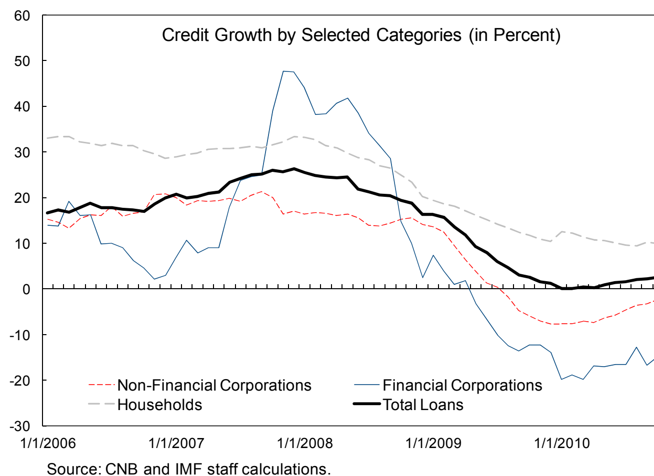
	2007	2008	2009	Oct-10
Asset-Backed Securities to Assets	0.0	0.0	0.0	0.0
Total Credit to Assets	48.1	50.0	49.8	49.9
Total Credit to Deposits	76.6	82.5	81.4	81.3
Domestic Credit to Total Credit	93.5	92.8	92.9	92.5
o/w in Foreign Currency	8.6	8.8	8.2	7.2

Source: CNB and IMF staff calculations.



Source: World Bank.

The dynamic credit expansion ended with the outbreak of the crisis. Credit growth dropped from a peak of about 25 percent peak in late 2007 to virtually zero in early 2010, before recovering to 2½ percent in October 2010. Credit to the private sector has stabilized at about 60 percent of GDP—broadly in line with the levels in emerging market economies, but substantially below those of other advanced economies. The end of the rapid credit growth entails an underlying vulnerability for the banking system, as loan quality tends to



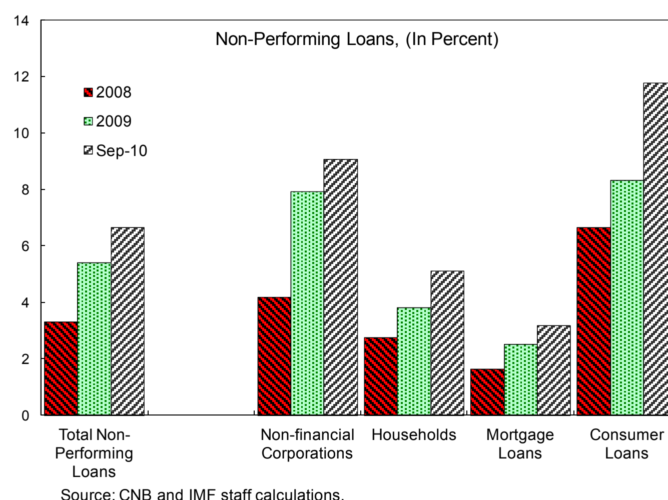
Source: CNB and IMF staff calculations.

[1] The three main foreign players own about a half of banking system assets. These include two institutions assisted with public funds: Austrian bank Erste, which owns Česká spořitelna (CS), and Belgian bank KBC, which owns Československá obchodní banka (CSOB). In addition, French bank Société Générale, which did not require public support during the crisis, owns Komerční Banka (KB).

deteriorate with the maturing of loan vintages during the downturn of credit cycles.

Credit growth diverged across borrowers and products. Credit to households (accounting for over half of the total stock of credit), remained relatively robust, particularly for mortgages. Interbank credit was severely curtailed due to rising concerns of counterparty solvency and effects of financial deleveraging. Credit to non-financial firms also plummeted, owing to weak loan demand and tightening of credit standards by banks. Bank intermediation spreads widened at the peak of the crisis but have been slowly normalizing, particularly for commercial and mortgage lending. The drop in lending rates, however, failed to transmit the full force of the monetary policy easing.

Credit quality continued deteriorating throughout 2010, albeit at a slowing pace. Non-performing loans (NPLs) increased to about 6½ percent of gross loans by September 2010, and varied substantially among groups of banks and credit types. Large and medium-sized institutions underperformed the industry, while building societies maintained the highest credit quality. Across credit types, unsecured consumer loans and credit to non-financial firms have higher NPLs at 9 percent (half of it already classified as loss). In contrast, credit quality of mortgages (which represent 40 percent of total credit) has been less sensitive to the macroeconomic downturn, reflecting conservative loan-to-value ratios, moderate levels of household debt, and relatively resilient house prices.



Source: CNB and IMF staff calculations.

Comparator Bank Financial Indicators, Sep-2010, In Percent

	Non-Performing Loans	Provisions to NPLs	Return on Assets	Capital to Assets	CAR 2/
Czech Rep.	6.6	55.0	1.4	6.6	15.5
Hungary	9.3	53.3	0.4	8.7	13.2
Poland	8.8	53.6	0.9	8.7	13.9
Euro Area 1/	6.6	55.3	0.3	6.8	14.7

Source: CNB and GFSR.
1/ Unweighted Average; excluding Cyprus, Malta, and Slovakia.
2/ Regulatory capital to risk-weighted assets.

Bank deposits have been stable and liquidity conditions have been normalizing during 2010. Resident retail deposits in local currency, which account for the bulk of bank liabilities, were broadly unchanged throughout 2010. Since the onset of the crisis, the authorities stepped up the monitoring of liquidity and strengthened the emergency liquidity facilities, which some banks called upon mainly at the peak of the financial turmoil. Normalization of liquidity conditions allowed the authorities to implement a gradual withdrawal of liquidity support measures.

