INTERNATIONAL MONETARY FUND

IMF Country Report No. 17/168

CZECH REPUBLIC

June 2017

2017 ARTICLE IV CONSULTATION—PRESS RELEASE; STAFF REPORT; AND STATEMENT BY THE EXECUTIVE DIRECTOR FOR THE CZECH REPUBLIC

Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. In the context of the 2017 Article IV consultation with the Czech Republic, the following documents have been released and are included in this package:

- A **Press Release** summarizing the views of the Executive Board as expressed during its June 21, 2017 consideration of the staff report that concluded the Article IV consultation with the Czech Republic.
- The **Staff Report** prepared by a staff team of the IMF for the Executive Board's consideration on June 21, 2017, following discussions that ended on May 15, 2017, with the officials of the Czech Republic on economic developments and policies. Based on information available at the time of these discussions, the staff report was completed on June 6, 2017.
- An **Informational Annex** prepared by the IMF staff.
- A **Statement by the Executive Director** for the Czech Republic.

The documents listed below have been or will be separately released.

Selected Issues

The IMF's transparency policy allows for the deletion of market-sensitive information and premature disclosure of the authorities' policy intentions in published staff reports and other documents.

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INTERNATIONAL MONETARY FUND
COMMUNICATIONS DEPARTMENT

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June 26, 2017

International Monetary Fund
700 19th Street, NW
Washington, D. C. 20431 USA

IMF Executive Board Concludes 2017 Article IV Consultation with the Czech Republic

On June 21, 2017, the Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation[1] with the Czech Republic.

The Czech economy has been doing well. It grew by 2.4 percent last year, and unemployment is now the lowest in the European Union. Headline inflation is at the target and external deflationary pressures have faded. In addition, nominal incomes are growing solidly.

Given momentum in the economy, real GDP growth is projected to increase to 3 percent in 2017, largely driven by domestic demand. But labor shortages are expected to constrain growth to about 2½ percent over the medium term. With tight labor markets and strong aggregate demand, inflation is expected to reach 2.3 percent this year, before coming back to the 2 percent target.

Monetary policy has been accommodative, but the process of normalizing monetary conditions has begun. The koruna:euro exchange rate floor that had been in place for over three years was removed in April. Capital inflows had accelerated in the run-up to the exit from the koruna floor. But financial market reaction to the removal of the floor has been muted, with the koruna appreciating by 2½ percent so far. The policy rate remains unchanged at 0.05 percent.

The banking system remains liquid and profitable. Private credit has continued to expand. The Czech National Bank has responded to risks arising from the residential housing market with steadily tighter limits on loan-to-value ratios, but some borrowers are nonetheless becoming overstretched.

Fiscal overperformance last year, including from lower capital spending and strong tax revenues, led to a surplus of 0.6 percent of GDP. General government debt has declined to just above 37 percent of GDP, one of the lowest levels in the EU. Strong economic growth and better

[1] Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. A staff team visits the country, collects economic and financial information, and discusses with officials the country's economic developments and policies. On return to headquarters, the staff prepares a report, which forms the basis for discussion by the Executive Board.

revenue collection mean a surplus of 0.4 percent of GDP is expected for 2017; current policies and improved tax collection would imply continued small surpluses from 2018.

Some progress has been made on structural reforms, including measures targeted at R&D and the labor market. However, challenges remain, including with infrastructure, the planning framework for public investment, a high labor tax wedge, and shortages of skills. Additionally, complex administrative procedures for building permits limit the ability of housing supply to respond quickly to demand.

Executive Board Assessment[2]

Executive Directors agreed with the thrust of the staff appraisal. They welcomed the Czech Republic's economic performance, including solid growth and high employment. They expected steady growth to continue, as in staff's baseline scenario. At the same time, Directors noted that this relatively positive outlook is subject to risks and uncertainties, including those related to increasing household financial vulnerabilities and supply-side constraints. They encouraged the authorities to remain vigilant to the challenges ahead and to continue their policy efforts to promote growth and further boost resilience.

Directors welcomed the smooth exit from the exchange rate floor. They viewed the exchange rate path as an important source of uncertainty—they concurred that the exchange rate appears to be moderately undervalued, and that further appreciation is likely over the medium term, but the exchange rate could yet fluctuate as speculative positions are unwound. In the event of severe volatility, foreign exchange interventions could be used, but should not be employed to lean against natural structural adjustment. Directors supported the stance taken by the authorities and staff that, given the uncertainties, changes to the policy rate should be implemented cautiously.

Directors noted signs that some households are becoming overstretched as they borrow to finance house purchases. They concurred that, for the Czech National Bank to be able to guard against financial vulnerabilities, a wider range of tools is needed, and therefore supported recommendations that the CNB be given binding powers over loan-to-value, debt-to-income, and debt-servicing-to-income ratios. They agreed that the acceleration of credit growth raises concerns that lending standards might slip.

Directors agreed with staff's emphasis on supportive structural policies. Labor—especially skilled labor—is in short supply, and the economy faces unfavorable demographics over the long term. Policies should be directed to boosting labor supply and quality, such as by addressing incentives for women with small children to participate and older workers to delay retirement, boosting skills, and investing in infrastructure. Addressing infrastructure and housing supply constraints would in turn necessitate improving the regulatory environment.

[2] At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in summings up can be found here: http://www.imf.org/external/np/sec/misc/qualifiers.htm.

Directors concurred that, given the relatively low public debt ratio, fiscal policy should prioritize raising growth potential via modest increases in physical and human capital, rather than necessarily reducing debt. For such increases to be efficient and well targeted, the authorities should seek to establish a unified and transparent plan for infrastructure over the long term. Debt management should focus more on minimizing costs for an acceptable level of risk over the medium term, which would likely imply taking advantage of currently low rates and extending maturities.

Table 1. Czech Republic: Selected Economic Indicators, 2012–22

(Annual percentage change, unless noted otherwise)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
						Staff projections					
NATIONAL ACCOUNTS											
Real GDP (expenditure)	-0.8	-0.5	2.7	4.5	2.4	3.0	2.4	2.3	2.3	2.3	2.3
Domestic demand	-2.1	-0.6	3.4	4.8	1.4	2.9	2.8	2.7	2.8	2.8	2.8
Consumption	-1.4	1.1	1.6	2.7	2.4	2.8	2.6	2.4	2.4	2.4	2.4
Public	-2.0	2.5	1.1	2.0	1.2	2.3	2.2	2.0	2.0	2.0	2.0
Private	-1.2	0.5	1.8	3.0	2.9	3.0	2.7	2.6	2.6	2.5	2.5
Investment	-3.9	-5.1	8.6	10.0	-0.9	3.0	3.5	3.5	3.5	4.0	4.0
Exports	4.3	0.2	8.7	7.7	4.3	3.8	3.5	4.0	4.0	4.0	4.0
Imports	2.7	0.1	10.1	8.2	3.2	3.9	4.2	4.7	4.7	4.7	4.7
Contribution to GDP											
Domestic demand	-2.1	-0.6	3.1	4.5	1.4	2.8	2.6	2.6	2.6	2.7	2.7
Net exports	1.3	0.1	-0.4	0.1	1.0	0.2	-0.3	-0.3	-0.3	-0.4	-0.4
Investment (percent of GDP)	25.9	25.1	25.1	26.3	24.6	24.9	25.0	25.1	25.2	25.5	25.8
Gross domestic investments (percent of GDP)	26.2	24.7	25.9	27.4	26.2	26.5	26.5	26.6	26.7	26.9	27.1
Gross national savings (percent of GDP)	24.6	24.1	26.1	27.6	27.4	27.1	26.8	26.7	26.4	26.3	26.1
LABOR MARKET											
Employment	0.4	1.0	0.8	1.4	1.9	1.2	-0.4	-0.5	-0.3	-0.3	-0.3
Total labor compensation	2.3	0.7	3.5	4.6	5.9	6.4	4.0	4.1	4.0	4.1	4.0
Unemployment rate (in percent)	7.0	7.0	6.1	5.0	4.0	3.4	3.4	3.5	3.5	3.5	3.5
PRICES											
Consumer prices (average)	3.3	1.4	0.3	0.3	0.7	2.3	1.8	2.0	2.0	2.0	2.0
Consumer prices (end-of-period)	2.4	1.4	0.1	0.0	2.0	2.3	1.8	2.0	2.0	2.0	2.0
Producer price index (average)	2.1	0.8	-0.7	-3.2	-3.2	...	...	...	...	...	...
MACRO-FINANCIAL											
Money and credit (end of year, percent change)											
Broad money (M3)	4.8	5.8	5.9	8.0	6.5						
Private sector credit	2.6	3.7	3.6	6.5	7.8						
Interest rates (in percent, year average)											
Three-month interbank rate	1.0	0.5	0.4	0.3	0.3	...	...	...	...	...	...
Ten-year government bond	2.8	2.1	1.6	0.6	0.4	...	...	...	...	...	...
Exchange rate											
Nominal effective exchange rate (index, 2005=100)	118.4	116.9	111.6	110.3	112.7	...	...	...	...	...	...
Real effective exchange rate (index, CPI-based; 2005=100)	118.2	116.1	109.9	108.0	109.9	...	...	...	...	...	...
PUBLIC FINANCE (percent of GDP)											
General government revenue	40.5	41.4	40.3	41.4	40.5	40.9	41.0	41.0	41.1	41.1	41.1
General government expenditure	44.5	42.6	42.2	42.1	39.9	40.4	40.6	40.5	40.6	40.6	40.6
Net lending / Overall balance	-3.9	-1.2	-1.9	-0.6	0.6	0.4	0.5	0.6	0.5	0.5	0.5
Primary balance	-2.8	-0.2	-0.8	0.3	1.4	1.2	1.2	1.2	1.1	1.1	1.0
Structural balance (percent of potential GDP)	-1.5	0.1	-0.8	-0.6	0.5	0.2	0.3	0.4	0.4	0.4	0.5
General government debt	44.5	44.9	42.2	40.3	37.2	35.2	33.2	31.2	29.4	27.7	26.1
BALANCE OF PAYMENTS (percent of GDP)											
Trade balance (goods and services)	5.0	5.8	6.4	5.8	7.5	6.7	6.4	6.1	5.7	5.3	4.8
Current account balance	-1.6	-0.5	0.2	0.2	1.1	0.7	0.3	0.1	-0.2	-0.6	-1.0
Gross international reserves (billions of euros)	34.0	40.8	44.9	59.2	81.3	125.5	125.2	123.9	122.8	122.0	121.3
(in months of imports of goods and services)	3.6	4.5	4.1	5.6	7.7	11.2	10.5	9.8	9.2	8.6	8.1
(in percent of short term debt, remaining maturity)	94.3	103.1	88.0	105.6	122.3	160.5	163.2	163.9	163.9	163.2	161.7
MEMORANDUM ITEMS											
Nominal GDP (USD billions)	207.4	209.4	207.8	185.2	192.9	195.3	208.5	220.5	232.9	245.3	257.4
Population (millions)	10.5	10.5	10.5	10.5	10.6	10.6	10.6	10.6	10.6	10.6	10.6
GDP per capita (USD)	19,740	19,913	19,769	17,570	18,282	18,459	19,680	20,786	21,935	23,075	24,179
Real GDP per capita	-1.0	-0.6	2.8	4.3	2.3	2.7	2.2	2.1	2.1	2.2	2.2
Output gap (percent of potential output)	-1.9	-4.0	-2.5	0.2	0.4	0.6	0.5	0.4	0.5	0.3	0.1

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

CZECH REPUBLIC

STAFF REPORT FOR THE 2017 ARTICLE IV CONSULTATION

June 6, 2017

KEY ISSUES

The Czech economy is performing relatively well. It is a dynamic economy, open to investment and tightly integrated to global supply chains. Recent growth has been solid, employment is very high, and inflation is now back around its target, after numerous periods at zero during the past two years.

Nonetheless, the Czech economy faces challenges that will require a well-calibrated combination of monetary, macroprudential, financial, fiscal, and structural policies to ensure continued steady growth.

- In the immediate term, there is the question of interest rate policy in the aftermath of the recent exit from the koruna:euro exchange rate floor. Staff agrees the conditions to eliminate the floor were met, and policy rate increases in response to expected future price pressures should be gradual and guided by the data.

- A range of policies is needed to mitigate vulnerabilities arising from rapid growth in real-estate related lending. Demand-side measures should focus first on a wider range of macroprudential tools more tightly enforced, supported by rigorous supervision of lending standards. However, other measures, including on taxes and affecting housing supply, are also likely to be needed.

- Over the long run, the economy faces challenges to further progress on convergence. Measures should target labor participation incentives; training and skills; connectivity and infrastructure, supported by improved expenditure efficiency (notably in healthcare); improved tax compliance; and reduced regulatory burdens on small firms and start-ups. Given the relatively low public debt ratio, fiscal policy should prioritize raising growth potential via modestly higher investment in physical and human capital.

Approved By
Philip Gerson and Bob Traa

Discussions took place in Prague during May 2–15, 2017. The staff team comprised Messrs. Scott (head) and Harrison (EUR), Ms. Shabunina (EUR), and Mr. Hansen (FIN). Ms. Erbenova and Mr. Stradal (OED) attended some meetings. Mses. Calixto and Caselli and Mr. Smith (all EUR) assisted in the preparation of the staff report. The staff team met with Czech National Bank Governor Rusnok, CNB Board Members, Finance Minister Babiš, Deputy Prime Minister Belobradek, Deputy Minister Pavelek, other senior officials, and representatives from the private sector, academia, and trade unions. The Czech Republic is an Article VIII country (Informational Annex: Fund Relations). Data provision is adequate for surveillance (Informational Annex: Statistical Issues).

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TABLES

ANNEXES

CONTEXT

1. The Czech economy is doing well overall. Growth is solid and income inequality is low relative to that of peers.[1] Employment is high and the unemployment rate low. After falling to zero during the past two years, CPI inflation is back toward the target level, matched by strong nominal income growth. The public finances are in very good condition, and the banking system is liquid and profitable.

2. Nonetheless, the Czech economy faces challenges. In particular, three issues, corresponding to immediate, medium-term and longer-term objectives, motivate discussion about the setting of monetary, macroprudential, financial, fiscal, and structural policies:

- *The transition from the koruna floor:* From November 2013 to April 2017, the Czech National Bank (CNB) used the exchange rate as an instrument to mitigate deflationary pressures by enforcing a floor on the koruna:euro rate. With the floor now removed, two questions arise: What is the best path for interest rates to avoid overheating while also mitigating potential pressures on the real economy? And what should be the reaction to exchange rate volatility?

- *Credit and real estate:* Credit and real estate prices have been growing strongly. Household debt has been increasing, albeit from low levels, and some households are borrowing at high leverage and income multiples. These developments raise questions about whether existing macroprudential tools are sufficient to address emerging vulnerabilities and what support is needed from other policies.

- *Long-term transition*: The share of total investment in GDP is relatively high, but workforce growth is expected to be low over the long term, given demographics and the already high employment rate, and productivity growth has recently slowed. The real exchange rate can be expected to appreciate over the long term, challenging an economy concentrated on cost-competitive manufacturing.

3. National elections are scheduled for 2017 and 2018. The current government is a coalition of three parties (¶47). General elections are scheduled for October, and presidential elections for early 2018.

RECENT DEVELOPMENTS

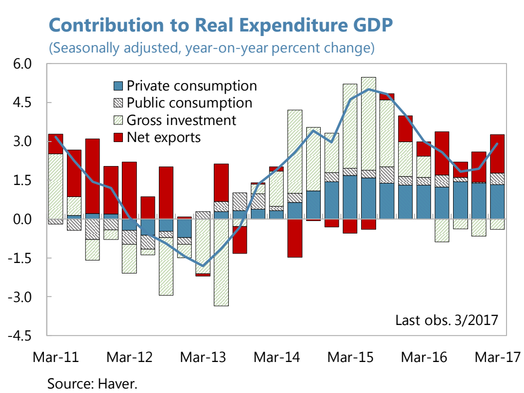
4. The koruna:euro exchange floor has been removed. The decision was widely expected, although the exact timing was uncertain. Financial market reaction so far has been muted. The koruna appreciated by 1½ percent on the day—a small change compared with other episodes of leaving exchange rate pegs, notably the Swiss franc in January 2015—and has

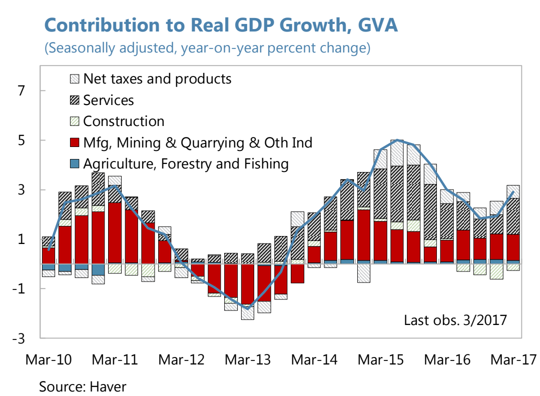
[1] Gender inequality, however, is more pronounced—see EC country report (2016).

appreciated further by 1 percent.[2] Some selling can be expected through the rest of the year as speculative positions are unwound. Forward rates indicate that markets expect appreciation of another 0.2 percent by the end of the year. The sovereign yield curve shifted up, more so at the short end, consistent with unwinding of speculative koruna positions and increased expectations of continued consumer price pressures and resultant policy rate increases to come. The CNB's balance sheet is now smaller than in April (Figure 1).

5. Capital inflows accelerated in the run-up to the exit from the koruna floor. Inflows during January–March amounted to 8 percent of GDP per month, bringing the stock of foreign exchange reserves to around 70 percent of GDP, more than three times the level when the floor was introduced. Most capital inflows went to bank deposits and government securities, reducing short-term yields to historical lows (Figure 2 and Annex VII: Capital Inflows).