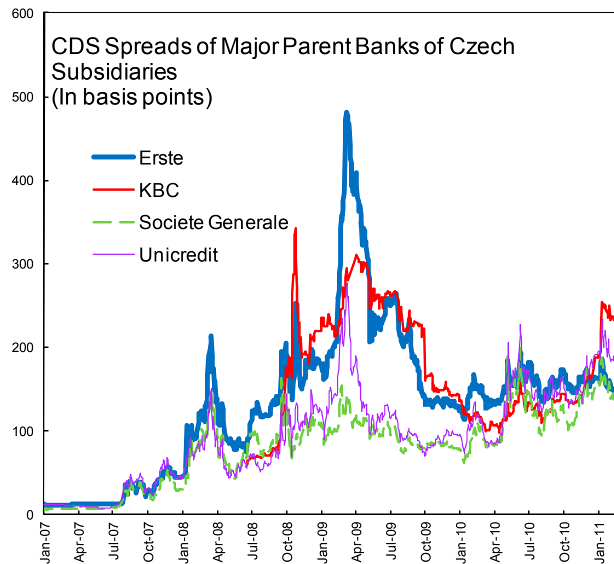
Selected Indicators of Commercial Bank Deposits, In Percent

	Selected Liabilities (Percent of Total Liabilities)			Yearly Growth (Percent)		
	2008	2009	Jun-10	2008	2009	Jun-10
Total Deposits	59.1	62.2	64.5	8.4	5.1	1.1
o/w Residents	57.0	60.5	62.6	8.4	6.1	0.8
o/w Non-Residents	2.1	1.7	2.0	6.7	-20.2	12.9
Deposits in Foreign Currency	6.1	5.5	5.7	2.5	-9.4	-5.5
o/w Residents	5.0	4.7	4.8	0.2	-5.0	-8.2
o/w Non-Residents	1.1	0.8	0.9	14.1	-28.7	8.1

Source: CNB and IMF staff calculations.

Banks' financial soundness indicators are generally robust and compare well with other countries. Capital adequacy ratios have increased on the back of retained earnings and all banks display solvency ratios above 10 percent. The quality of capital is also robust, with Tier 1 components accounting for about 85 percent of banks' own resources. Liquidity is also comfortable and structurally sound. Liquid assets account for about ⅓ of bank balance sheets and cover ¾ of short-term liabilities, while retail deposits fully cover the non-interbank loan portfolio. In addition, reliance of banks on short-term wholesale funding is low, and the banking system has a net external credit position vis-à-vis non-residents, including foreign credit institutions. Despite increasing loan-loss provisions, banks' profits have remained positive, helped by one-off gains from securities sales.

The financial situation of parent banks abroad has been gradually improving, but underlying fragilities persist. While improving, parent banks' solvency has not fully recovered yet due to the weak macroeconomic environment in core Europe and market perceptions of sovereign risk in the EU periphery, to which some banks are significantly exposed. Parent banks that relied on government assistance have stabilized and continue implementing their EC-approved restructuring plans, which entail the run-down of non-core businesses and financial deleveraging. In this context, some subsidiaries have been repatriating profits, after thorough evaluation by the CNB that ensures that capital and liquidity relocation across borders does not impair the financial situation of domestic subsidiaries.



Source: Bloomberg.

Non-bank financial sector

The insurance industry is stable and well prepared to transit into the Solvency II framework. Insurance premiums and total assets have resumed a gradual increase. Unrealized losses originating from marked-to-market portfolios have been partially reversed, and further relief from market volatility was provided by the authorization to apply amortized-cost valuation rules to a large proportion of

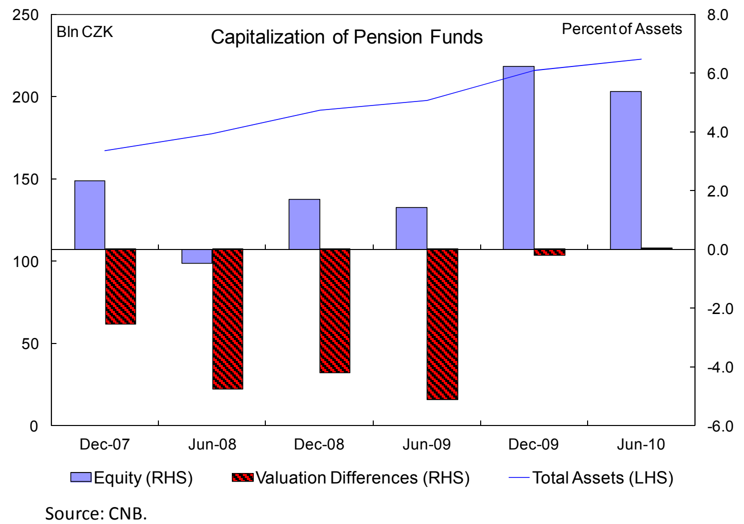
Selected Financial Indicators for Insurance, 2005-09, In Percent

	2005	2006	2007	2008	2009
Total Premiums to GDP	3.9	3.8	3.8	3.8	4.0
Solvency of Life Insurance	342	314	285	249	295
Solvency of Non-Life Insurance	387	368	394	460	450
Change in Financial Investment	7.8	2.3	4.3	6.6	5.1
Return on Equity	13.5	24.6	21.2	14.6	21.0
Claims to Net Technical Provisions (life)	12.1	10.3	12.8	14.8	15.0
Claims to Net Technical Provisions (non-life)	71.6	70.8	60.8	59.8	63.2

Source: CNB.

government bond portfolios that are held to maturity. Preparations for the implementation of the Solvency II regime scheduled to start in 2013, which are in line with EU Directives, continue as planned. Impact assessments indicate that all 14 sampled insurance companies (accounting for 90 percent of insurance sector's assets), are well positioned to transit into the new regime, entailing a 1½ times increase in current capital requirements.

Pension funds recovered from severe solvency problems. Marked-to-market valuation losses have been fully reversed in tandem with the rebound of financial markets. As a result, shareholder's equity recovered from about 1½ percent of assets in mid-2009 to 5½ percent in mid-2010. The total value of portfolios under management increased by 12 percent in the first half of 2010, due to valuation gains and strong net contributions. Meanwhile, the composition of portfolios has remained stable and conservative, with around 80 percent of investments in bonds (mainly domestic sovereign), 10 percent in bank deposits, and only 5 percent in higher risk shares and units. Going forward, there is merit in revising pension fund regulations on guaranteed non-negative yearly returns to allow for investment policies more commensurate with their long-term investment horizons. This could help promote private savings.



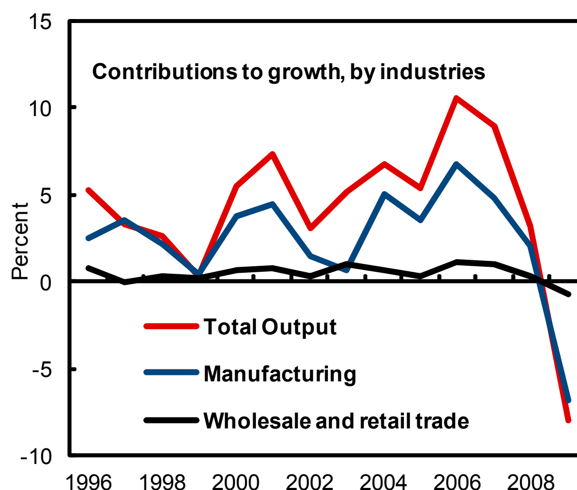
Source: CNB.

Appendix II. Growth Potential of the Czech Economy

Staff's analysis suggests that in the *long run* the Czech GDP growth is bound to slow to at most 2½ percent.[1] This estimate is based on the low projected growth of the Czech population; the forecasted growth rates of trading partners that consume some 80 percent of Czech output; and the industry structure of the economy and historical growth rates of value added in these industries in advanced economies.

There is scope for faster growth in the *medium term* due to more rapid productivity growth, but that would require implementing a range of structural reforms. Income per capita and productivity still remain about 1/3 below that of the EU-15 countries. Theory suggests that productivity growth can be raised by improving human or physical capital and know-how spillovers associated with FDI inflows. However, data suggest that the scope for this may be limited as productivity growth in the Czech economy seems to be more closely linked to the declining share of young workers in the labor force than in neighboring countries;[2] the stock of physical capital is already high compared to other European countries; and the stock of FDI liabilities seems to have already converged (in fact, from above) to European levels (Figure A1).

On the demand side, net exports have provided a significant contribution to growth. Openness of the Czech economy and its worldwide export share doubled since 1995. Following accession to the European Union, contribution of net exports to real GDP growth has been consistently around 1 percent (Figure A2). However, while expansion of trade benefits the Czech economy via creation of jobs, higher tax base, and transfer of know-how, direct spillovers are more limited: faster growth in exports is accompanied by faster growth in imports; and FDI-driven improvements in the trade balance are accompanied by increased income outflows that widen the gap between GDP and gross national income (GNI).



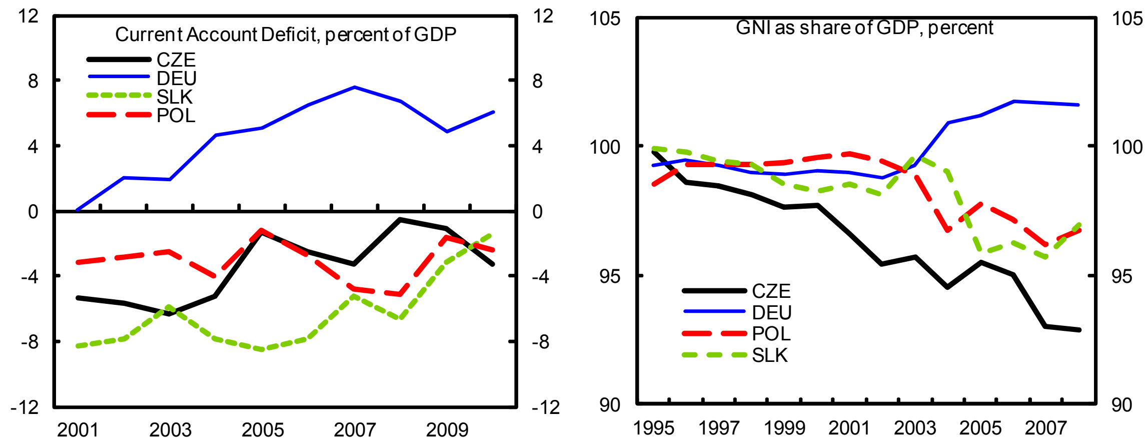
Source: Czech Statistical Office and IMF staff calculations.

[1] See 2010 Selected Issues Paper, IMF Country Report No. 10/59.

[2] According to UN projections, the share of workers younger than 34 will decline from 44 percent in 1995 to 36 percent in 2015. However, these pressures are somewhat alleviated by immigration of young people from countries in Eastern Europe.

Whether the strong growth performance of the pre-crisis years can be sustained remains a question. The existing structure of the Czech exports and industry, based on manufacturing, is a potential source of weakness. Exports are dominated by industrial products destined to EU countries. As population in the EU countries ages, their demand for the Czech goods will slow down and could also shift towards different kinds of products. Meanwhile, Czech goods already face competition both from advanced and developing countries.[3] Thus, to maintain the contribution of net exports to growth at substantial levels it will be essential to either expand the range of trading partners or achieve product diversification of exports, possibly by moving toward higher value-added merchandize or services.

Current account deficit improved over time owing to strong exports. However, with increasing income outflows, the GDP-GNI gap has widened.



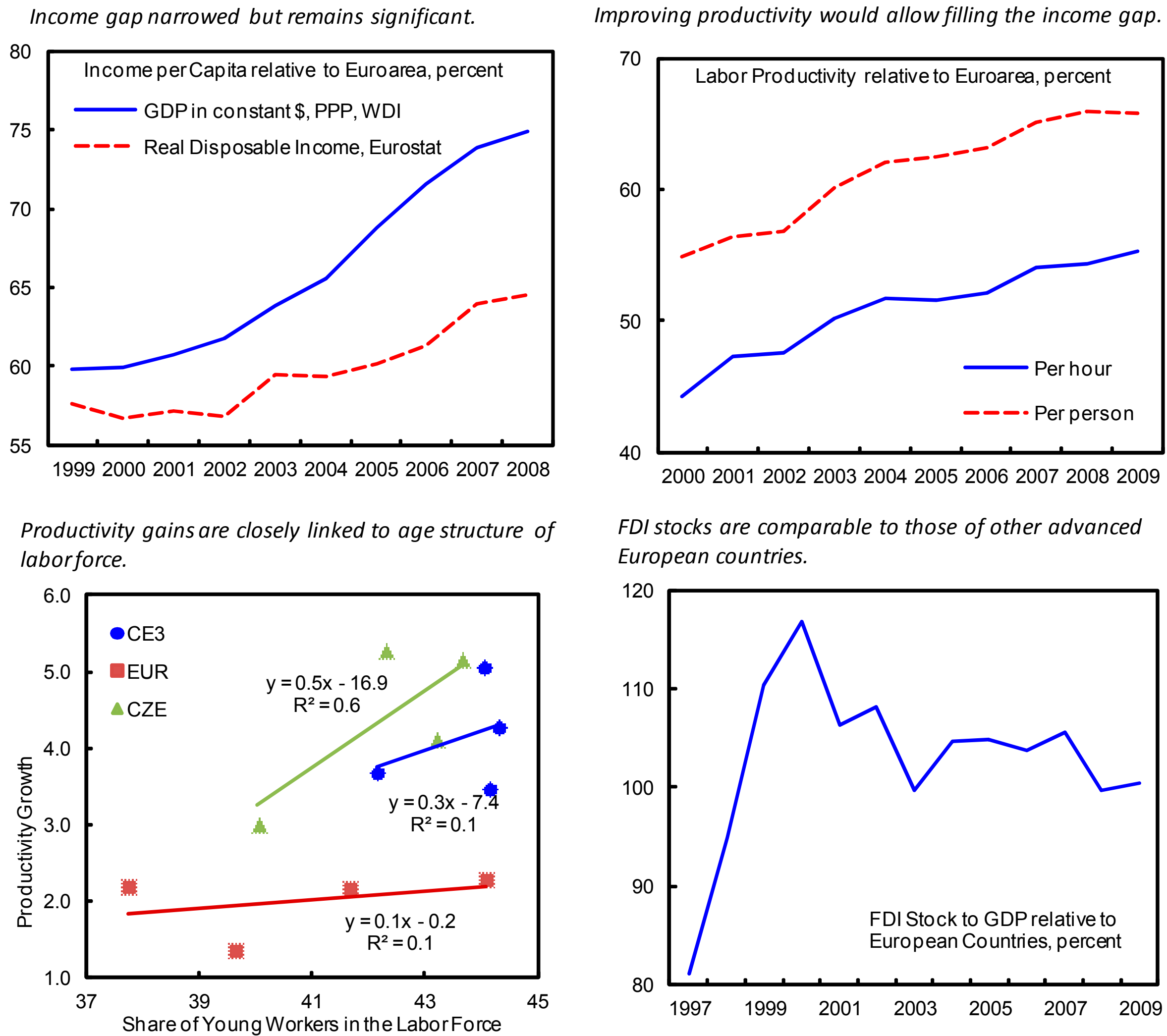
Source: WEO, WDI.