6. Growth has continued to be solid. Real GDP is estimated to have grown by 2.4 percent in 2016. This was just over half the rate recorded in 2015, mainly because of slower absorption of EU funds. Private consumption, supported by sustained real wage and employment gains, was strong, while business investment was positive (although total investment fell). Net exports also made strong contributions, and the manufacturing sector continues to perform well. Staff estimates the output gap to be slightly positive.





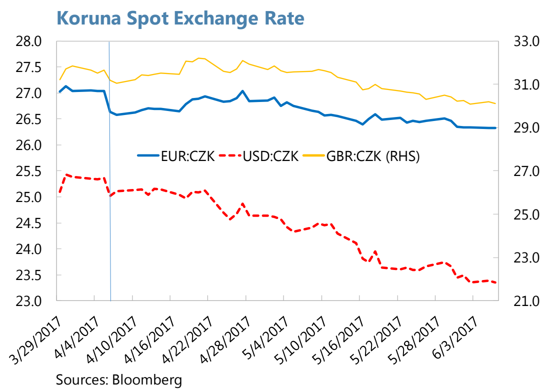
7. The economy is reflating (Figure 3, charts 1–3). Headline inflation is now at the 2 percent target (April). Some of this is from rebounding food and energy prices and euro area producer prices, but core inflation has also increased, to 2.4 percent. External deflationary pressures have faded, with import prices rising by 5.8 percent in February. Domestic industrial producer prices are growing for the first time since December 2013.

8. The labor market appears tight (Figure 3, charts 3–6). Unemployment has declined further to record low levels, despite increasing participation, reaching 3.3 percent in April. Wages grew by 5.3 percent in Q1:2017, with added pressure from the public sector, and

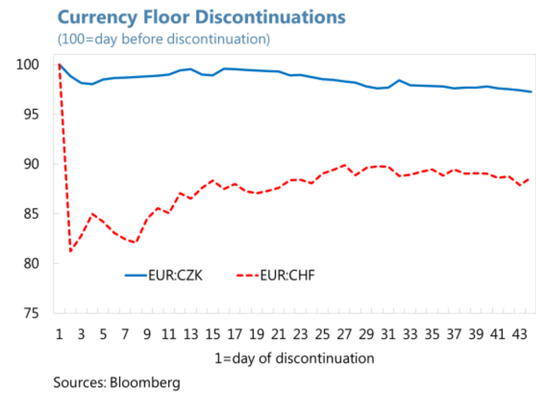
[2] Data on underlying gross flows are not available.

Figure 1. Czech Republic: Financial Market Developments Since the Removal of the Exchange Rate Floor

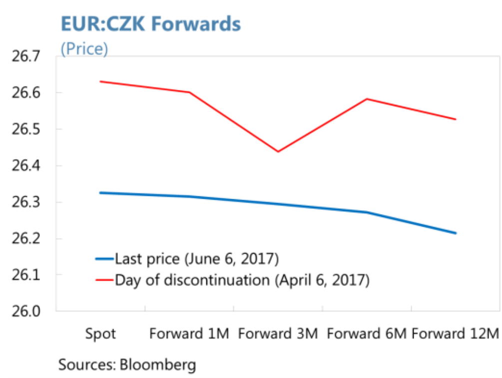
The koruna has appreciated after the removal of the floor…



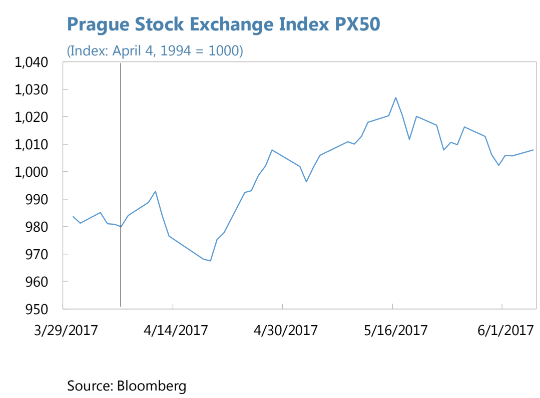
… although modestly when compared to the appreciation of the Swiss franc.



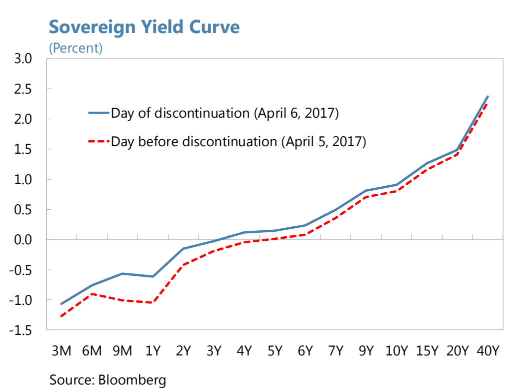
The forwards market pointed to further appreciation.



Stock market reaction has been mild.



The yield curve has shifted upwards…



… consistent with expectations of faster monetary policy tightening.

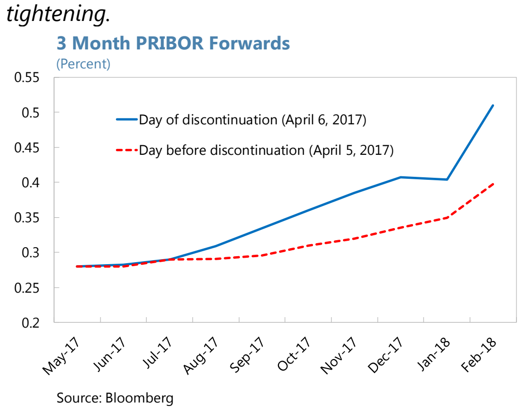
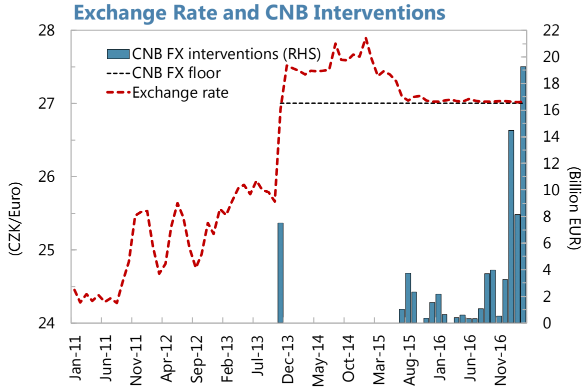


Figure 2. Czech Republic: The Period of the Koruna:Euro Floor

The central bank had intervened aggressively to maintain the floor of 27 koruna to the euro…

Exchange Rate and CNB Interventions

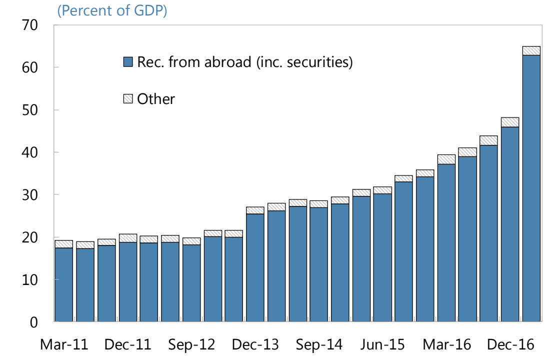


Sources: Czech National Bank; and Haver.

…leading to increases in the central bank's balance sheet.

Czech National Bank Balance Sheet: Assets

(Percent of GDP)

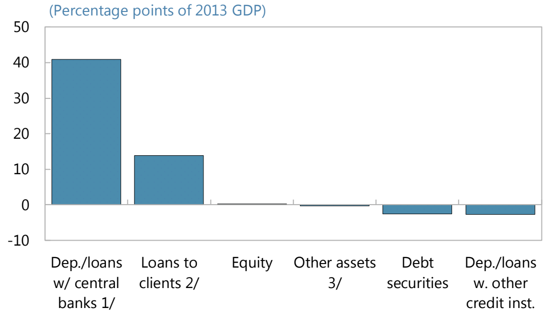


Source: Haver.

Commercial banks also expanded their balance sheets…

Change in Banking Sector Assets, 2013M10 to 2017M4

(Percentage points of 2013 GDP)

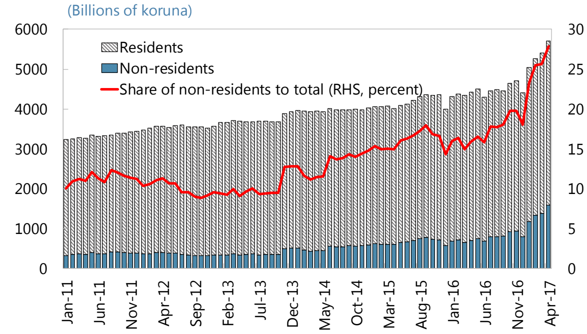


Sources: Czech National Bank; and IMF staff calculations.
1/ Includes cash, 2/ includes other receivables, 3/ includes money market funds units and shares, fixed assets and other on-balance sheet assets.

…mainly balanced by domestic deposits, but the share of foreign deposits has increased.

Sum of Banks' Received Loans and Deposits by Residency 1/

(Billions of koruna)

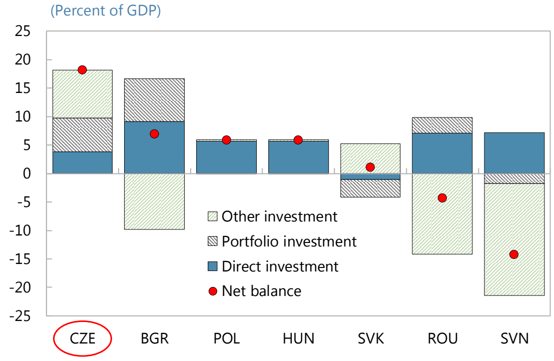


Source: Czech National Bank.
1/ Residency refers to nationality of lender/deposit owner.

Capital flowed into Czech bank deposits and government securities…

Cumulative Capital Inflows 2013Q4-2016Q4

(Percent of GDP)

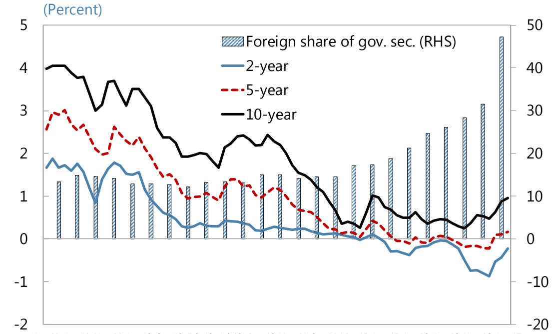


Source: Haver.

…driving down sovereign yields.

General Government Bond Yields

(Percent)

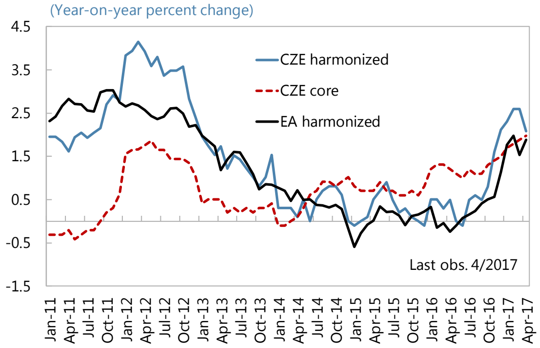


Sources: Haver; Czech National Bank; and IMF staff calculations.

Figure 3. Czech Republic: Inflation and Capacity

Inflation has rebounded and is now at the target…

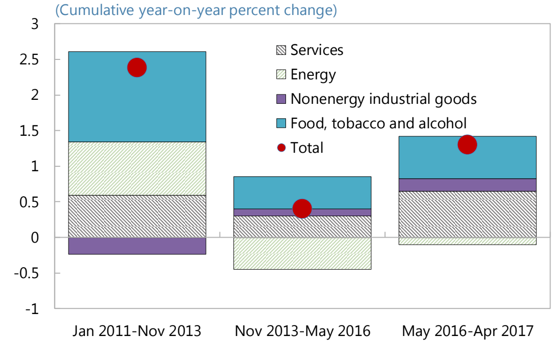
Consumer Price Index
(Year-on-year percent change)



Source: Haver.

…driven by reduced deflationary pressure from energy prices, but also services and other goods…

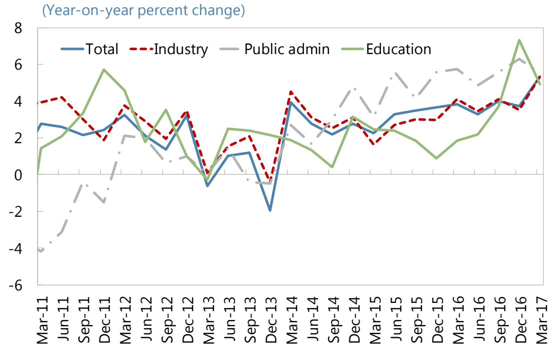
Contribution to Inflation
(Cumulative year-on-year percent change)



Source: Haver.

…consistent with nominal wage increases.

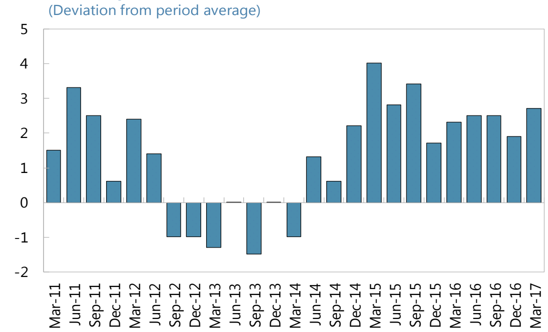
Wages by Industry
(Year-on-year percent change)



Source: Haver.

Industry is running above capacity…

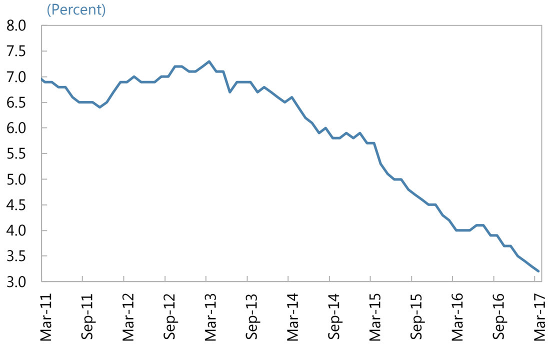
Capacity Utilization
(Deviation from period average)



Sources: Haver.

…and unemployment is very low…

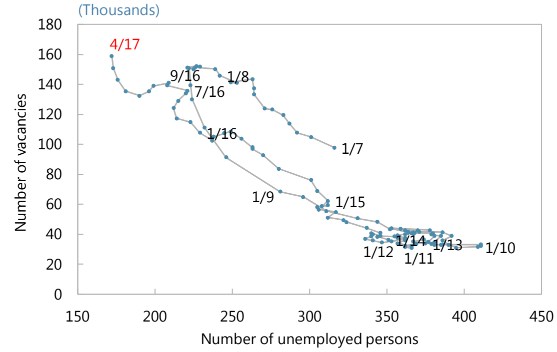
Unemployment Rate
(Percent)



Source: Haver.

…with vacancy rates remaining high.

Beveridge Curve
(Thousands)



Source: Haver.

supported by an increase in the minimum wage. Vacancies are high; businesses note rising labor shortages as a constraint on future growth (Figure 9, chart 3).

9. **Credit growth continues to be strong.** Private credit continues to expand quickly—ahead of nominal incomes for a second year—albeit from a low base. Real estate activities account for around 65 percent of the growth in non-financial corporate loans. Mortgages have seen the strongest increases in household lending, aided by declining lending rates, but consumer credit is also expanding rapidly.

10. **Public debt is low and the public balance in surplus.** Lower capital spending and strong tax revenues are estimated to have resulted in a surplus of 0.6 percent of GDP in 2016, whereas a deficit had been projected in the budget. The improvement was mainly because of stronger tax revenues, expected to persist, higher social security contributions, and capital underspending. General government debt has declined to just above 37 percent of GDP, mainly because of the improved fiscal balance, a negative interest-growth rate differential, and retroactive cash disbursement of EU funds from the European Commission.

11. **Net trade has improved, aided by a slightly undervalued currency** (Figure 4).

- The current account balance reached 1.1 percent of GDP in 2016, boosted by net exports reaching 7.5 percent of GDP. Given substantial inward FDI, the primary income deficit is large (5.8 percent of GDP). The net international investment position improved to -25 percent of GDP; steady improvement since 2015 has been driven mainly by accumulation of official reserves. NIIP without official reserves stands at -72 percent of GDP, but most of that—53 percentage points—is accounted for by FDI, and is therefore expected to be stable.

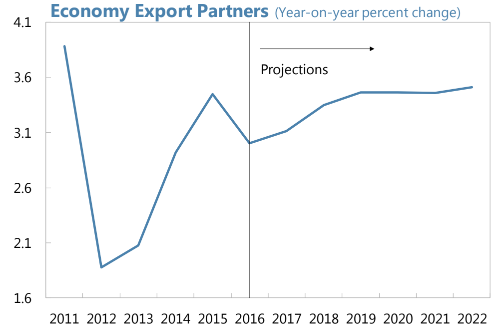
- Increasing costs and prices have caused the real effective exchange rate to appreciate during the period of the floor. Staff estimates that the exchange rate remains moderately undervalued: the current account gap model and external sustainability approach indicate an undervaluation of about 4 percent (Annex I: External Assessment). Since the removal of the floor, the nominal exchange rate has appreciated by 2½ percent.

12. **External factors are largely favorable**:

- Demand from trading partners is strong; in particular, near-term indicators for Germany and most euro area countries are exceeding expectations. Steady external demand growth is expected to continue.

- External deflationary pressures have dissipated, as oil prices have stabilized. Inflation is expected to pick up further in most advanced economies.

Nominal GDP Growth, Weighted by Advanced Economy Export Partners (Year-on-year percent change)



Source: WEO, GEE database.

However, last year's improvement in the terms of trade will likely fade due to higher energy prices.