Despite recent reforms, there is room to improve business climate, which is key to boosting productivity and attracting FDI. World Economic Forum ranks the Czech economy as 36th in terms of competitiveness, Transparency International—as 53rd in terms of perceived corruption, and World Bank—as 63rd in terms of ease of doing business. In the European Commission's Innovation Union Scoreboard, the Czech Republic is 17th out of 27. In order to improve the business environment, the Czech government has singled out several

[3] For example, while between 1999 and 2009, the share of Czech imports in the EU market for machinery and transport equipment increased by 2.2 percent, second only to China (8.0 percent), the increase between 2007 and 2009 was 0.6 percent, compared to 1.8 percent for China, and 0.7 percent for the U.S. and Poland. In the other important segment—the EU market for manufacturing goods—the share of Czech imports increased by just 0.1 percent between 2007 and 2009, less than market gains by China (2.1), U.S. (0.5), Poland, Switzerland (0.4 each), Japan, Netherlands, Bangladesh (0.3 each), and India (0.2).

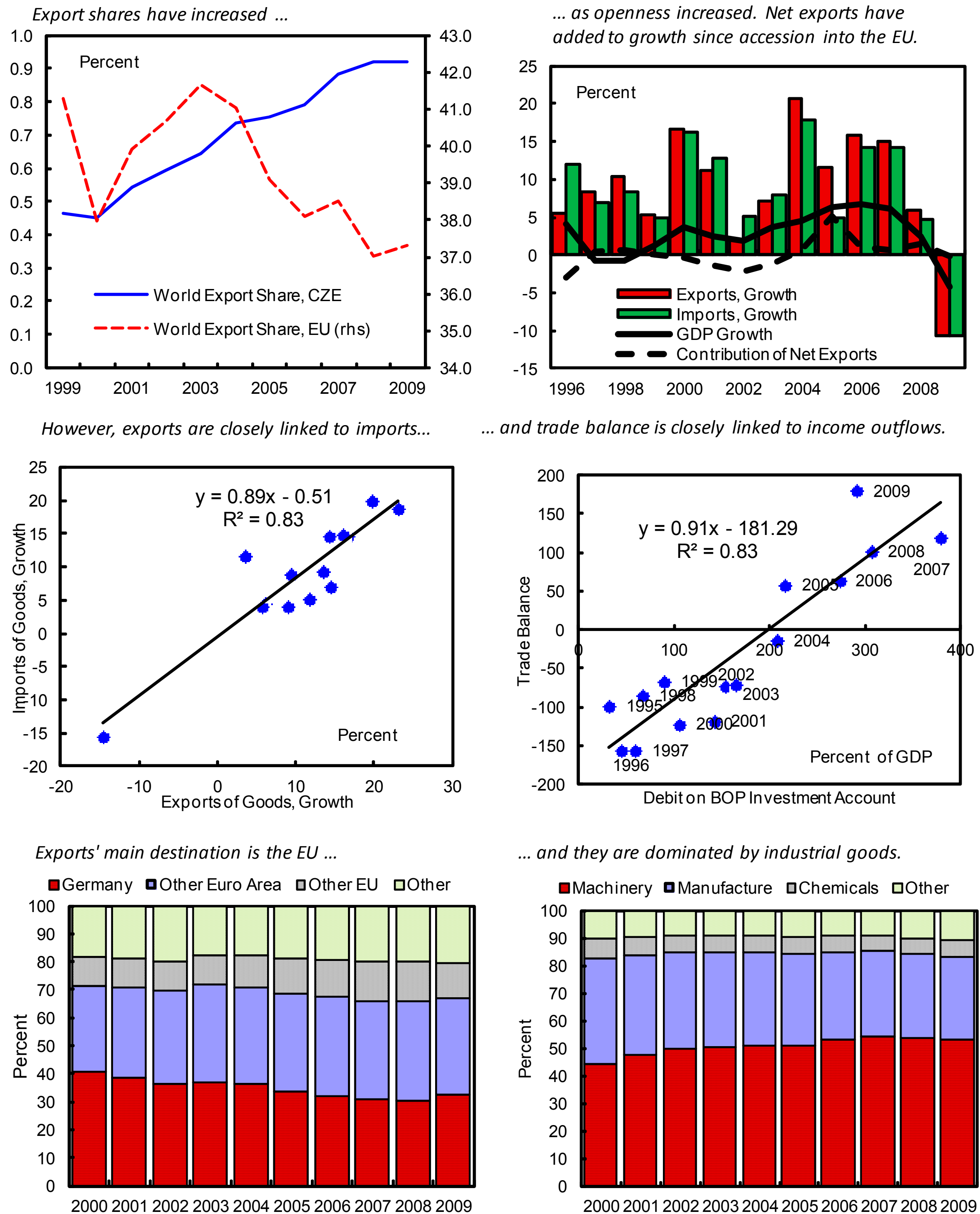
key areas that need to be addressed to improve competitiveness. Bottlenecks include inadequate infrastructure, low effectiveness of the non-bank financial sector, inefficient public institutions, slow functioning of courts, and the absence of links between R&D and the needs of the business sector. The government intends to alleviate the administrative burden on businesses, enhance electronic communications, and reduce excessive dependence on a few industries (such as machinery and manufacturing) by moving towards higher-value-added products by fostering innovation and modernization. The government has also approved an anti-corruption strategy and is developing a comprehensive approach for improving competitiveness.