13. Domestic factors point to continued momentum in the short term:

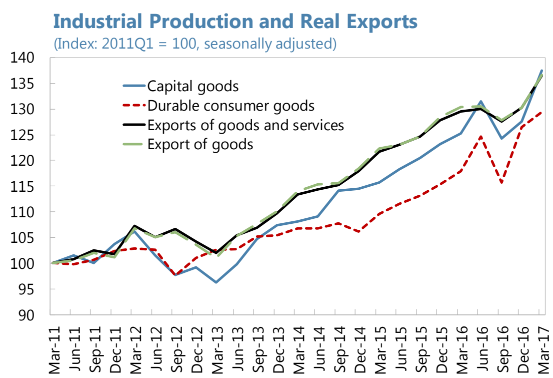
- High-frequency indicators, such as consumer sentiment surveys, point to increased domestic demand (Figure 5). Recent strong employment and wage growth suggest continuing robust consumption, notwithstanding some tightening in credit conditions.

- On current policies, there will be a small fiscal stimulus this year. Increased EU funds absorption will boost both public and private investment.

- For the baseline projection, the exchange rate is assumed to appreciate moderately, followed by a gradual increase in policy rates.

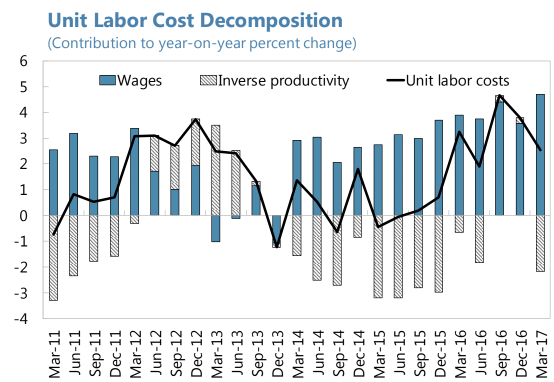
Figure 4. Czech Republic: Competitiveness

Export growth has been strong over many years, primarily of goods…



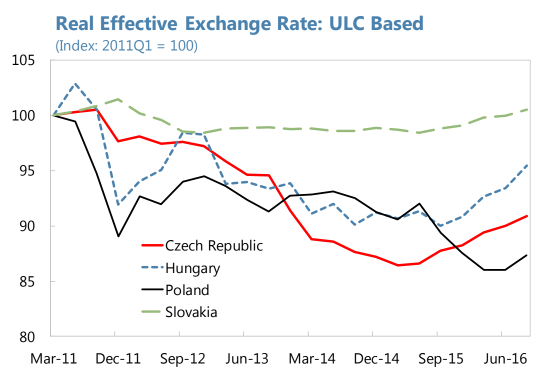
Source: Haver.

…but recently productivity growth has declined and labor costs have escalated…



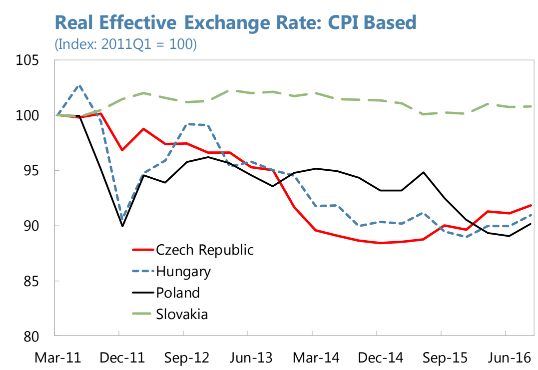
Source: Eurostat.

…implying real appreciation both in terms of production costs…



Source: Haver.

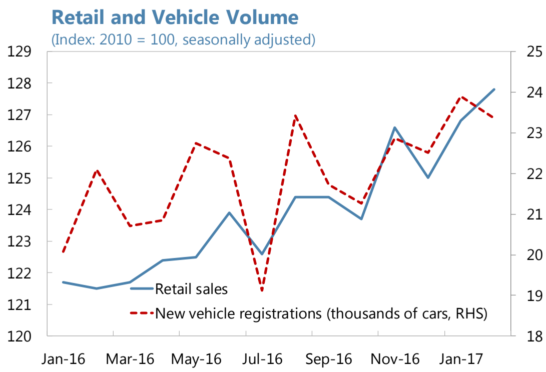
…and consumer price levels.



Source: Haver.

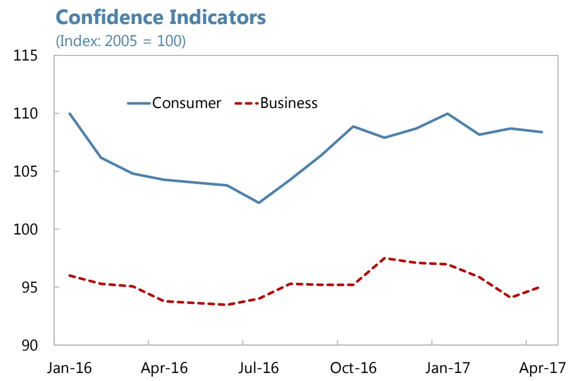
Figure 5. Czech Republic: Near-Term Growth Momentum

Retail sales have continued at trend, while vehicle sales have bounced back…



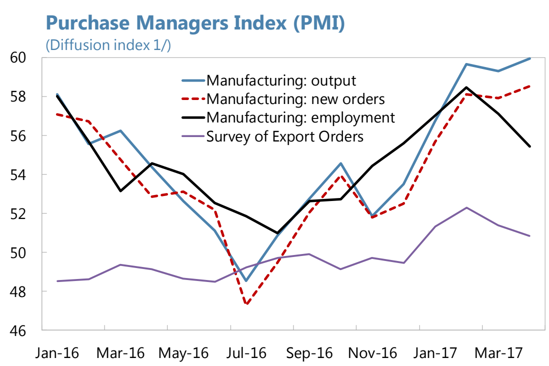
Source: Haver.

…consistent with improving household and business confidence…



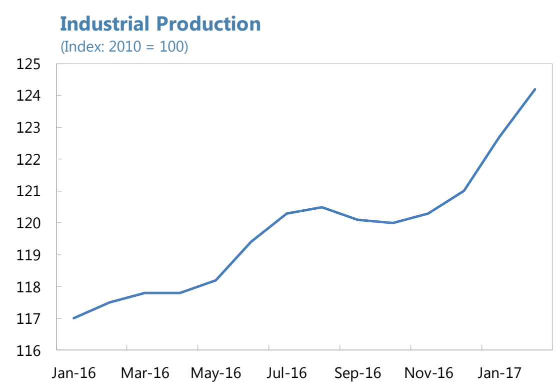
Source: Haver.

… increased export orders and stronger manufacturing…



Source: Haver.
1/ 50+ = expansion.

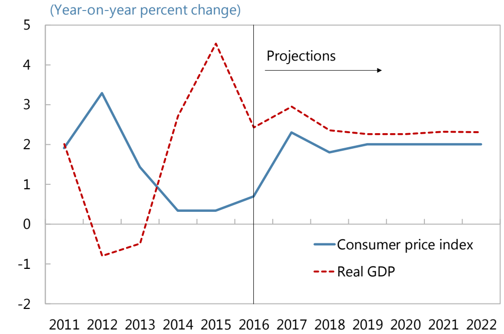
…expanding industrial production.



Source: Haver.

14. On these assumptions, growth is projected to increase further this year, and inflation to overshoot. Given momentum in the economy, real GDP growth is projected to increase to 3 percent in 2017, accounted mainly by domestic demand. Higher exports are almost entirely offset by imports, owing to the high import intensity of investment and a recovery in imported consumption. Labor tightness and aggregate demand pressures see inflation increasing to 2.3 percent (from 0.7 percent in 2016), and outweigh deflationary pressure from the moderate nominal exchange rate appreciation.

GDP and Consumer Price Index
(Year-on-year percent change)



Sources: Haver; and IMF staff projections.

15. Economic activity is expected to decelerate next year and converge to potential growth in the medium-term. A gradual increase in policy rates, in addition to exchange rate appreciation, would rein in demand and inflation in 2018. Supply constraints from the labor market (with unemployment already significantly below the NAIRU and declining working age population) will also slow growth. Inflation is projected to come back to target in 2019 and the output gap is projected to close by the end of the projection period. In comparison to other forecasts, growth and inflation projections for 2017 are high, but those for 2018 are low.

Czech Republic: Forecast Comparison

	GDP growth		Inflation		Budget balance	
	2017	2018	2017	2018	2017	2018
IMF	3.0	2.4	2.3	1.8	0.4	0.5
CNB	2.9	2.8	2.5	2.0	1.1	1.1
MoF	2.5	2.5	2.4	1.7	0.4	0.3
EC	2.6	2.7	2.0	1.8	0.1	0.2
OECD	2.5	2.6	1.8	2.2	-0.2	0.1
Consensus	2.6	2.6	2.3	2.0	-0.4	-0.4

16. Risks are roughly balanced (RAM p.47).

- *Domestic risks:* Unwinding of large financial positions built up by foreign investors ahead of the floor's removal could cause the exchange rate to be erratic. Another important risk to the forecast is the sustainable growth rate: a significant increase in labor productivity is assumed in the face of a shrinking workforce. Cheaper imported goods could support higher consumption, and better-than-expected absorption of EU funds would boost investment. Policies could change after the upcoming elections.
- *External risks:* Weaker or stronger-than-expected demand from trading partners would have a high impact on growth.[3] Increased protectionism is a notable downside risk, and

[3] Czech exports are now 80 percent of nominal GDP, over twice the ratio of 20 years ago.

medium-term investment is sensitive to changes in the EU's budget. An increase in global interest rates would increase expected returns to foreign investment in the country.

Authorities' views

17. There was broad agreement on the economic outlook and the balance of risks. The authorities expect growth to increase in 2017 and to persist into 2018, driven mainly by robust growth in household consumption and a recovery in investment. The CNB is slightly more optimistic than staff on potential output, though the authorities agreed that there is significant uncertainty about productivity growth assumptions. The authorities expect inflation to overshoot, before retreating in 2018 to the target level as monetary conditions gradually tighten and base effects recede. Inflation is projected to stay close to the target over the monetary policy horizon; the balance of inflation risks is somewhat to the upside. The authorities assess the exchange rate as the key source of uncertainty, with the CNB considering the koruna to be "overbought" (i.e. that large speculative positions were taken on the basis of overly-optimistic expectations of capital gains) and likely to be volatile. The authorities also considered domestic and foreign political risks to be important, noting uncertainty over the impact of the UK's departure from the EU as posing particular risks to export demand, both directly and through other EU countries.

POLICY DISCUSSIONS

A. Monetary Policy

18. The CNB has removed the koruna:euro floor. The decision means the CNB resumes using repo tenders as its main instrument to pursue its 2 percent inflation target.

- At the announcement of the floor's removal, on April 6, the CNB stated that it stands ready to intervene against "excessive" exchange rate fluctuations, including "excessive appreciation" of the exchange rate that would pose risks to the fulfilment of the inflation target and "sound economic developments".

- The CNB stated that the removal of the floor should be followed by a gradual increase in interest rates, although negative interest rates could be used in exceptional circumstances. The CNB has also stated that it will wait for the koruna to find its new equilibrium value before increasing interest rates.

19. The recent decision to remove the floor was appropriate. Inflation is at the target, external deflationary pressures have faded, and the real exchange rate remains moderately undervalued, even with increasing domestic price levels. In addition, the economy is running slightly above capacity, labor markets are tight, and credit growth is high.

20. A gradual, data-driven approach to raising interest rates is appropriate, and the exchange rate should be allowed to find its value.

- *Caution about FX interventions*. If market conditions become disorderly, some moderate foreign exchange intervention (FXI) could be valid.[4] The exchange rate might yet be volatile as speculative positions are unwound, especially through to the end of the year. From there, the exchange rate will likely appreciate further as the economy finds its way back to equilibrium after removing the floor (Annex I). FXI should not be used to counter structural moves in the exchange rate, which would interfere in macroeconomic adjustment and could cause confusion about monetary policy objectives.

- *The case for gradualism:* A cautious approach to raising interest rates is warranted. As noted, the exchange rate path is a key risk to the forecast, and could have a material effect on inflation. It is possible that the exchange rate could appreciate more quickly than anticipated in the baseline and that the pass-through to CPI inflation could be more extensive. Households have had an extended period of very low interest rates and might be unprepared for rapid interest rate increases. In this situation, it is better to increase interest rates gradually now that the floor has been removed. Such a policy risks allowing the buildup of a larger output gap and inflation overshooting the target further. But that scenario is preferable to one in which rapid tightening of rates accelerates exchange rate appreciation and leads to a sharp fall in output and inflation, as policy rates are already at the effective zero bound (Selected Issues Paper).

21. The CNB does not regard balance sheet losses from revaluations of FX reserves as a threat to its independence.

- The CNB currently intends to maintain its foreign exchange reserves, favoring interest rates as the instrument to adjust overall monetary conditions. Absent further interventions, a nominal annual appreciation of 3 percent would imply an annual balance sheet loss of 2 percent of GDP. Steady appreciation over the medium term would imply protracted losses, assuming no changes in FX reserves management.

- The CNB has a long tradition of operating independently, until recently with negative equity, and balance sheet losses have been experienced before.[5] By law, up to 100 percent of any year's surplus can be retained by the CNB to replenish reserves, although the relevant legislation does not provide for recapitalization in the currently unlikely case of capital shortfalls.[6]

[4] See also Box 1 in IMF (2016), "Capital Flows—Review of Experience with the Institutional View".

[5] Archer and Moser-Boehm (2013) argue that the Czech Republic, Chile, Israel, and Mexico have had policy success despite long periods of negative central bank equity, owing in part to clear institutional mandates and high levels of accounting transparency. See "Central Bank Finances", BIS Papers No. 71.

[6] Similarly, the Swiss National Bank, which also imposed an exchange rate floor, has a contingent distribution scheme that halts distribution to federal and cantonal governments when profits are negative. However, the SNB agrees annual distributions with the Department of Finance five years ahead. This arrangement implied distributions of CHF 2.5 billion in 2008 and 2010 despite negative annual profits in those years largely because of revaluation losses. The CNB has no such agreement with the Ministry of Finance.

Authorities' views

22. The authorities agreed on caution in the use of FX interventions and the need for tightening monetary policy gradually.

- They emphasized that potential FX interventions should not be used to lean against long-run trends in the exchange rate, but rather to ensure that price, financial and macroeconomic stability is sustained. They did not see exchange rate fluctuations so far as excessive.

- They also broadly agreed with the need for only gradually raising the policy rate, and that raising interest rates sooner than warranted by economic conditions would be a bigger policy mistake than overestimating the appreciation of the koruna and thus raising interest rates too late.

- They noted that the strategy for managing the FX reserve is still being developed, and reiterated the position that potential balance sheet losses are not a threat to central bank independence. Indeed, the CNB has previously experienced such losses without questions arising about independence. They also noted that losses from revaluations should be evaluated together with other investment returns.

B. Macroprudential Policy

23. Credit has rebounded, especially for real estate. With the expansion of the central bank's balance sheet, commercial banks' reserves with the CNB have correspondingly increased. Banks have also expanded lending as the economy has reflated, notably to commercial firms for real estate activity and households for mortgages. Overall lending has been increasing faster than trend nominal incomes (Figure 6). Bank lending standards have been loosening for households and non-financial corporations; there are some signs that those for housing loans have recently tightened, but the growth rate in mortgage lending to households continues to be strong. In addition, unsecured consumer credit is accelerating, which raises questions about potential "leakages" from mortgages to consumer credit lending as LTV recommendations for mortgages are tightened.

Growth in loans (percent, end of period, y/y)

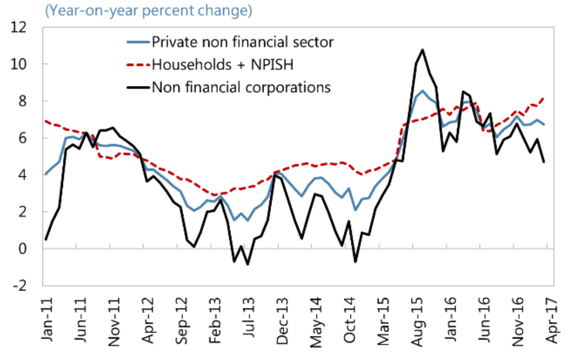
	2010	2011	2012	2013	2014	2015	2016
Total	3.5	6	2.4	6.5	4.8	5.6	6.9
Non-financial corporations	-0.3	6.1	0.9	3.8	0.9	5.3	8.5
– real estate activity (NACE L)	6	11.5	0.7	6.3	3.6	5.6	12.7
Households	7	5	3.6	4.5	4.5	8.2	8.2
– loans for house purchase	6.4	6.1	4.8	5.2	5.6	8	7.8
– consumer credit	7.3	-1.6	-0.7	0.4	-0.6	8.9	9.7
Sole traders	-5.4	-5.5	-5	1	-4	0	0.2

Note: 2016 is March 2016.
Source: Czech National Bank, Financial Stability Report 2016.

Figure 6. Czech Republic: Credit Markets

Credit growth is dynamic…

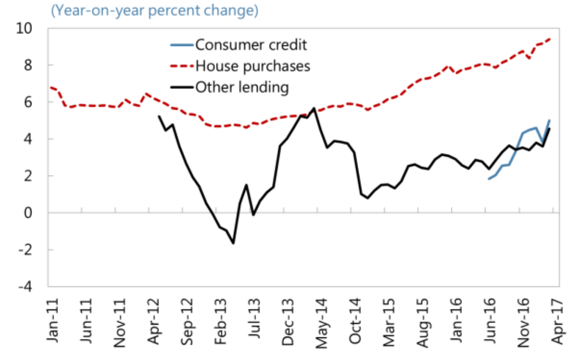
Private Sector Credit
(Year-on-year percent change)



Source: ARAD database.

…especially within mortgages…

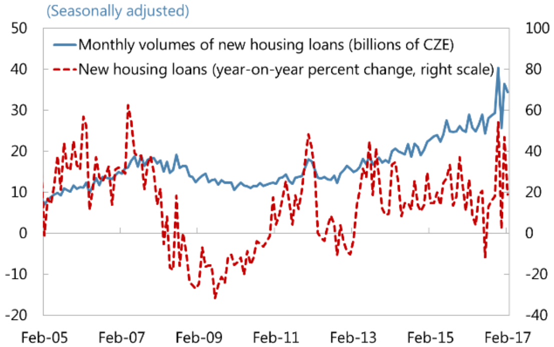
Household and NPISH Credit
(Year-on-year percent change)



Source: ARAD database.