Figure A1. Czech Republic: Convergence



Source: WEO, IFS, WDI, Eurostat, UN, and IMF staff calculations.

Figure A2. Czech Exports



Source: WEO, DOT, CNB, and IMF staff calculations.

Appendix III. Model Simulations of the Impact of Announced Fiscal Consolidation

Staff have applied the Global Integrated Monetary and Fiscal Model (GIMF)[1] to analyze the impact of fiscal consolidation on the Czech economy.[2] The principal conclusions of this analysis are as follows:

- **The impact of the 2 percent of GDP consolidation package contained in the 2011 budget on real GDP level equals 0.7 percent in 2011 and 0.5 percent in 2012** (compared to the baseline of unchanged policies).[3] The simulations assume that the measures pledged in the 2011 budget will remain in place indefinitely, and no new measures would be introduced, with one minor exception.[4] The results are as follows:
    - Output growth will fall 0.7 percentage point in 2011, and then turn mildly positive in 2012 (all relative to the baseline; see the top chart of Figure A3). The shock will also have a mildly deflationary impact, shaving 0.1 percentage point off CPI inflation.
    - In the long run, real GDP will be 0.3 percent higher than in the baseline if the government uses the fiscal room created by lower debt and interest payments to reduce distortive labor taxes.
    - The simulations take into account that the policy interest rate is close to the zero bound and is unlikely to decrease further in 2011 in response to the fiscal package. However, relaxing that constraint restriction would only increase real GDP growth by 0.05 percentage point.

The choice of instruments used in the consolidation matters for the impact on GDP growth. In staff estimates, to reach its medium-term zero deficit fiscal target, the government

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[1] GIMF is a micro-founded, multi-country, dynamic general equilibrium model developed at the IMF and used extensively for policy analysis. A comprehensive overview of the model can be found in IMF Working Paper 10/34, "The Global Integrated Monetary and Fiscal Model (GIMF) – Theoretical Structure."

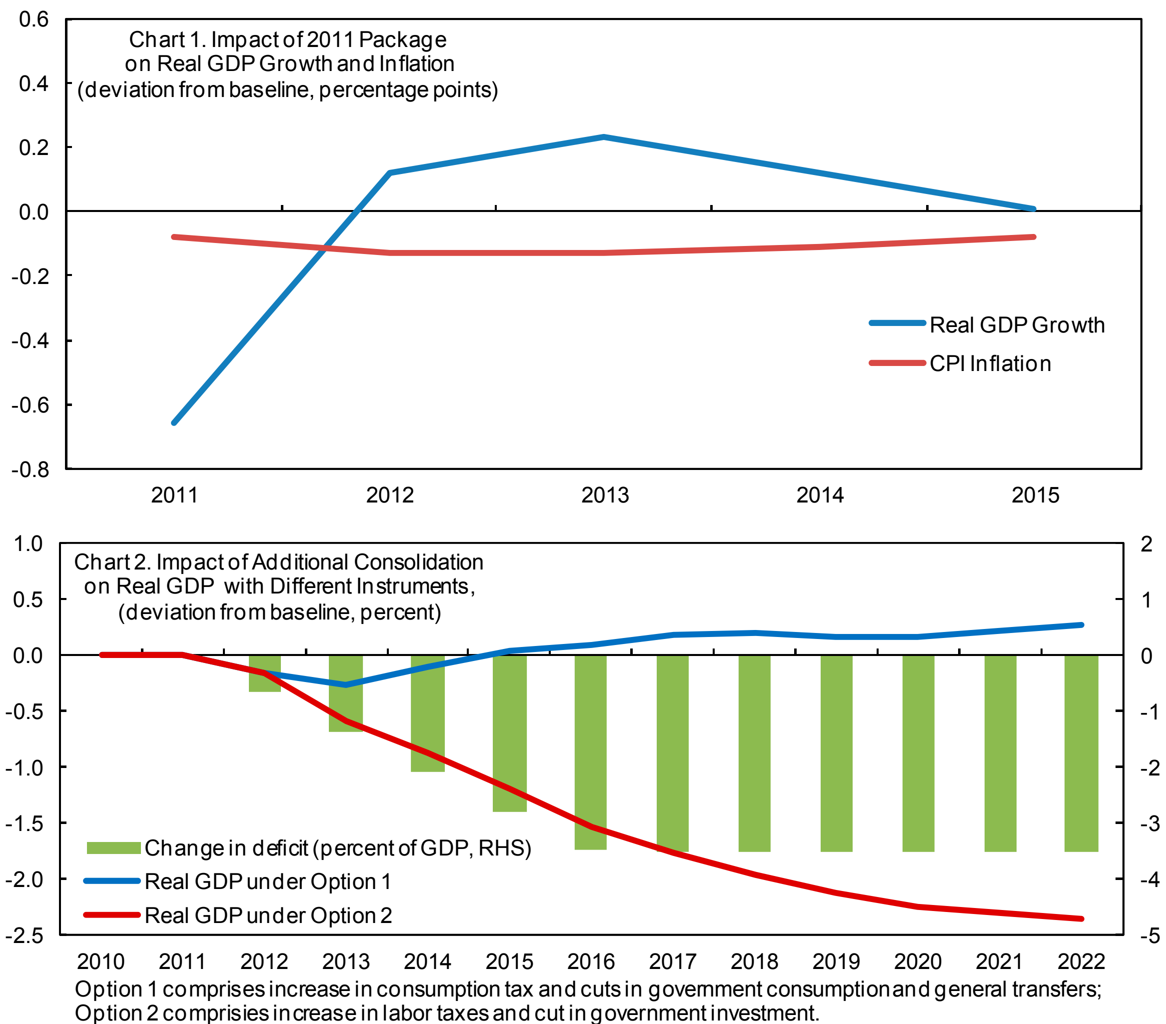
[2] Full results are presented in forthcoming MF Working Paper No. 11/65 "Effects of Fiscal Consolidation in the Czech Republic" by Vladimir Klyuev and Stephen Snudden.