…where the growth of new loans is rapid…

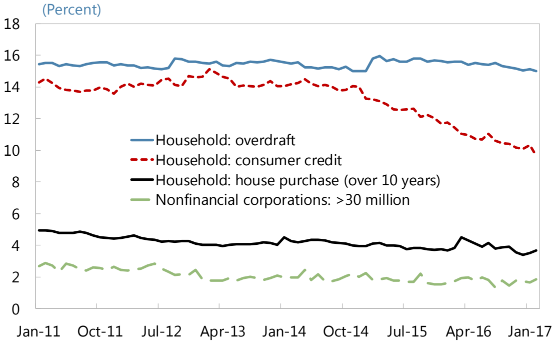
New Housing Loans to Housholds
(Seasonally adjusted)



Source: Czech National Bank.

…fueled by lower lending rates…

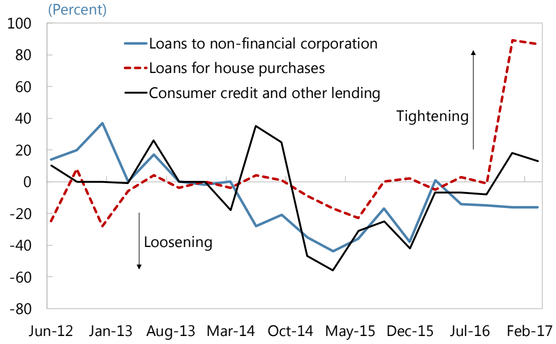
Lending Rates
(Percent)



Source: Haver.

…and a period of looser credit standards.

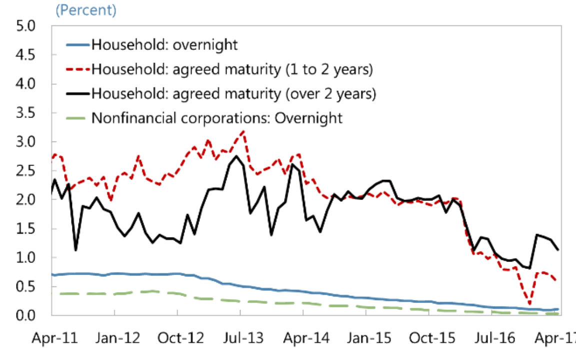
Credit Standards
(Percent)



Source: Czech National Bank lending survey.

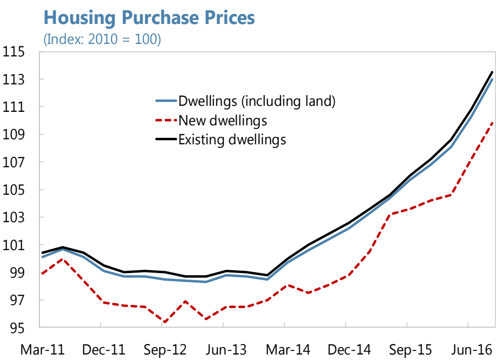
Meanwhile, deposit rates have trended down.

Deposit Rates
(Percent)

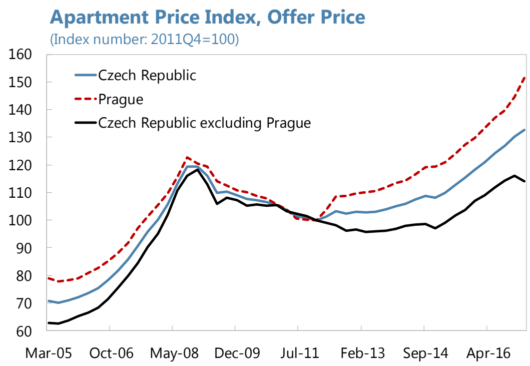


Source: Haver.

24. Real estate values have also been increasing quickly. House prices have escalated rapidly from a post-crisis trough in 2012, both in Prague and outside the capital region. The increases are in line with those in neighboring countries, and simple metrics—price to income and price to rent ratios—do not yet show current house price levels to be unusually high (Figure 7, charts 1–2). However, data gaps preclude a more conclusive analysis—in particular, an aggregate price index for the commercial real estate market is not publicly available.



Source: Czech Statistical Office.



Source: Haver.

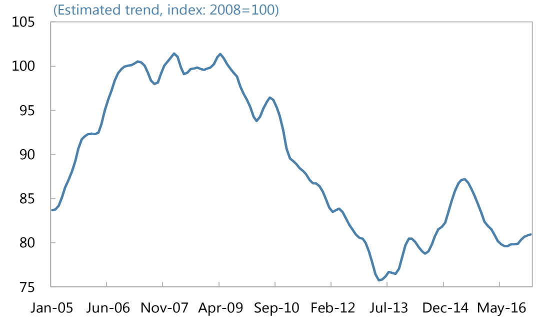
25. Household financial vulnerabilities appear to be increasing. Overall household net worth has rebounded from its trough in 2009, but overall household debt has been increasing rapidly, and within that, many households have been borrowing at high LTV ratios and/or taking loans at high loan-to-income multiples, making them more vulnerable to house price, personal income, or interest rate shocks (Figure 7, charts 4–6).

26. Macroprudential responses are welcome, but the CNB's tools are limited. Over the last two years, the CNB has introduced and gradually tightened recommendations on maximum LTV ratios for both individual mortgages to households and the share of mortgages that banks can extend above a certain LTV threshold each quarter. In addition, a new consumer law requires credit providers to test the affordability of loans (Annex VI). However, the CNB still lacks powers of *direction* (not simply recommendation) over maximum loan-to-value (LTV), debt-to-income (DTI), and debt-service-to-income (DSTI) ratios.

27. The tax treatment of housing is relatively lenient. Property taxes are levied on size rather than value, although municipalities do have discretion to set rates differently. A 4 percent transaction tax applies. There is no inheritance tax.

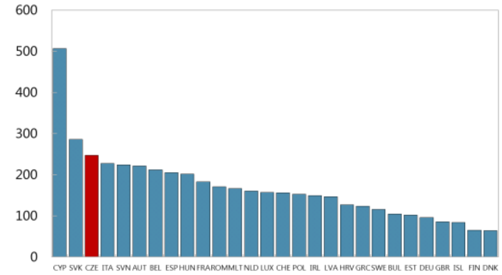
28. House price increases are amplified by inelastic supply. Construction declined considerably after the global financial crisis, and has not recovered significantly, despite the increase in house prices. In addition, the processes for obtaining necessary permits are long, complex, and often inconsistent, limiting the ability of supply to respond quickly to demand.

Construction Output
(Estimated trend, index: 2008=100)



Source: Haver.

Time to Obtain Construction Permit 1/
Days



Note: 1/ Needed time to complete all neccesary procedures to build a warehouse.
Source: *Doing Business Database*, World Bank

29. The risks associated with these developments warrant a wider range of tools than currently employed, including to create scope for a more moderate increase in interest rates going forward. The distribution of mortgages over different LTI ratios has not materially changed, despite restrictions on LTV ratios (Figure 7, charts 5–6). Staff recommends the following measures:

- That the CNB be given powers to limit LTV, DTI, and DSTI ratios. Such tools are increasingly standard for central banks, including those in advanced economies with inflation targets. Legislation currently under review providing powers over these tools should be put in place quickly without being watered down further—the tools should not be thought of as substitutes for each other, and prudential tools (such as bank capital requirements) are not well suited to addressing borrower vulnerabilities (Annex VI). If data limitations slow down the implementation of debt limits, then loan-to-income limits should be introduced.

- That the introduction of LTV, DTI, and DSTI ratios is complemented with improved data on household balances. Implementation of debt ratios requires information on debt levels for each household across loan providers. Some banks exchange data on client loans, but also rely on self-assessment questionnaires. All credit providers should participate in and have access to reliable data on household debt levels and interest payments, especially as a substantial number of loan applications are submitted through mortgage brokers (who, compared to banks, could have more incentive to concentrate on generating volume than maintaining credit quality).[7]

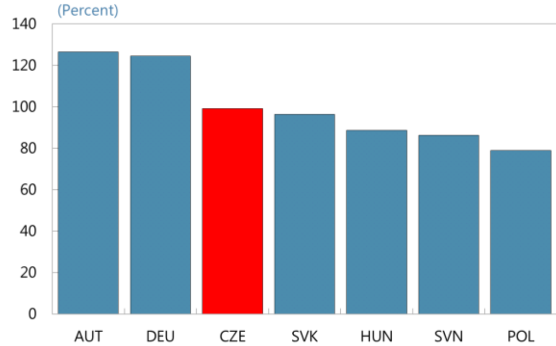
- To the extent that there are also distortions and constraints arising from tax incentives, lender incentives, and the supply side, then supervisory, fiscal, and structural initiatives should be taken to support macroprudential tools (sections C, D, and E).

[7] During the sub-prime crisis in the US, some of the loans with the highest default rates were originated by mortgage brokers—see the *Global Financial Stability Report*, April 2011, Chapter 3.

Figure 7. Czech Republic: Housing Market

House prices do not yet appear out of line with average incomes...

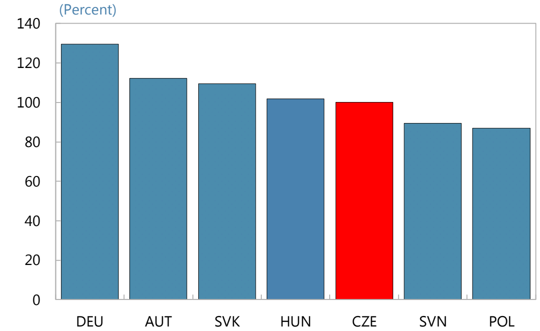
Price to Income Ratios, 2016Q3 or Latest
(Percent)



Sources: IMF, Global Housing Watch.

...or yields.

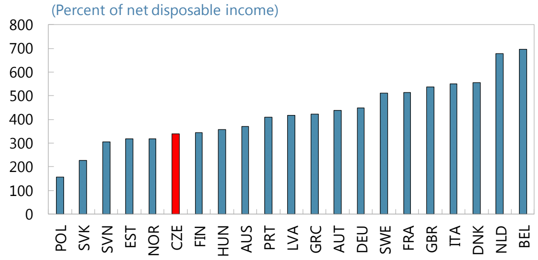
Price to Rent Ratios, 2016Q3 or Latest
(Percent)



Sources: IMF, Global Housing Watch.

But household net worth is relatively low,

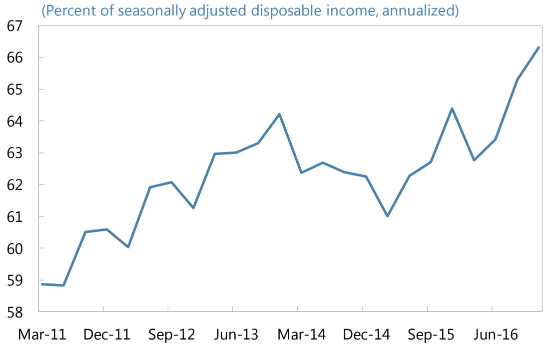
Household Net Worth, 2014 1/
(Percent of net disposable income)



Source: OECD
1/ Household total net worth is the value of total assets (the total amount of financial assets plus the total amount of non-financial assets; the latter only takes into account the value of dwellings from non-financial assets) minus the total value of outstanding liabilities.

...and household debt is increasing.

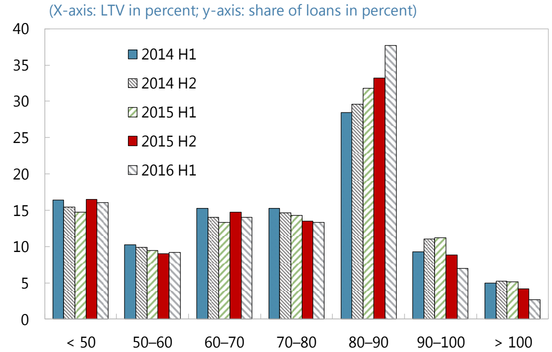
Household Outstanding Debt
(Percent of seasonally adjusted disposable income, annualized)



Source: Haver.

Moreover, a significant portion of households is borrowing large amounts...

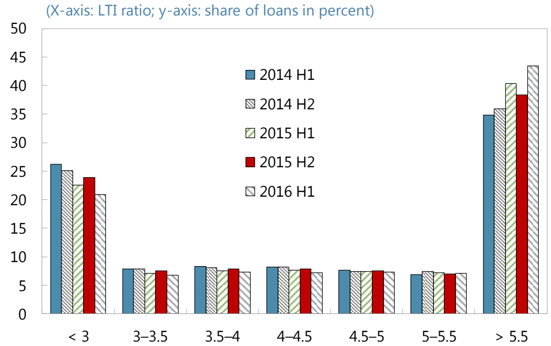
LTV Distribution of New Loans
(X-axis: LTV in percent; y-axis: share of loans in percent)



Source: Czech National Bank.

...especially relative to their incomes.

LTI Distribution of New Loans
(X-axis: LTI ratio; y-axis: share of loans in percent)



Source: Czech National Bank.

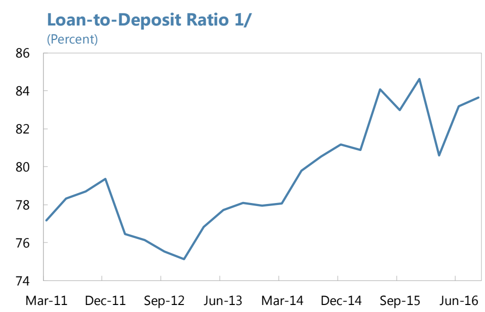
Authorities' views

30. The authorities broadly shared staff's assessment of risks and the need for additional macroprudential measures. They pointed to risks stemming from fast growth in credit and house prices. The authorities emphasized that a number of macro- and micro-prudential measures had already been taken, including tighter capital requirements, off- and onsite supervision, LTV recommendations, and the consumer credit act. Nevertheless, they saw a need to make existing LTV recommendations legally binding and to endow the CNB with a mandate to set legally binding limits over DSTI and DTI ratios.

C. Financial Policy

31. The banking system is liquid, and profitable (Table 5). Aggregate capital ratios are above requirements. Leverage is low and liquidity high. Banks are funded mainly from deposits. Czech banks are profitable: both return on assets and (especially) return on equity are generally higher than in other CEE economies, and are very high by Western European standards. Aggregate levels of non-performing loans are low and decreasing as nominal demand picks up, while provisioning is in line with that of peers.

32. Recent credit growth does not appear to be creating vulnerabilities for the banking system as a whole. Credit growth resumed after a prolonged period of deleveraging—loan:deposit ratios have been increasing, but, for the system as a whole, remain below 100 percent. The maturity of deposits has shortened, but not excessively so.



Source: IMF, Financial Soundness Indicators.
1/ Loans are non-interbank and deposits are to customers.

33. Nonetheless, the speed of credit growth raises concerns that lending standards might slip.

- The substantial share of loans provided via intermediaries could increase risk. Some banks reported that more than 50 percent of all mortgages are provided via brokers, who have an incentive to generate volume; this could strain bank credit checks.

- There is also substantial variation of LTI ratios across banks, with some banks extending the majority of new mortgages at LTI ratios above 5, raising the question of whether some banks are taking excessive risks.[8]

34. Risks to the banking system from removing the koruna floor appear manageable, with the possible exception of FX exposures:

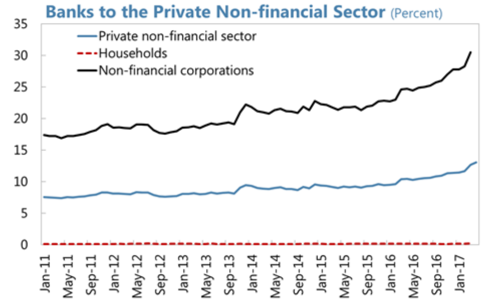
[8] Risk weights used by the largest banks, which are based on internal models, have not substantially eased during this real estate cycle, and are relatively conservative. But those of smaller banks, using standardized models, have fallen.

- *Capital outflows:* The share of foreign-sourced deposits has been increasing, raising the risk that banks would have to cover sudden deposit withdrawal now that the floor has been removed. A substantial outflow of foreign capital could also depress prices of government securities, negatively affecting bank balance sheets. However, the share of government bonds held by domestic banks has fallen, and the banking system as a whole has sufficient liquid assets to cover foreign deposits. That said, the CNB stress tests from 2016 show that pension funds are vulnerable to falls in government bond prices.

- *Interest rates:* An increase in world interest rates could raise wholesale funding costs. However, as banks are funded mainly out of deposits, they should be able to weather such fluctuations.

- *FX exposures:* Foreign currency loans to households are almost negligible, but those to non-financial corporates have been increasing, much faster than local currency loans, and are now around 30 percent of loans to NFCs. The loans are almost entirely denominated in euros. Currency depreciation could challenge firms that do not invoice in euros or are momentarily short on euro revenues. Reported banks' aggregate net open positions have increased, implying banks could be caught out by exchange rate volatility.

Share of Foreign Currency Lending from Commercial Banks to the Private Non-financial Sector (Percent)



Source: Czech Republic National Bank.

35. The CNB has implemented a number of prudential measures to manage financial risks. Capital requirements on banks are relatively high, the capital conservation buffer has been fully implemented, and the counter cyclical capital buffer has been set to 0.5 percent of risk-weighted exposure amounts (from 2017). Buffers have been activated for five systemically-important banks. Consumer protection has been bolstered via adaptation of a new consumer credit law in late 2016, which, inter alia, requires that mortgage brokers obtain a permit from the CNB to continue operations (Annex VI).

36. The authorities are moving towards implementation of the Bank Recovery and Resolution Directive (BRRD). The framework is intended to facilitate orderly resolutions of financial institution while cushioning tax payers from losses. The BRRD was transposed into Czech law in 2016; as the designated resolution authority, the CNB is currently working to develop resolution plans and calibrate appropriate levels of eligible liabilities for each institution (MREL). An important input to this work will be the decision at the European level about MREL targets. Given that the banking system is dominated by subsidiaries of parents from the euro area, a key issue in the development of resolution plans yet to be agreed by the Single Resolution Board (SRB) and national authorities is the choice between single or multiple points of entry when resolving banks.

37. Going forward, vigilance is needed to prevent vulnerabilities. Staff welcomes the authorities' plan to conduct new bottom-up stress tests with a full sample of banks and a 3-year horizon. The supervisor should continue to increase the frequency of on-site inspections.[9] Supervision needs to be backed up by more granular data, such as on real estate and household debt. Close attention to the rapid growth in FX lending to corporates is also needed, especially for the FX loans to sectors with no clear need of foreign currency.

Authorities' views

38. The authorities broadly shared staff's assessment of risks to financial stability. They emphasized that capital requirements for banks had already been tightened, and that the CNB has some scope to influence banks via bilateral relationships. A leverage ratio of 3 percent is expected to become effective in 2020. They agreed that FX lending to corporates had been growing, but emphasized that could be partly explained by hedging motives by exporting companies with euro-denominated cash flows. They concurred that large foreign-held koruna positions create a risk of sudden capital outflows and associated exchange rate volatility, but stressed the difficulties in forecasting whether such an event would materialize, and pointed to the possibility that foreign investors could hold their positions to maturity or even longer. With regards to bank resolution, they emphasized the need for full clarity from European authorities about MREL targets, and the need for discretion for the national supervisor to adapt MREL requirements to local circumstances. Similarly, point of entry approaches for resolution should differ across banks, depending on their business models and corporate structures.

D. Structural Reform

39. Reforms can further support per capita incomes as society ages and population growth slows (Figure 8). Convergence was set back by the financial crisis. It appears to have resumed over the past two years, especially in PPP terms owing to deflationary pressures. But a number of factors can be expected to challenge further convergence of living standards:

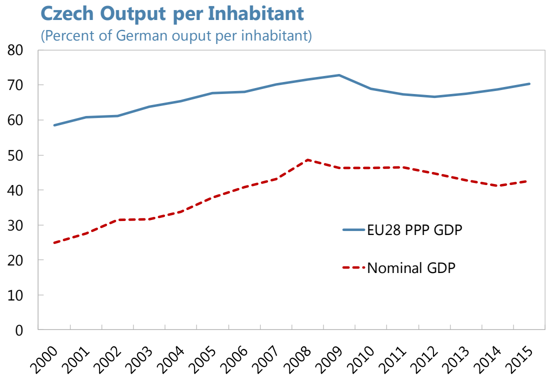
- Productivity growth has slowed as output has increased during the past few years, with increasing signs of labor market mismatches. Workforce growth is expected to decline, owing to unfavorable demographics and limited inward migration, leading to a higher dependency ratio (Figure 9).

- On the plus side, total investment rates have been relatively high (Figure 8), and the economy is very export oriented, which should be expected to increase transfer of technology and best practices to the domestic economy. But public infrastructure coverage and quality remains suboptimal (Figure 11). Production is increasingly concentrated in a limited number of manufacturing subsectors. The high dependence on existing supply chains puts a premium on retaining cost competitiveness, yet real exchange rate appreciation can be expected over the long term.

[9] The current upper limit between on-site inspections is 3 years for large banks, and up to 5 years for other banks.

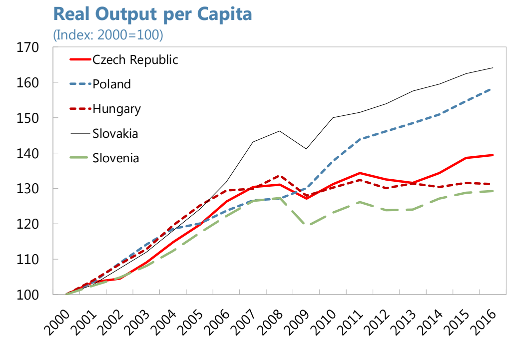
Figure 8. Czech Republic: The Economy in Transition

Income convergence has resumed, after being set back by the financial crisis…



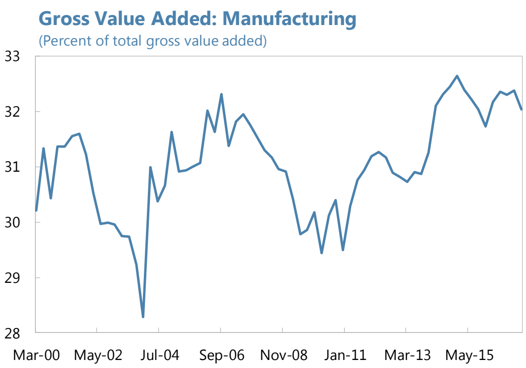
Source: Eurostat.

…aided by productivity growth in line with peers…



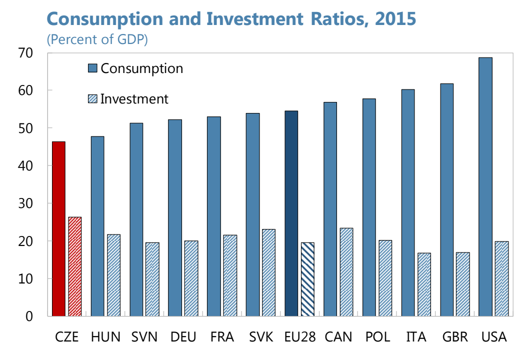
Source: Eurostat.

…and associated with an increasing concentration in manufacturing.



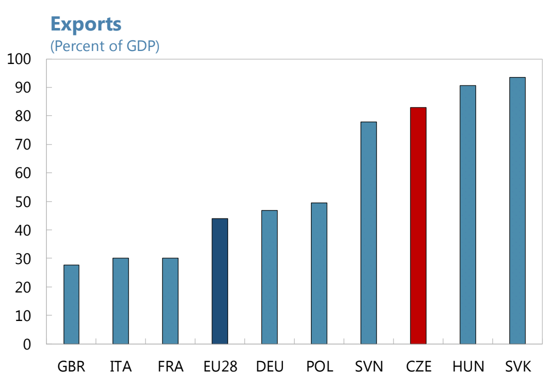
Sources: Haver.

Consumption share of expenditure is relatively low and investment high…



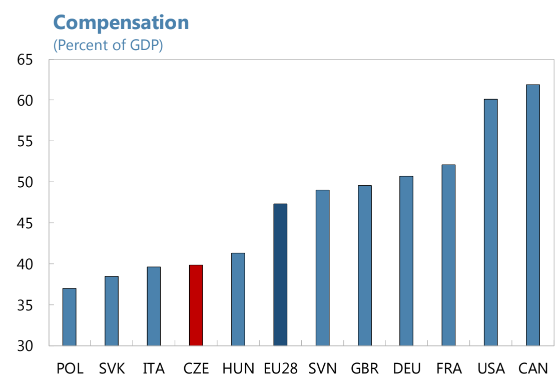
Sources: Eurostat; and World Bank.

…associated with high exports…



Source: Eurostat.

…and a relatively low labor share of income.

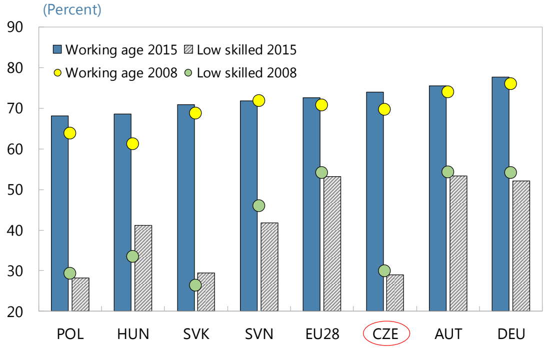


Sources: Eurostat; and FRED.

Figure 9. Czech Republic: Demographics in the Labor Market

Labor force participation has increased since 2008 but low-skilled participation remains below peers…

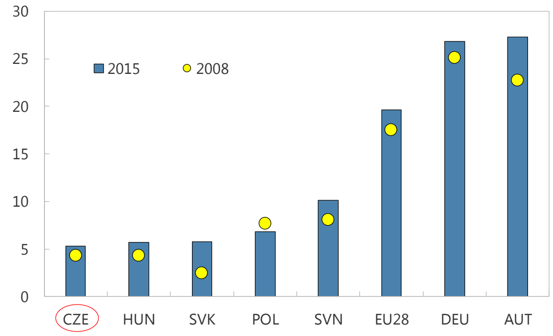
Labor Force Participation Rate
(Percent)



Source: Eurostat.

…and part-time employment also remains relatively low.

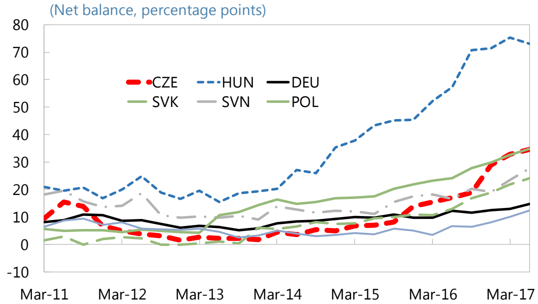
Part-time Employment, 15-64 Years
(Percent of total)



Source: Eurostat.

In this tight labor market, employers have reported increasing labor shortages.

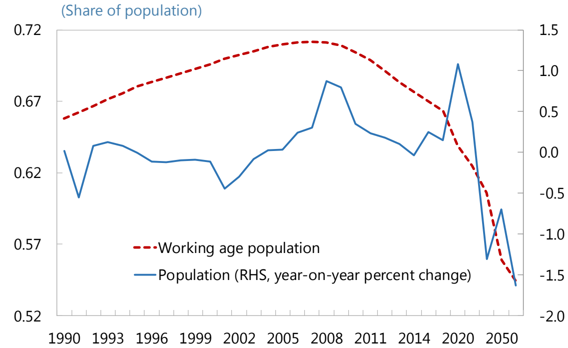
Labor Shortages 1/
(Net balance, percentage points)



Source: Haver Analytics.
1/ Labor shortage refers to answers to European Commission survey question on labor as a limiting factor to production.

Both the overall population and working age share are projected to decline in the long run…

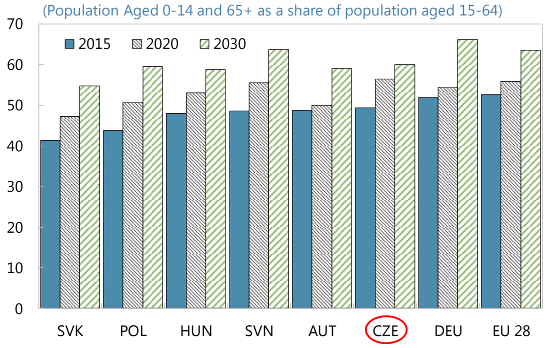
Working Age Share and Population Growth
(Share of population)



Source: Eurostat.

…increasing the age dependency ratio, as with peers.

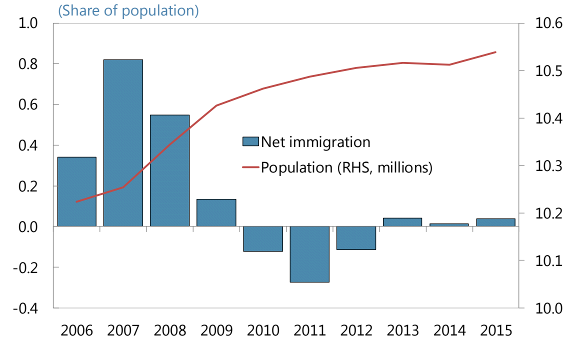
Age Dependency Ratio
(Population Aged 0-14 and 65+ as a share of population aged 15-64)



Source: Eurostat.

Net migration is low and has room for improvement.

Net Migration and Population
(Share of population)



Source: Eurostat.

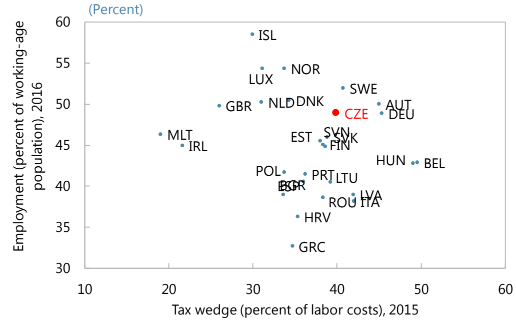
- Although income inequality is less pronounced than in other economies, the wage share of income is low, and a relatively high share of income is returned to foreign investors, resulting in relatively low consumption for the output the economy produces.

40. Overall, the economy does not suffer from major distortions limiting growth. The economy is open to foreign investment, and compares well in terms of product and labor market flexibility. In particular, it does not suffer from labor market dualism.

41. Nonetheless, a range of initiatives could be taken to aid the transition to higher living standards:

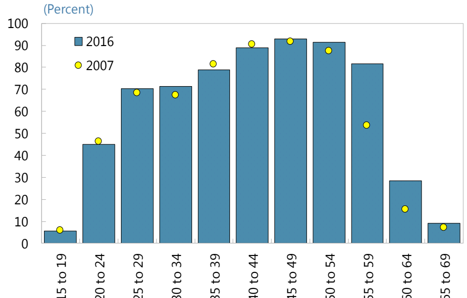
- *Labor market incentives.* Labor force participation overall is already high, but could be boosted by reducing the relatively high tax wedge and marginal tax disincentives to enter the workforce. And there are groups with relatively low participation, suggesting potential for further improvement. Participation of women with small children is notably low, limiting not just the labor force but lifetime female earnings. This necessitates attention to a tax system that penalizes women for reentering the labor force and limited affordable childcare services and flexibility with part-time contracts that limit their ability to do so. Incentives could also be changed to deter early retirement. As skill mismatches are relatively high[10], strengthening vocational training systems, including apprenticeships and other in-work (including tax incentives) and life-long learning schemes, could help upgrade the labor force skill level.

Tax Wedge and Working Age Employment
(Percent)



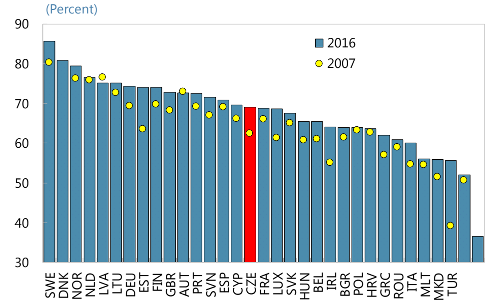
Source: Eurostat.

Czech Republic: Female Participation Rate by Age
(Percent)



Source: Eurostat.

Female Participation Rate
(Percent)



Source: Eurostat.

- *Regulatory environment.* The Czech Republic ranks well on competitiveness and product market regulation indicators overall. However, initiatives could be taken to facilitate the growth of new and innovative firms. These include lowering the complexity of regulatory

[10] SDN/16/07 "Emigration and its economic impact on Eastern Europe".

procedures (including planning and building permits); minimizing administrative burdens for start-ups (Figure 10); and improving the predictability of the regulatory environment.

- *Infrastructure, connectivity and innovation:* Private sector innovation needs appropriate network externalities. Improved efficiency in EU funds absorption could be instrumental in addressing infrastructure needs (section D). Investment in R&D has improved, but still shows a gap (Figure 11), and could be further increased with a higher share of co-financing. Well designed and properly administered tax incentives for R&D should also be used to complement direct support.

Authorities' views

42. The authorities agreed that further progress in improving infrastructure, boosting innovation, and addressing demographic issues is crucial to boosting long-term growth. They pointed to a number of measures in progress. National spending on R&D has been stepped up and the current policy aims to stabilize its funding. The authorities are also implementing a new international peer-review system for R&D spending evaluation. With respect to the intensifying labor shortages and low female labor force participation, the authorities pointed to several new tax and benefit instruments supporting working parents with children (support for micro-nurseries, shortening the period of drawing on parental allowances, and abolishing the limits on the use of preschool facilities) and measures to enhance regional labor mobility. A new digital literacy strategy, revision of retraining systems, and the Work 4.0 plan aim to upgrade skills. The transparency of public procurement is being strengthened and administrative burdens reduced. Transparency and speed are being improved through the development of online government services.

E. Fiscal Policy

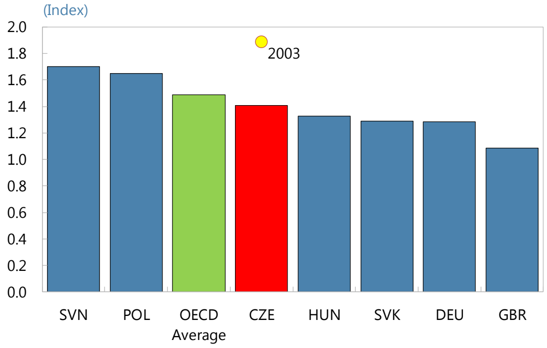
43. The fiscal framework is being improved. A new fiscal law establishes an independent fiscal council to assess compliance with the fiscal rules and evaluate the long-term sustainability of the public finances. The law also sets fiscal limits, not only for general government but also for local government. Strict targets at the local level are important to ensure fiscal sustainability.

- *A new fiscal responsibility framework was adopted in January 2017.* The law establishes (i) an independent expert committee for fiscal forecasts; (ii) a fiscal council which, with its independent expert committee, will evaluate compliance with numerical fiscal rules and assess the long-term sustainability of public finances; (iii) and fiscal rules. The rules include: (i) a structural balance rule with a limit of -1 percent of GDP; (ii) a debt brake rule for general government that caps debt net of cash reserves at 55 percent GDP; and (iii) a 60 percent debt:revenue limit for local government. Penalties include the retention of part of shared tax revenues of non-complying local government units in accordance with the mandated adjustment not performed. The framework also provides for stricter requirements to be applied to individual general government sector entities should numerical rules prove ineffective.