[3] Since the package reverses the increase in the deficit that would take place under unchanged policies, the change in the cyclically-adjusted primary balance (CAPB) in 2011 is smaller than the size of the adjustment package (about 1.2 vs. 2.0 percent of GDP). Hence, the impact of an improvement in CAPB relative to 2010 (rather than relative to 2011 projection under unchanged policies) is correspondingly smaller, or about 0.4 percentage points.

[4] A new lottery tax yielding 0.15 percent of GDP, which is the only specific measure identified by the government for deficit reduction beyond 2011, applies from 2012 on.

would have to improve the budget balance gradually by 3½ percent of GDP on top of the 2011 package. The bottom chart of Figure A3 shows the impact on real GDP of fiscal adjustment of this magnitude achieved through different fiscal instruments under no constraint on monetary policy. It illustrates that a consolidation achieved by increasing a consumption tax (for example, by unifying the VAT rates) and cutting government transfers and government consumption would have a much less contractionary effect in the short run than a combination of payroll or income tax hikes and cuts in government investment. It would also have a positive long-term impact on real GDP.

Figure A3. Czech Republic: Impact of Fiscal Consolidation



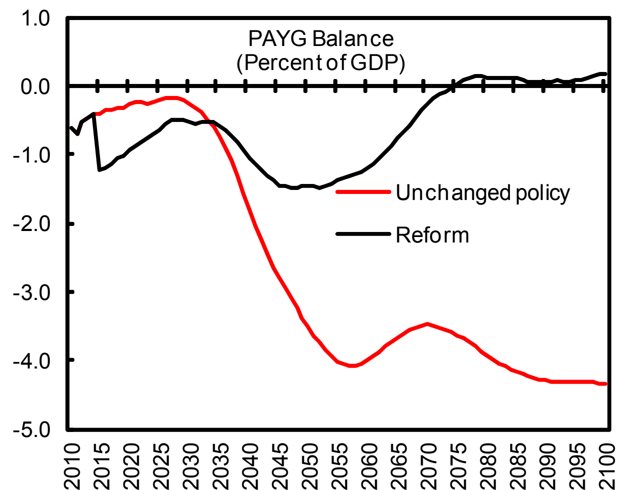
Source: IMF staff calculations.

Appendix IV. Pension System Reform Options—Expert Advisory Group Proposal

The Czech pension system consists currently of two pillars—a mandatory, state-run universal defined-benefit PAYG (first pillar) and a voluntary private subsidized supplement (third pillar). The PAYG scheme is financed by social security contributions. It is projected to run deficits on the order of half a percent of GDP over the next decade. Owing to impending demographic changes, the deficits are expected to surge around 2030 and reach a new plateau of 4 percent of GDP by 2055. The supplementary scheme enjoys a high participation rate, but its size in terms of accumulated assets is rather small, with participants apparently focused on maximizing state contributions more than on building up savings for retirement.

A 2010 report commissioned by the government and produced by the Expert Advisory Group (EAG) recommended a package of reforms.[1] The two main elements of the proposal are a set of measures to contain PAYG deficits and an introduction of a fully-funded, defined-contribution pillar. Under the EAG's projections, these changes will be sufficient to bring the PAYG pillar into balance by around 2075, i.e., once the transition is over. The package also included a partial substitution of VAT for payroll taxes as a source of PAYG financing.

- *The second pillar would be relatively small and would aim to supplement rather than replace PAYG, which would remain the mainstay of the Czech pension system.* Participation in the second pillar would be mandatory for those under 40 at the time the scheme is launched. It would be financed by carving out 3 percentage points of the pension insurance contributions for the second pillar. The scheme would be administered by the state, but the funds would be managed by an asset manager of members' choice and paid out upon retirement in the form of life-long annuity.



Source: Expert Advisory Group.

- *Parametric changes would improve the sustainability of the*

[1] The pension reform package agreed by the coalition partners in March 2011 draws on some, but not all, recommendations of the Expert Advisory Group.

PAYG pillar. These changes include unifying retirement ages for men and women by 2035 and increasing the retirement age by 2 months per year henceforth;[2] linking growth in pension benefits to CPI inflation;[3] and abolishing life-long widow or widower payments for new pensioners.

- *The EAG also proposed reducing social security contributions from 28 to 23 percent and unifying the VAT rate at 19 percent.* The change was meant to be broadly revenue-neutral and was aimed at increasing the efficiency of the economy.

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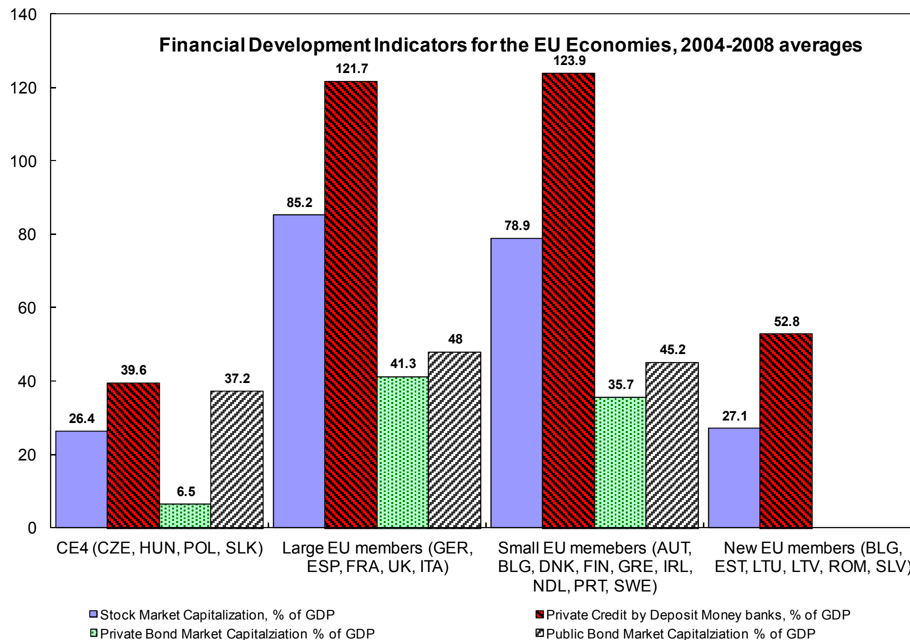
[2] Recent reforms have set to increase gradually the retirement age for men to 65 and for women to 62-65 depending on the number of children, without specifying further increases.

[3] Currently pension benefits are indexed to 2/3 CPI inflation plus 1/3 of nominal wage growth, with the government having discretion to grant increases above, but not below those suggested by the formula.