Figure 10. Czech Republic: Regulation

Overall, the Czech Republic ranks well on product market regulation indicators…

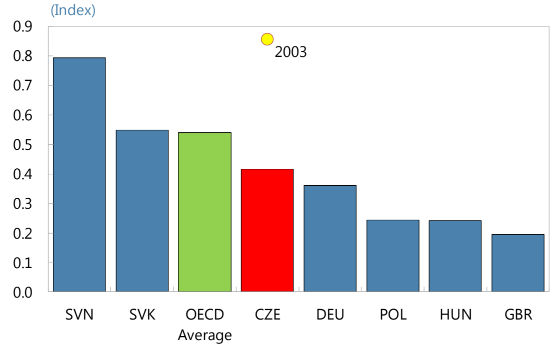
Product Market Regulation, 2013
(Index)



Source: OECD.

…with very low barriers to trade and investment.

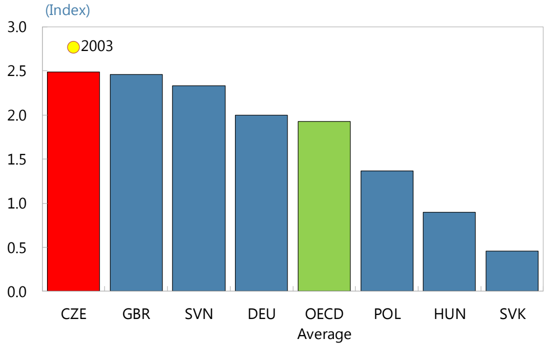
Barriers to Trade and Investment, 2013
(Index)



Source: OECD.

However, complexity of regulation has declined but remains high…

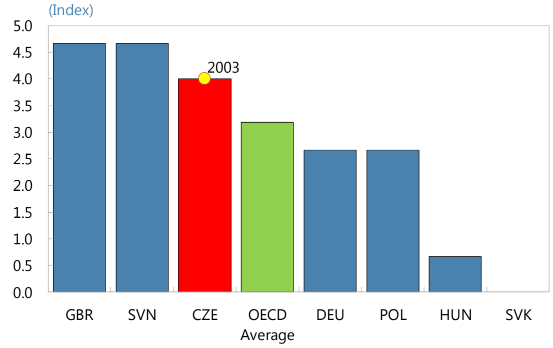
Complexity of Regulatory Procedure, 2013
(Index)



Source: OECD.

…with no progress on the administrative burdens on startups.

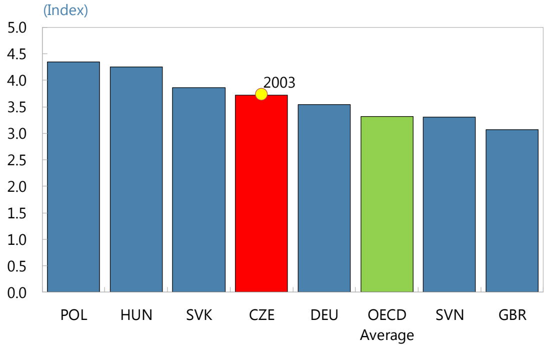
Administrative Burdens on Startups, 2013
(Index)



Source: OECD.

Barriers in the service sector remain elevated.

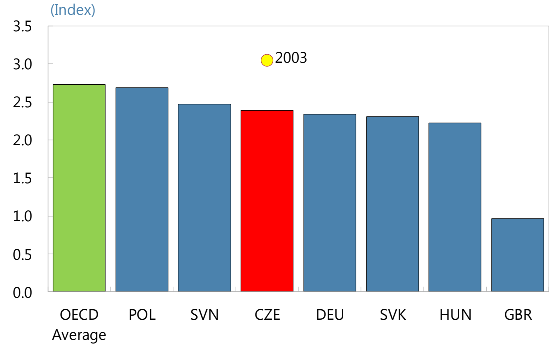
Barriers in Services Sector, 2013
(Index)



Source: OECD.

Network industries barriers have declined but there is room for further progress.

Barriers in Network Sectors, 2013
(Index)

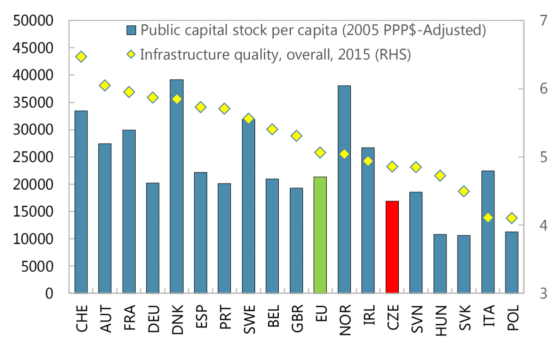


Source: OECD.

Figure 11. Czech Republic: Infrastructure and Innovation

Public capital stock is below the EU average and infrastructure quality is suboptimal…

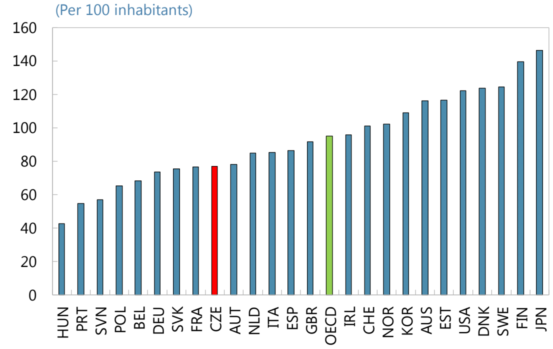
Public Capital Stock per Capita and Infrastructure Quality



Sources: OECD and IMF staff estimates.

…together with mobile broadband connectivity that is below the OECD average.

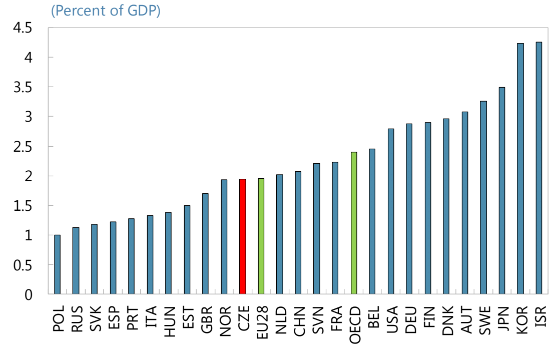
Total Mobile Broadband Subscriptions, 2016Q2
(Per 100 inhabitants)



Source: OECD.

Investment in R&D has increased in recent years but is still below the advanced economy average…

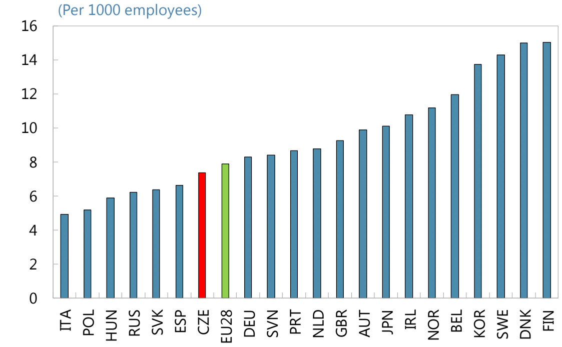
R&D Expenditure, 2015
(Percent of GDP)



Source: OECD.

…and the share of researchers in the labor force is not very high.

Number of Researchers, 2015
(Per 1000 employees)



Source: OECD.

- *The new framework improves transparency and accountability, and strikes the right balance between limiting debt and providing space for counter-cyclical fiscal policy.* The fiscal council, with its independent expert committee, will evaluate compliance with the numerical fiscal rules and the long-term sustainability of the public finances. The enforcement mechanisms strengthen the rule, but escape clauses in cases of serious economic downturns, natural disasters, or emergency provide flexibility. However, the fiscal framework is not embedded in constitutional law, making these rules easier to reverse or abandon.

44. A mild fiscal easing this year is appropriate. The projected surplus of 0.4 percent of GDP for 2017 implies a fiscal impulse of 0.3 percent of GDP.[11] This will support the economy during a year of monetary policy normalization, and is easily accommodated.

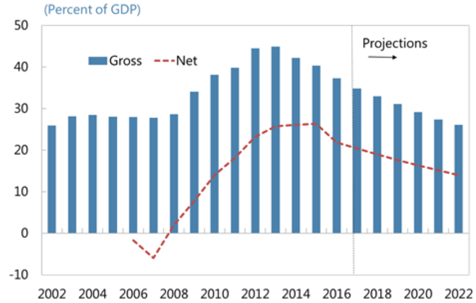
Czech Republic: Fiscal Stance
(In percent of GDP)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
								Proj.			
Net lending/borrowing (overall balance)	-3.9	-1.2	-1.9	-0.6	0.6	0.4	0.5	0.6	0.5	0.5	0.5
Net lending/borrowing (excl. revenues from EU)[1]	-5.2	-2.5	-3.4	-2.9	0.0	-0.5	-0.6	-0.5	-0.6	-0.3	-0.3
Primary balance	-2.8	-0.2	-0.8	0.3	1.4	1.2	1.2	1.2	1.1	1.1	1.0
Structural balance	-1.5	0.1	-0.9	-0.6	0.5	0.2	0.3	0.4	0.4	0.4	0.5
Cyclically adjusted budget balance	-3.3	0.1	-1.1	-0.7	0.5	0.2	0.3	0.4	0.4	0.4	0.5
Structural balance excl revenues from EU[2]	-2.8	-1.2	-2.4	-2.8	0.0	-0.7	-0.7	-0.7	-0.8	-0.4	-0.3
Public debt	44.5	44.9	42.2	40.3	37.2	35.2	33.2	31.2	29.4	27.7	26.1

Source: Czech Ministry of Finance, Czech National Bank, and Fund staff projections.
[1,2] Item is net of receipts of EU Structural and Cohesion Funds.

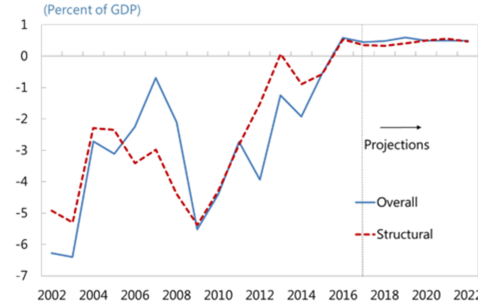
45. On current policies, a small surplus is projected over the medium term, leading to declining debt. This is the first time over the past 20 years that the government is expected to achieve a sustained period of expected surpluses. If cautious spending policies remain in place, these combined with improved tax collection would imply continued small surpluses from 2018. These surpluses and steady nominal growth would bring the public debt to around 26 percent of GDP by 2022 (Annex V: Debt Sustainability Analysis). Net debt, defined as debt plus accounts payable net of short-term and liquid financial assets, is also projected to decline, reaching 14.0 percent of GDP in 2022.

General Government Debt
(Percent of GDP)



Sources: Czech Republic Ministry of Finance; and IMF staff projections.

General Government Fiscal Balances
(Percent of GDP)



Sources: Czech Republic Ministry of Finance; and IMF staff projections.

46. There are long-term demands on the public finances from healthcare, pensions, and infrastructure.

- *Healthcare:* Spending on healthcare, currently somewhat below the EU average, is projected to increase. Lack of any co-payment for outpatient care and gate-keeping in the system leads to overconsumption of health services (e.g. the number of annual doctor consultations per capita is the third highest in the OECD) (Figure 13). Cost efficiency of hospitals is low and

[11] The Ministry of Finance estimates a similar impulse of 0.4 percent of GDP.

while the authorities started to move towards hospital financing based on diagnosis-related groups, progress is slow.[12]

- *Pensions*: Demographic trends challenge the long-term sustainability of the pensions system. The pension account balance is projected by MoF and the Ageing and Sustainability Working Group at the Economic Policy Committee in the 2017 Convergence Program to be around -2 percent of GDP by 2060. In 2016, the government approved the introduction of a statutory retirement age limit of 65 years by 2030, subject to review at 5 year intervals from now, with the aim that a quarter of expected life be spent in retirement. This bill is now being considered in Parliament. Projections by the Ministry of Labor and Social Affairs indicate that this amendment would imply a modest increase in pension spending, from 8.5 percent of GDP in 2017 to 10.1 percent of GDP in 2060 if the revision mechanism is strictly obeyed (if the statutory retirement age is simply capped on 65, pension spending will increase to 11.2 percent of GDP).
- *Infrastructure*: The quantity and quality of infrastructure are below the EU average (Figure 11). In particular, the Czech Republic ranks only 21st across the EU for the quality of its road network.

47. Political parties have contrasting policy positions ahead of the elections scheduled for October: The ANO party wants lower labor taxes and cuts to VAT rates and social insurance contributions. It opposes increases to corporate taxes and bank surcharges. The CSSD favors more spending and progressive personal income and corporate taxation,[13] including a bank levy; indexation of pensions to at least 50 percent of wage growth; public sector wage increases; and greater investment in hospitals. KDU-CSL prefers to leave statutory income tax rates unchanged and instead offer tax rebates for families with young children. It also favors increasing defense spending to 2 percent of GDP and opposes the introduction of bank levies.

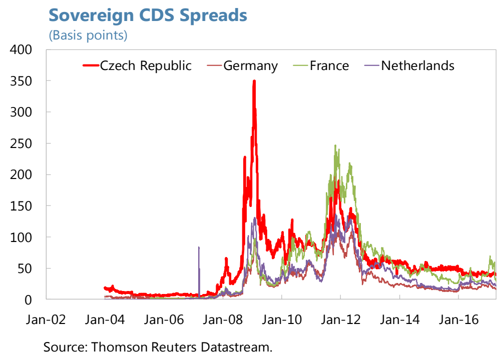
48. Given the relatively low public debt ratio, fiscal policy should prioritize raising growth potential via modestly higher investment in physical and human capital. There is no need for sizeable short-term stimulus, given that the economy is operating slightly above capacity. But the authorities should consider adjustments to fiscal policy to boost potential output and maintain competitiveness. For illustration of the potential room that the authorities have, staff estimates the primary balance consistent with constant debt in perpetuity equal to the 2016 ratio of 37.2 percent of GDP to be -0.6 percent of GDP.[14]

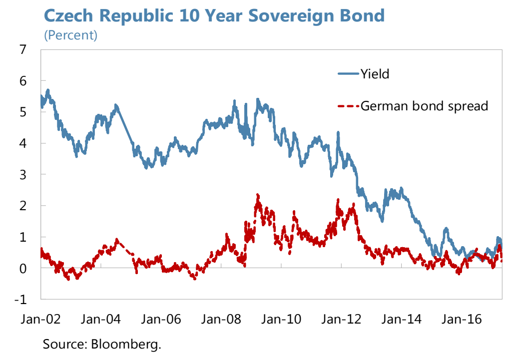
- With debt already low and interest rates at historic lows, surpluses could be used to finance spending on infrastructure and skills rather than necessarily to reduce debt. The fiscal stance would need to be calibrated to account for uncertainty about future revenues, given questions about the sustainable growth rate and availability of EU funds financing after 2020.

[12] See Joint Report on Health Care (European Commission, 2016).

[13] Currently there is a flat personal income tax of 15 percent.

[14] This calculation assumes the interest rate is equal to the 2022 forward rate on 10-year CZE bonds, and nominal growth equal to forecast average growth between 2017 and 2022.





- Increasing health spending efficiency would entail policies aimed at containing both cost pressures and excess demand for health services. These could include introduction of means-tested co-payments to contain growing pressure on the public healthcare system, as well as soft-gate keeping (e.g., requirement of referral from a general physician). Moreover, substantial scope exists for providers to streamline networks and reduce pharmaceutical costs.

- Staff agrees with the policy of raising the retirement age gradually. The authorities should refrain from frequent and ad hoc pension adjustments beyond what is implied by the standard indexation formula—to this end, staff recommends legislating pension indexation to remove uncertainty in government and household budgets.

- The composition of tax and expenditure policies could also be adjusted: in addition to the above-mentioned measures, better targeting of direct taxation and social security contributions could create extra room for public investment in infrastructure and skills, and to reduce tax distortions affecting the labor force.

49. Effective public investment spending necessitates improved public administration. Infrastructure spending is not coordinated and lacks a medium- and long-term framework. No single ministry is responsible for coordinating planning for all infrastructure, including not just transport but also energy and connectivity. Thus, responsibility for infrastructure planning and implementation is distributed across seven ministries. Last year's absorption was even lower than expected (it is typically low in the first years of a programming period) in part due to the incompatibility of environmental impact assessment with revised EU standards.[15] Additionally, frequent changes of rules and methodology within the national and EU control frameworks continue to cause shortcomings in the utilization of EU funds. To address these issues, staff recommends:

- A review of the infrastructure development framework. The IMF's PIMA tool provides a comprehensive evaluation of fifteen institutions relevant to public investment at three key stages of the public investment cycle—planning, allocation, and implementation. Enhancing these institutions could increase public investment efficiency.

[15] Since then, an agreement has been reached with the EC regarding the nine priority infrastructure projects.

- Establishing a unified and transparent plan for infrastructure over a long horizon. This could take the form of an independent agency like the UK's National Infrastructure Commission.

- Enacting measures to increase processing ability and auditing capacity in public sector management to reduce holdups in public administration. This includes increased spending, if needed.

50. The debt management framework should be improved. The main objective of public debt management should be to ensure the government's financing needs and its payment obligations are met at the lowest possible cost over the medium to long run, consistent with a prudent degree of risk.

- Debt management operates with only a 3-year horizon, and in practice the current debt management strategy puts a high weight on even shorter-term outcomes. Staff therefore recommends that debt management pursue a strategy of minimizing costs for an acceptable level of risk over the medium term. The authorities should also consider how to achieve suitable operational independence to achieve such a strategy.

- The target for average debt maturity of 6 years by 2018 is modest. Actual maturities have shortened further, to under 5 years, whereas other sovereigns have been extending maturities. In general, it is preferable to accept higher funding costs rather than to concentrate issuance within a narrow range of maturities, so as to keep refinancing risks under control. Contingent on the yield curve for Czech sovereign debt and management of risks, the authorities should lock in low rates for longer while the opportunity remains.

- 12 percent of state debt is currently exposed to foreign exchange risk. Unhedged foreign exchange exposures leave a government vulnerable to volatile and possibly increasing debt servicing costs—the authorities should review policies on exchange rate risk management, assessing costs of issuance in foreign currencies and costs of hedging against risks.

Authorities' views

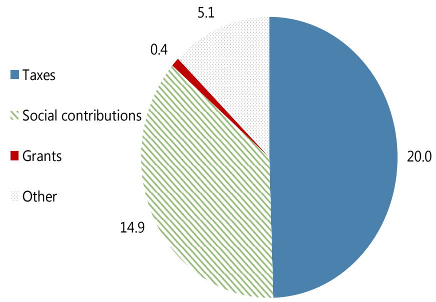
51. The authorities stressed their commitment to fiscal prudence, underpinned by the recently approved fiscal responsibility act. They pointed to recent measures to combat tax evasion and improve tax administration including the introduction of electronic VAT reporting in 2016 and expansion of the electronic registration of sales to more sectors. They considered the 2016 and projected surpluses as positive results, though they recognized that some of the savings were the result of delays in implementing the investment spending plan and acknowledged the need for improvements in public investment management. Regarding debt management, the authorities considered short-term revenue gains as evidence of a successful strategy, while at the same time pointing to their commitment to reach an average maturity of 6 years over the medium term.

Figure 12. Czech Republic: Revenue and Expenditure

Taxes remain an important revenue source…

General Government Revenue, 2016

(Percent of GDP)

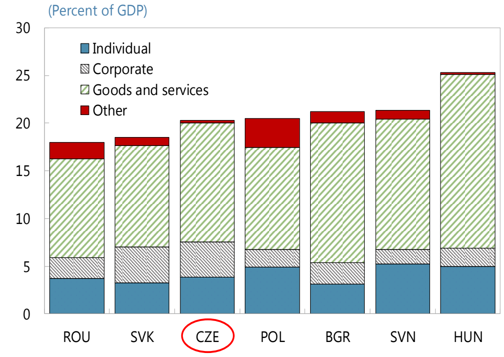


Sources: Czech Republic Ministry of Finance; and IMF staff estimates.

…and tax revenue is in line with regional standards.

General Government Tax Revenue, 2016

(Percent of GDP)

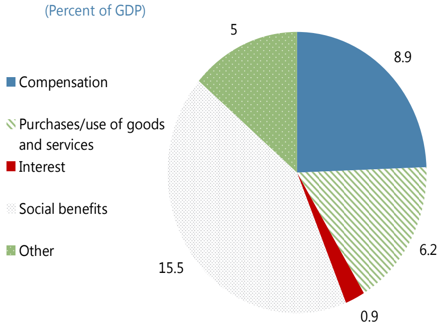


Sources: World Economic Outlook; and IMF staff estimates.

Social benefits and employee compensation are the largest expenditure components …

General Government Expense, 2016

(Percent of GDP)

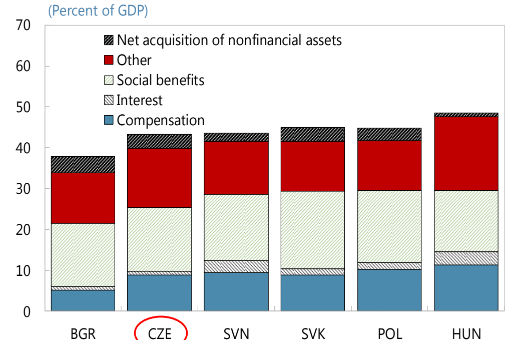


Source: Czech Republic Ministry of Finance.

…and public spending is average by regional standards.

General Government Expenditure, 2016

(Percent of GDP)

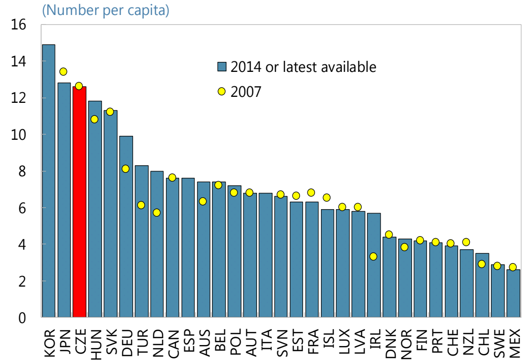


Sources: World Economic Outlook; and IMF staff estimates.

Figure 13. Czech Republic: Health Care

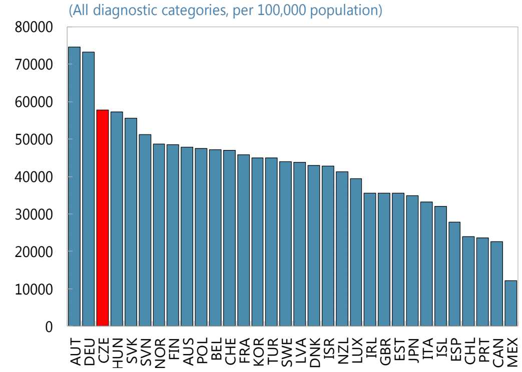
The number of doctor consultations per capita....

Doctor Consultations
(Number per capita)



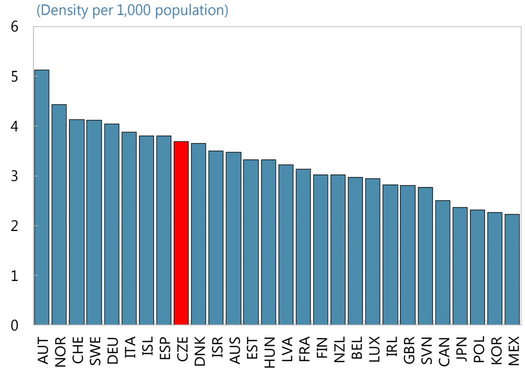
....and hospital discharges is very high.

Hospital Discharges, 2014 1/
(All diagnostic categories, per 100,000 population)



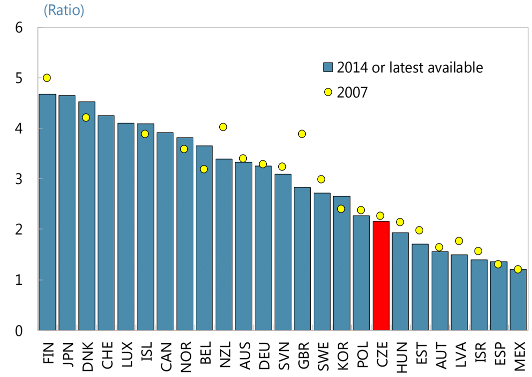
The number of doctors is above the EU average....

Practicing Physicians, 2014 1/
(Density per 1,000 population)



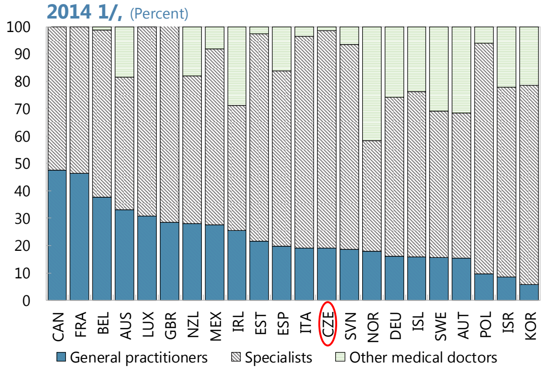
...but the ratio of nurses to physicians is low.

Practicing Nurses to Practicing Physicians
(Ratio)



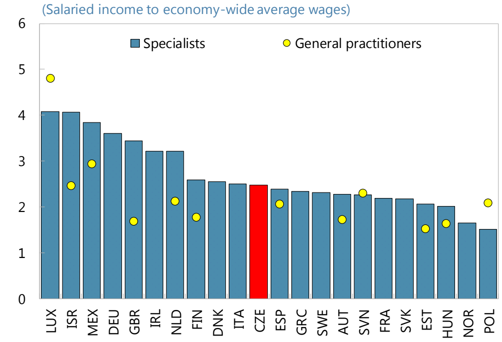
At the same time, the share of specialists is very high...

Generalist and Specialist as a Share of all Doctors, 2014 1/, (Percent)



...while overall remuneration of doctors remains low.

Remuneration of Doctors, 2015 1/
(Salaried income to economy-wide average wages)



Source: OECD.
1/ Or latest available data.

STAFF APPRAISAL

52. The Czech economy has been doing well. Growth is solid, the unemployment rate is low, and the public finances are in good condition. Exit from the exchange rate floor has been smooth, and the banking system is liquid and profitable. However, policy makers face important challenges: household financial vulnerabilities appear to be increasing; labor—especially skilled labor—is in short supply; and several aspects of public administration and processes need improvement. Addressing these and other issues will require a well calibrated combination of monetary, macroprudential, financial, structural, and fiscal policies.

53. The outlook is positive, but supply constraints will bite. Real GDP growth is projected to increase to 3 percent in 2017, but labor shortages are expected to constrain growth to about 2½ percent over the medium term. The immediate risk to the baseline forecast is the future path of the exchange rate, now that the koruna:euro floor has been removed. Over the medium and long terms, the main risk to the forecast is the sustainable growth rate: a significant increase in labor productivity is assumed in the face of a shrinking workforce. As firms are already facing labor shortages, these productivity gains are crucial to ensure wages can increase without putting undue pressure on competitiveness.

54. The real exchange rate appears to be moderately undervalued, and likely to appreciate over the medium term. The external position is moderately stronger than the level consistent with medium-term fundamentals and desirable policies. This will likely be balanced by further real exchange rate appreciation.

55. With headline inflation at the target and the economy running slightly above capacity, the decision to leave the nominal exchange rate floor was well timed. Future policy rate adjustments should be gradual and guided by the data. Foreign exchange interventions could be used in cases of severe volatility, but should not be employed to lean against natural structural adjustment of the exchange rate.

56. The CNB will need to guard against financial vulnerabilities. Some households are becoming overstretched, borrowing high amounts to finance house purchases, especially in comparison to their incomes. These households are particularly vulnerable to falling house prices or incomes or increases in interest rates. These developments warrant a wider range of tools than currently employed—to this end, the CNB should be given binding powers over loan-to-value, debt-to-income, and debt-servicing-to-income ratios. Vulnerabilities are less apparent for lenders as a whole, but the acceleration of credit growth raises concern that lending standards may slip.

57. The constraints on supply place a premium on supportive structural policies. Labor market incentives should be revised to boost labor force supply and quality, such as by reducing the relatively high tax wedge and marginal disincentives to enter the workforce, particularly for women with small children, and to take later retirement. Skill mismatches necessitate attention to labor force skills. Investment in physical and digital infrastructure will help boost potential growth. Finally, there is space to improve the regulatory environment.

58. Given the relatively low public debt ratio, fiscal policy should prioritize raising growth potential via modestly higher investment in physical and human capital. With debt already low and interest rates at historic lows, surpluses could be used to finance spending on infrastructure and skills, rather than necessarily to reduce debt. However, public investment spending lacks a medium- and long-term strategy—to ensure that any increase in public investment is efficient and well targeted, an assessment of public investment management with a view to establishing a unified and transparent plan for infrastructure over a long horizon would be welcome. Debt management should focus on minimizing costs and risks over the medium term, and consideration should be given to how to achieve suitable operational independence.

59. It is recommended that the next Article IV consultation be held on the standard 12-month cycle.

Table 1. Czech Republic: Selected Economic Indicators, 2012–22

(Annual percentage change, unless noted otherwise)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
								Staff projections			
NATIONAL ACCOUNTS											
Real GDP (expenditure)	-0.8	-0.5	2.7	4.5	2.4	3.0	2.4	2.3	2.3	2.3	2.3
Domestic demand	-2.1	-0.6	3.4	4.8	1.4	2.9	2.8	2.7	2.8	2.8	2.8
Consumption	-1.4	1.1	1.6	2.7	2.4	2.8	2.6	2.4	2.4	2.4	2.4
Public	-2.0	2.5	1.1	2.0	1.2	2.3	2.2	2.0	2.0	2.0	2.0
Private	-1.2	0.5	1.8	3.0	2.9	3.0	2.7	2.6	2.6	2.5	2.5
Investment	-3.9	-5.1	8.6	10.0	-0.9	3.0	3.5	3.5	3.5	4.0	4.0
Exports	4.3	0.2	8.7	7.7	4.3	3.8	3.5	4.0	4.0	4.0	4.0
Imports	2.7	0.1	10.1	8.2	3.2	3.9	4.2	4.7	4.7	4.7	4.7
Contribution to GDP											
Domestic demand	-2.1	-0.6	3.1	4.5	1.4	2.8	2.6	2.6	2.6	2.7	2.7
Net exports	1.3	0.1	-0.4	0.1	1.0	0.2	-0.3	-0.3	-0.3	-0.4	-0.4
Investment (percent of GDP)	25.9	25.1	25.1	26.3	24.6	24.9	25.0	25.1	25.2	25.5	25.8
Gross domestic investments (percent of GDP)	26.2	24.7	25.9	27.4	26.2	26.5	26.5	26.6	26.7	26.9	27.1
Gross national savings (percent of GDP)	24.6	24.1	26.1	27.6	27.4	27.1	26.8	26.7	26.4	26.3	26.1
LABOR MARKET											
Employment	0.4	1.0	0.8	1.4	1.9	1.2	-0.4	-0.5	-0.3	-0.3	-0.3
Total labor compensation	2.3	0.7	3.5	4.6	5.9	6.4	4.0	4.1	4.0	4.1	4.0
Unemployment rate (in percent)	7.0	7.0	6.1	5.0	4.0	3.4	3.4	3.5	3.5	3.5	3.5
PRICES											
Consumer prices (average)	3.3	1.4	0.3	0.3	0.7	2.3	1.8	2.0	2.0	2.0	2.0
Consumer prices (end-of-period)	2.4	1.4	0.1	0.0	2.0	2.3	1.8	2.0	2.0	2.0	2.0
Producer price index (average)	2.1	0.8	-0.7	-3.2	-3.2	...	...	...	...	...	...
MACRO-FINANCIAL											
Money and credit (end of year, percent change)											
Broad money (M3)	4.8	5.8	5.9	8.0	6.5						
Private sector credit	2.6	3.7	3.6	6.5	7.8						
Interest rates (in percent, year average)											
Three-month interbank rate	1.0	0.5	0.4	0.3	0.3	...	...	...	...	...	...
Ten-year government bond	2.8	2.1	1.6	0.6	0.4	...	...	...	...	...	...
Exchange rate											
Nominal effective exchange rate (index, 2005=100)	118.4	116.9	111.6	110.3	112.7	...	...	...	...	...	...
Real effective exchange rate (index, CPI-based; 2005=100)	118.2	116.1	109.9	108.0	109.9	...	...	...	...	...	...
PUBLIC FINANCE (percent of GDP)											
General government revenue	40.5	41.4	40.3	41.4	40.5	40.9	41.0	41.0	41.1	41.1	41.1
General government expenditure	44.5	42.6	42.2	42.1	39.9	40.4	40.6	40.5	40.6	40.6	40.6
Net lending / Overall balance	-3.9	-1.2	-1.9	-0.6	0.6	0.4	0.5	0.6	0.5	0.5	0.5
Primary balance	-2.8	-0.2	-0.8	0.3	1.4	1.2	1.2	1.2	1.1	1.1	1.0
Structural balance (percent of potential GDP)	-1.5	0.1	-0.8	-0.6	0.5	0.2	0.3	0.4	0.4	0.4	0.5
General government debt	44.5	44.9	42.2	40.3	37.2	35.2	33.2	31.2	29.4	27.7	26.1
BALANCE OF PAYMENTS (percent of GDP)											
Trade balance (goods and services)	5.0	5.8	6.4	5.8	7.5	6.7	6.4	6.1	5.7	5.3	4.8
Current account balance	-1.6	-0.5	0.2	0.2	1.1	0.7	0.3	0.1	-0.2	-0.6	-1.0
Gross international reserves (billions of euros)	34.0	40.8	44.9	59.2	81.3	125.5	125.2	123.9	122.8	122.0	121.3
(in months of imports of goods and services)	3.6	4.5	4.1	5.6	7.7	11.2	10.5	9.8	9.2	8.6	8.1
(in percent of short term debt, remaining maturity)	94.3	103.1	88.0	105.6	122.3	160.5	163.2	163.9	163.9	163.2	161.7
MEMORANDUM ITEMS											
Nominal GDP (USD billions)	207.4	209.4	207.8	185.2	192.9	195.3	208.5	220.5	232.9	245.3	257.4
Population (millions)	10.5	10.5	10.5	10.5	10.6	10.6	10.6	10.6	10.6	10.6	10.6
GDP per capita (USD)	19,740	19,913	19,769	17,570	18,282	18,459	19,680	20,786	21,935	23,075	24,179
Real GDP per capita	-1.0	-0.6	2.8	4.3	2.3	2.7	2.2	2.1	2.1	2.2	2.2
Ouput gap (percent of potential output)	-1.9	-4.0	-2.5	0.2	0.4	0.6	0.5	0.4	0.5	0.3	0.1