Appendix V. Financial Market Development in the CE4 Countries

Financial markets in the CE4 countries are still shallow compared to other advanced EU countries. While the depth, measured by market capitalization in percent of GDP, is comparable for the government bond market, that is not the case for private bond, private credit, and equity markets. Empirical analysis helps identify factors that slow down development of these segments. A staff working paper[1] links the measures of depth of each segment to macroeconomic fundamentals, institutional characteristics (such as rule of law, control of corruption, etc), and the international investment position (IIP) variables that help account for external financing.[2]



The results suggest that the relative shallowness of some of the financial markets cannot be explained only by macroeconomic variables.[3] However, incorporating indicators of institutional development and external funding eliminates the gap in case of the equity and the private credit markets, but not in the case of the private bond market, where a significant gap remains even when accounting for these factors. The analysis also suggests that development of the public bond market does not stimulate development of other financial markets via establishing a reference yield, but on the contrary suppresses it via crowding out.

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[1] A forthcoming working paper "Development of Financial Markets in Central Europe: the Case of the CE4 Countries" by Amat Adarov and Robert Tchaidze; the CE4 countries include the Czech Republic, Hungary, Poland, and Slovakia.

[2] The benchmark analysis was based on pooled OLS estimation with cluster-robust standard errors performed on a 3-year non-overlapping averages sample of 68 high-income and upper-middle-income countries spanning the period of 1994–2008. The main hypothesis tested was the sign and statistical significance of the CE4 dummy variable.

[3] Such as GDP per capita, inflation level and volatility, trade openness, etc.

INTERNATIONAL MONETARY FUND

CZECH REPUBLIC

Staff Report for the 2011 Article IV Consultation—Informational Annex

Prepared by the European Department

March 18, 2011

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II. Statistical Issues 5

Appendix I. Czech Republic: Fund Relations

(As of January 31, 2011; unless specified otherwise)

I. **Membership Status**: Joined 1/01/1993; Article VIII

II. **General Resources Account**

	SDR Million	% Quota
Quota	819.30	100.0
Fund holdings of currency	603.98	73.72
Reserve position in Fund	215.33	26.28
Lending to the Fund	89.50	

III. **SDR Department**:

	SDR Million	% Allocation
Net cumulative allocation	780.20	100.00
Holdings	794.89	101.88

IV. **Outstanding Purchases and Loans**: None

V. **Financial Arrangements**:

Type	Approval Date	Expiration Date	Amount Approved (SDR Million)	Amount Drawn (SDR Million)
Stand-by	3/17/1993	3/16/1994	177.00	70.00

VI. **Projected Payments to Fund**:
(SDR Million; based on existing use of resources and present holdings of SDRs):

	Forthcooming				
	2011	2012	2013	2014	2015
Principal					
Charges/Interest	0.01	0.01	0.01	0.01	0.01
Total	0.01	0.01	0.01	0.01	0.01

VII. **Exchange Rate Arrangement**:
The currency of the Czech Republic is the Czech koruna, created on February 8, 1993 upon the dissolution of the currency union with the Slovak Republic, which had used the Czechoslovak koruna as its currency. From May 3, 1993 to May 27, 1997, the exchange rate was pegged to a basket of two currencies: the deutsche mark (65 percent) and the U.S. dollar (35 percent). On February 28, 1996, the Czech National Bank widened the exchange rate band from ±0.5 percent to ±7.5 percent around the central rate. On May 27, 1997, managed floating was introduced. In the *Annual Report on Exchange Arrangements and Exchange Restrictions,* the de facto exchange rate regime of the Czech Republic is classified as a

free float. Since 2002, the CNB has not engaged in direct interventions in the foreign exchange market. International reserves have been affected by the off-market purchases of large privatization receipts and EU transfers and the sales of the accumulated interest. On January 31, 2011, the exchange rate of the Czech koruna stood at CZK 17.696 per U.S. dollar.

The Czech Republic has accepted the obligations of Article VIII and maintains an exchange system that is free of restrictions on the making of payments and transfers for current international transactions. The Czech Republic maintains exchange restrictions for security reasons, based on UN Security Council Resolutions and Council of the European Union Regulations that have been notified to the Fund for approval under the procedures set forth in Executive Board Decision No. 144-(52/51).

VIII. **Last Article IV Consultation**:
The last Article IV consultation with the Czech Republic was concluded on February 22, 2010. The staff report and PIN were published on March 4, 2010.

IX. **FSAP Participation and ROSCs**:
An FSAP was carried out in late 2000/early 2001. The Financial System Stability Assessment was considered by the Executive Board on July 16, 2001, concurrently with the staff report for the 2001 Article IV Consultation. ROSCs on: banking supervision; data dissemination; fiscal transparency; securities market; and transparency of monetary and financial policies were published on the Fund's external website on July 1, 2000.

X. **Technical Assistance**: See attached table.

XI. **Implementation of HIPC Initiative**: Not Applicable

XII. **Implementation of Multilateral Debt Relief Initiative (MDRI)**: Not Applicable

XIII. **Implementation of Post-Catastrophic Debt Relief (PCDR)**: Not Applicable

XIV. **Safeguards Assessments:** Not Applicable

Czech Republic: Technical Assistance, 1991–2010

Department	Timing	Purpose
FAD	Dec. 1991–Sept. 1993	Regular visits by FAD consultant on VAT administration
	March 1993	Public financial management
	September 1993	Follow-up visit on public financial management
	November 1993	Follow-up visit on public financial management
	January 1994	Follow-up visit on public financial management
	July 1994	Follow-up visit by FAD consultant on VAT administration
	May 1995	Follow-up visit on public financial management
	June 1995	Follow-up visit by FAD consultant on VAT administration
	June–July 1999	Medium-term fiscal framework
MCM	February 1992	Monetary management and research, foreign exchange operations, and banking supervision
	June 1992	Monetary research
	July 1992	Long-term resident expert assignment in the area of banking supervision (financed by EC-PHARE; supervised by the Fund)
	December 1992 and February 1993	Bond issuance and monetary management
	November 1993	Follow-up visit on bond issuance and monetary management and management of cash balances
	April 1994	Data management and monetary research
	January 1995	Foreign exchange laws (jointly with LEG) and external liberalization
	May 1995	Monetary operations
	May 1995	Banking system reform
	May 1996	Economic research
	April 1997	Banking legislation
	February–June 1999	Monetary research—inflation targeting
	June 1999	Integrated financial sector supervision (with WB)
RES	September 1999	Inflation targeting (financed by MFD)
	June–August 2000	Inflation targeting (financed by MFD)
	February–March 2005	Inflation targeting (financed by MFD)
STA	May 1993	Money and banking statistics
	February 1994	Balance of payments
	April 1994	Government finance
	November 1994	Money and banking statistics
	January–February 1999	Money and banking statistics
	May 2002	Monetary and financial statistics
	February 2003	Implementing GFSM 2001
	November 2006	GFSM 2001 Pilot Project

APPENDIX II: STATISTICAL ISSUES

Data provision is adequate for surveillance. The Czech Republic subscribed to the Special Data Dissemination Standard in April 1998, and metadata and annual observance reports for 2006-9 are posted on the Fund's Dissemination Standards Bulletin Board.

Data on core surveillance variables are available to the Fund regularly and with minimal lags (reporting to STA is less current, especially for foreign trade and the national accounts). Exchange rates and interest rates, set by the Czech National Bank (CNB), are reported daily with no lag. Gross and net international reserves are reported on a monthly basis with a one-week lag, as well as on a 10-day basis (with the CNB's balance sheet) with a one-week lag. Consumer prices, reserve money, broad money, borrowing and lending interest rates, central government fiscal accounts, and foreign trade are reported monthly with a lag of between one and four weeks. Final monetary survey data are available with a lag of about one month. GDP and balance of payments data are made available on a quarterly basis with a lag of two to three months. Since 2003, the main components of the balance of payments are also available monthly. Annual data published in the *Government Finance Statistics Yearbook* cover all operations of the general government, including the extrabudgetary funds excluded from the monthly data. These annual data are available on a timely basis. Monthly fiscal data published in *International Financial Statistics (IFS)* cover state budget accounts and are available with a two- to three-month lag.

While data quality is generally high, some deficiencies remain in certain areas, and the authorities are taking measures to improve data accuracy.

- National accounts data are subject to certain weaknesses. Value added in the small-scale private sector is likely to be underestimated, as the mechanisms for data collection on this sector are not yet fully developed and a significant proportion of unrecorded activity stems from tax evasion. Discrepancies between GDP estimates based on the production method and the expenditure method are large and are subsumed under change in stocks. Quarterly estimates of national accounts are derived from quarterly reports of enterprises and surveys. The estimates are subject to bias because of nonresponse (while annual reporting of bookkeeping accounts is mandatory for enterprises, quarterly reporting is not) and lumping of several expenditure categories in particular quarters by respondents. Large swings in individual components of spending and the overall GDP from quarter to quarter bring into question the reliability of the quarterly data and hamper business cycle analysis.

- Recently, revisions to procedures for processing export data have brought external trade statistics close to the practice in the EU. However, a continued weakness of foreign trade statistics is the unavailability of fixed base price indices for exports and imports; these indices are currently presented on the basis of the same month of the previous year.

- Monetary survey data provided to the European Department are generally adequate for policy purposes. However, large variations in the interbank clearing account float, especially at the end of the year, require caution in interpreting monetary developments. The CNB has made a major effort to identify the causes of these variations and adjust the data. In 2002, to meet EU statistical conventions, the CNB implemented the European Central Bank's (ECB) framework for collecting, compiling, and reporting monetary data. The data published in *IFS* are based on monetary accounts derived from the ECB's framework. The same set of accounts also forms the basis for monetary statistics published in the CNB's bulletins and on the website, which are thereby effectively harmonized with the monetary statistics published in *IFS*, although the presentation in *IFS* differs somewhat from the CNB's.

- Annual fiscal data on ESA-95 basis has been prepared by the Czech Statistical Office. Quarterly data for non-financial accounts have also been compiled and quarterly financial accounts are being prepared. The Ministry of Finance uses the ESA-95 methodology for the Convergence Program targets. The ESA-95 methodology differs from the national (fiscal targeting methodology) in terms of the coverage of the institutions (for example, the Czech Consolidation Agency is included in the central government under ESA definition) and inclusion of financial transactions and other accrual items (for example, called guarantees). The Ministry of Finance participated in the Fund's pilot project to transition to the statistical methodologies outlined in *Government Finance Statistics Manual, 2001*.

Czech Republic: Table of Common Indicators Required for Surveillance
As of March 9, 2011

	Date of Latest Observation	Date Received	Frequency of Data[7]	Frequency of Reporting[7]	Frequency of Publication[7]
Exchange Rates	3/9/11	3/9/11	D	D	D
International Reserve Assets and Reserve Liabilities of the Monetary Authorities[1]	Jan. 2011	Feb. 2011	D	M	M
Reserve/Base Money	Jan. 2011	Feb. 2011	M	M	M
Broad Money	Jan. 2011	Feb. 2011	M	M	M
Central Bank Balance Sheet	Jan. 2011	Feb. 2011	M	M	M
Consolidated Balance Sheet of the Banking System	Jan. 2011	Feb. 2011	M	M	M
Interest Rates[2]	3/9/11	3/9/11	D	D	D
Consumer Price Index	Feb. 2011	3/9/11	M	M	M
Revenue, Expenditure, Balance and Composition of Financing[3] – General Government[4]	2009	Jun. 2010	A	A	A
Revenue, Expenditure, Balance and Composition of Financing[3]– Central Government	Jan. 2011	Feb. 2011	M	M	M
Stocks of Central Government and Central Government-Guaranteed Debt[5]	2010 Q3	Dec. 2010	Q	Q	Q
External Current Account Balance	2010 Q3	Nov. 2010	Q	Q	Q
Exports and Imports of Goods and Services	Jan. 2011	Mar. 2011	M	M	M
GDP/GNP	2010 Q3	Dec. 2010	Q	Q	Q
Gross External Debt	2010 Q3	Dec. 2010	Q	Q	Q
International Investment Position[6]	2010 Q3	Dec. 2010	Q	Q	Q

[1]Includes reserve assets pledged or otherwise encumbered as well as net derivative positions.
[2] Both market-based and officially-determined, including discount rates, money market rates, rates on treasury bills, notes and bonds.
[3] Foreign, domestic bank, and domestic nonbank financing.
[4] The general government consists of the central government (budgetary funds, extra budgetary funds, and social security funds) and state and local governments. Data for the state budget are available with monthly frequency and timeliness, while data on extra budgetary funds are available only on an annual basis.
[5] Including currency and maturity composition.
[6] Includes external gross financial asset and liability positions vis-à-vis nonresidents.
[7] Daily (D); Weekly (W); Monthly (M); Quarterly (Q); Annually (A); Irregular (I); Not Available (NA).