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

Table 2. Czech Republic: Balance of Payments, 2012–22
(Percent of GDP)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
						Staff Projections					
Current account balance	-1.6	-0.5	0.2	0.2	1.1	0.7	0.3	0.1	-0.2	-0.6	-1.0
Trade balance	3.0	4.1	5.1	4.1	5.3	4.7	4.4	4.2	3.8	3.5	3.0
Exports	64.6	65.4	70.5	69.2	67.9	67.6	67.1	66.8	66.5	66.6	66.4
Imports	61.6	61.4	65.4	65.1	62.6	62.9	62.7	62.6	62.7	63.1	63.4
Nonfactor services	1.9	1.7	1.3	1.7	2.1	2.0	2.0	1.9	1.9	1.8	1.7
Receipts	11.7	11.5	12.1	12.3	12.4	12.3	12.2	12.2	12.1	12.1	12.1
Payments	9.8	9.7	10.8	10.6	10.3	10.3	10.3	10.3	10.3	10.3	10.4
Factor income (net)	-5.9	-6.1	-6.0	-5.6	-5.8	-5.8	-5.7	-5.7	-5.6	-5.5	-5.5
Transfers	-0.7	-0.2	-0.2	0.0	-0.6	-0.3	-0.4	-0.3	-0.3	-0.3	-0.3
Capital account	1.3	2.0	0.7	2.2	1.2	0.6	1.1	0.8	0.9	0.9	1.0
Errors and omissions	0.5	0.2	0.4	1.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Financial account (change in stocks, + = increase)	0.3	1.7	1.4	3.9	2.5	1.3	1.4	1.0	0.6	0.3	0.0
Direct investment, net	-3.0	0.2	-1.9	1.1	-3.0	-1.4	-1.4	-1.4	-1.4	-1.4	-1.3
Portfolio investment, net	-1.4	-2.3	2.1	-3.6	-3.6	-9.5	0.3	0.8	0.7	0.7	0.7
Other investment and derivatives, net	2.6	-0.8	-0.5	-1.3	-3.1	-11.8	2.7	2.2	1.8	1.4	0.9
Reserve assets	2.0	4.6	1.7	7.7	12.0	24.0	-0.2	-0.6	-0.5	-0.4	-0.3
Memorandum items											
Gross official reserves (billions of euros)	34.0	40.8	44.9	59.2	81.3	125.5	125.2	123.9	122.8	122.0	121.3
in months of the current year's imports	3.6	4.5	4.1	5.6	7.7	11.2	10.5	9.8	9.2	8.6	8.1
as a ratio to the short-term debt	94.3	103.1	88.0	105.6	122.3	160.5	163.2	163.9	163.9	163.2	161.7
External debt, percent of GDP	60.0	63.2	69.7	70.9	74.9	84.0	76.9	71.6	67.2	63.4	60.4

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

Table 3. Czech Republic: General Government Operations, 2012–22

(Percent of GDP)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
						Staff Projections					
Revenue	**40.5**	**41.4**	**40.3**	**41.4**	**40.5**	**40.9**	**41.0**	**41.0**	**41.1**	**41.1**	**41.1**
Taxes	19.3	19.9	19.1	19.6	20.0	20.1	20.3	20.2	20.2	20.2	20.1
Personal income tax	3.6	3.7	3.7	3.6	3.8	3.9	3.9	3.9	3.9	3.9	3.9
Corporate income tax	3.1	3.2	3.3	3.4	3.4	3.4	3.5	3.5	3.5	3.5	3.5
VAT	7.0	7.4	7.4	7.3	7.5	7.7	7.9	7.9	8.0	8.0	8.0
Excise	4.3	4.4	3.5	4.0	4.0	3.9	3.8	3.7	3.6	3.5	3.4
Other taxes	1.2	1.2	1.2	1.2	1.3	1.2	1.2	1.2	1.2	1.2	1.2
Social contributions	14.8	14.8	14.6	14.6	14.9	15.3	15.4	15.5	15.5	15.5	15.6
Capital and other current transfers and subsidies	1.9	2.1	2.2	3.0	1.4	1.4	1.6	1.6	1.7	1.7	1.7
Other revenue	4.5	4.6	4.4	4.2	4.2	4.0	3.8	3.7	3.7	3.7	3.7
Property income	0.9	0.9	0.8	0.8	0.8	0.7	0.6	0.6	0.6	0.6	0.6
Sales of goods and services	3.6	3.7	3.5	3.4	3.4	3.3	3.2	3.1	3.1	3.1	3.1
Other revenue	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Expenditure	**44.5**	**42.6**	**42.2**	**42.1**	**39.9**	**40.4**	**40.6**	**40.5**	**40.6**	**40.6**	**40.6**
Expense	**40.4**	**38.9**	**38.4**	**36.8**	**36.5**	**36.7**	**36.8**	**36.7**	**36.6**	**36.4**	**36.3**
Compensation of employees	8.9	8.9	8.8	8.7	8.9	9.0	9.1	9.1	9.2	9.2	9.2
Use of goods and services	6.4	6.6	6.4	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
Interest	1.4	1.3	1.3	1.1	0.9	0.9	0.8	0.8	0.7	0.7	0.7
Subsidies	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Grants	0.8	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Social benefits	16.3	16.5	16.1	15.6	15.5	15.6	15.7	15.5	15.4	15.3	15.1
Other expenses	4.4	2.7	3.1	2.6	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Net acquisition of nonfinancial assets	**4.1**	**3.7**	**3.8**	**5.2**	**3.4**	**3.7**	**3.7**	**3.8**	**4.0**	**4.2**	**4.3**
Gross Operating Balance	**0.2**	**2.4**	**1.9**	**4.6**	**0.6**	**4.1**	**4.2**	**4.3**	**4.5**	**4.7**	**4.8**
Net lending/borrowing (overall balance)	**-3.9**	**-1.2**	**-1.9**	**-0.6**	**0.6**	**0.4**	**0.5**	**0.6**	**0.5**	**0.5**	**0.5**
Net financial transactions	**-3.9**	**-1.2**	**-1.8**	**-0.4**	**0.6**	**0.4**	**0.5**	**0.6**	**0.5**	**0.5**	**0.5**
Net acquisition of financial assets	**3.8**	**-0.5**	**-2.4**	**0.4**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Net incurrence of liabilities	**7.7**	**0.8**	**-0.5**	**0.9**	**-0.6**	**-0.4**	**-0.5**	**-0.6**	**-0.5**	**-0.5**	**-0.5**
Adjustment and statistical discrepancies 1/	*0.0*	*0.0*	*-0.1*	*-0.2*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Memorandum item:											
General government debt	44.5	44.9	42.2	40.3	37.2	35.2	33.2	31.2	29.4	27.7	26.1
Primary balance	-2.8	-0.2	-0.8	0.3	1.4	1.2	1.2	1.2	1.1	1.1	1.0
Structural balance 2/	-1.5	0.1	-0.8	-0.6	0.5	0.2	0.3	0.4	0.4	0.4	0.5
Cyclically adjusted primary balance	-2.1	1.2	0.0	0.2	1.3	1.0	1.0	1.1	1.0	1.0	1.0
Change in cyclically adjusted primary balance	-0.3	3.3	-1.2	0.2	1.1	-0.3	0.0	0.1	-0.1	0.0	0.0
Output gap	-1.9	-4.0	-2.5	0.2	0.4	0.6	0.5	0.4	0.5	0.3	0.1
Nominal GDP (billions of Koruny)	4,060	4,098	4,314	4,555	4,715	4,916	5,113	5,324	5,538	5,765	5,997

Sources: Ministry of Finance and IMF staff estimates and projections.

1/ Adjustments for cash-accrual differences, valuation changes and other discrepancies.

2/ In percent of potential GDP.

Table 4. Czech Republic: Macroeconomic Framework, 2012–22

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
						Staff projections					
Real sector											
	(Annual growth rates, percent, unless otherwise noted)										
Real GDP	-0.8	-0.5	2.7	4.5	2.4	3.0	2.4	2.3	2.3	2.3	2.3
Private consumption	-1.2	0.5	1.8	3.0	2.9	3.0	2.7	2.6	2.6	2.5	2.5
Public consumption	-2.0	2.5	1.1	2.0	1.2	2.3	2.2	2.0	2.0	2.0	2.0
Investment	-3.9	-5.1	8.6	10.0	-0.9	3.0	3.5	3.5	3.5	4.0	4.0
Fixed investment	-3.1	-2.5	3.9	9.0	-3.7	3.0	3.5	3.5	3.5	4.0	4.0
Exports, goods and services	4.3	0.2	8.7	7.7	4.3	3.8	3.5	4.0	4.0	4.0	4.0
Imports, goods and services	2.7	0.1	10.1	8.2	3.2	3.9	4.2	4.7	4.7	4.7	4.7
contribution of net exports (percent)	1.3	0.1	-0.4	0.1	1.0	0.2	-0.3	-0.3	-0.3	-0.4	-0.4
Inflation (CPI, percent)	3.3	1.4	0.3	0.3	0.7	2.3	1.8	2.0	2.0	2.0	2.0
Unemployment (percent of labor force)	7.0	7.0	6.1	5.0	4.0	3.4	3.4	3.5	3.5	3.5	3.5
Output gap 1/	-1.9	-4.0	-2.5	0.2	0.4	0.6	0.5	0.4	0.5	0.3	0.1
Gross domestic savings (in percent of GDP)	24.6	24.1	26.1	27.6	27.4	27.1	26.8	26.7	26.4	26.3	26.1
Public	12.6	13.1	12.4	13.2	13.7	14.0	14.5	14.9	15.2	15.5	15.8
Private	12.0	11.1	13.6	14.4	13.6	13.1	12.3	11.8	11.2	10.8	10.3
Gross capital formation (in percent of GDP)	26.2	24.7	25.9	27.4	26.2	26.5	26.5	26.6	26.7	26.9	27.1
Balance of payments											
Current account balance	-1.6	-0.5	0.2	0.2	1.1	0.7	0.3	0.1	-0.2	-0.6	-1.0
Trade balance	3.0	4.1	5.1	4.1	5.3	4.7	4.4	4.2	3.8	3.5	3.0
Services balance	1.9	1.7	1.3	1.7	2.1	2.0	2.0	1.9	1.9	1.8	1.7
Net factor income	-5.9	-6.1	-6.0	-5.6	-5.8	-5.8	-5.7	-5.7	-5.6	-5.5	-5.5
Current transfers	-0.7	-0.2	-0.2	0.0	-0.6	-0.3	-0.4	-0.3	-0.3	-0.3	-0.3
Capital account balance	1.3	2.0	0.7	2.2	1.2	0.6	1.1	0.8	0.9	0.9	1.0
Errors and omissions, net	0.5	0.2	0.4	1.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Financial account balance (change in stocks, + = increase)	0.3	1.7	1.4	3.9	2.5	1.3	1.4	1.0	0.6	0.3	0.0
Direct investment, net	-3.0	0.2	-1.9	1.1	-3.0	-1.4	-1.4	-1.4	-1.4	-1.4	-1.3
Portfolio investment, net	-1.4	-2.3	2.1	-3.6	-3.6	-9.5	0.3	0.8	0.7	0.7	0.7
Other investment and derivatives, net	2.6	-0.8	-0.5	-1.3	-3.1	-11.8	2.7	2.2	1.8	1.4	0.9
Reserve assets	2.0	4.6	1.7	7.7	12.0	24.0	-0.2	-0.6	-0.5	-0.4	-0.3

Sources: Czech National Bank, Czech Statistical Office, Ministry of Finance, and IMF staff estimates and projections.
1/ In percent of potential GDP.

Table 5. Czech Republic: Financial Soundness Indicators, 2010–16

(In percent, unless indicated otherwise)

	2010	2011	2012	2013	2014	2015	2016Q3
Capital							
Regulatory capital to risk-weighted assets	15.3	15.0	15.6	16.5	17.0	16.7	16.0
Regulatory Tier 1 capital to risk-weighted assets	13.9	13.9	15.2	16.2	16.5	16.3	15.7
Capital to assets	6.5	6.5	6.9	7.2	7.3	7.8	7.4
Profitability							
Return on assets	1.3	1.2	1.4	1.2	1.2	1.1	1.3
Return on equity	19.7	18.3	20.4	16.2	16.5	14.2	17.4
Interest margin to gross income	63.1	64.5	60.7	59.9	61.8	63.7	61.8
Noninterest expenses to gross income	46.8	47.2	46.9	46.8	47.2	49.3	47.3
Trading income to total income	4.6	4.1	8.9	8.7	6.3	7.6	9.6
Personnel expenses to noninterest expenses	39.7	41.0	41.2	41.4	40.1	44.1	46.9
Liquidity							
Liquid assets to total assets	29.4	29.9	32.6	33.8	30.5	30.6	27.9
Liquid assets to short-term liabilities	71.1	72.2	71.4	67.4	64.9	61.7	53.5
Customer deposits to total (noninterbank) loans	129.6	126.0	133.1	128.3	123.2	118.1	119.6
Foreign-currency-denominated loans to total loans	21.6	22.2	20.9	29.1	28.9	...	...
Foreign-currency-denominated liabilities to total liabilities	14.3	15.0	14.1	21.5	23.3	...	...
Sensitivity to market risk							
Net open position in foreign exchange to capital[1]	0.4	-3.2	5.1	1.2	1.2	9.6	11.0
Gross asset position in financial derivatives to capital	43.2	57.5	46.5	29.5	37.5	25.8	27.0
Gross liability position in financial derivatives to capital	41.2	53.5	40.5	29.7	34.3	22.8	24.1
Net open position in equities to capital	8.1	9.3	7.8	6.2	6.6	...	...
Memo item							
Nonperforming loans to total gross loans	5.4	5.2	5.2	5.2	5.6	5.5	4.8

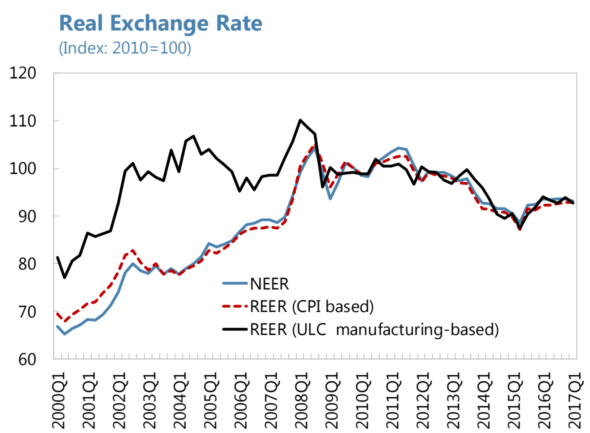
Source: Czech National Bank

1/The significant change in net open positions to foreign exchange in 2015 is because of a break in the series.

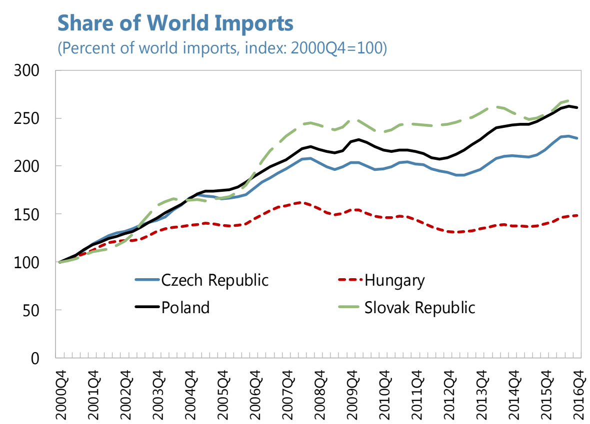
Annex I. Assessment of External Balances, Competitiveness, and the Exchange Rate

The external position is moderately stronger than the level consistent with medium-term fundamentals and desirable policies. Staff evaluates the real exchange rate to be moderately undervalued, and likely to appreciate over the medium term.

The Czech economy remains competitive, although the real exchange rate is appreciating. Exporters continue to increase market shares in world trade, after experiencing a stagnation in the post-crisis period. The moderate downward trend in the real exchange rate, observable since the euro area crisis, has now reverted. A moderate real appreciation, especially in ULC terms, has been taking place in 2016, driven by a combination of a higher wage bill and slowing productivity. The nominal koruna:euro exchange rate floor that had been in place for over three years was removed in April. But financial market reaction to the removal of the floor has been muted, with the koruna appreciating by 2½ percent so far.



Source: Haver.

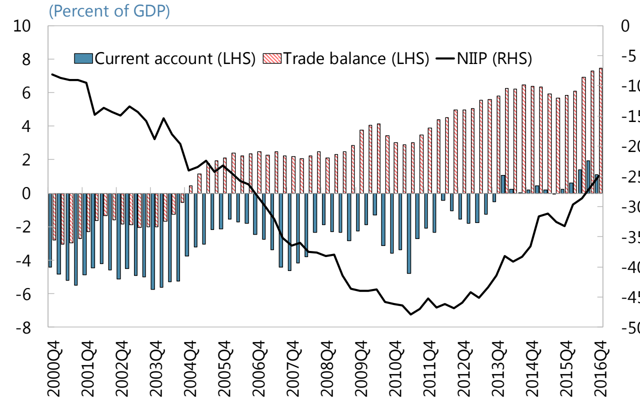


Sources: Direction of Trade Statistics

The level of the current account does not raise major competitiveness concerns. The current account turned positive in 2015 and is forecast to record small, but declining, surpluses in the medium term, given assumptions of continued, albeit moderate, appreciation of the real exchange rate. The current account surplus in 2016 reflects declining imports, especially of investment goods due to slowdown of EU funds absorption. In the past three years, large surpluses in the goods balance have been almost offset by significant deficits in the primary and secondary incomes, driven by returns on large FDI stock.

Recent movements in the financial account reflect higher appetite for koruna-denominated assets, driven by speculation on future currency appreciation, and increased foreign exchange intervention in the run up to FX floor exit. Inward portfolio flows have been accelerated by foreign demand for government securities. The liabilities recorded under other investments are associated primarily with a rise in short-term deposits in domestic banks. The increase in reserve assets was due to foreign exchange interventions.

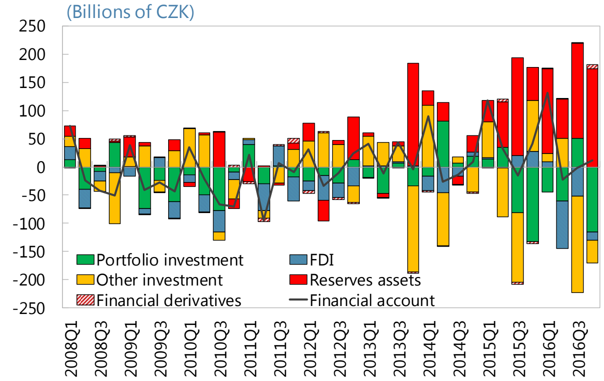
Current Account and International Investment Position
(Percent of GDP)



Sources: Haver analytics; and IMF staff calculation.

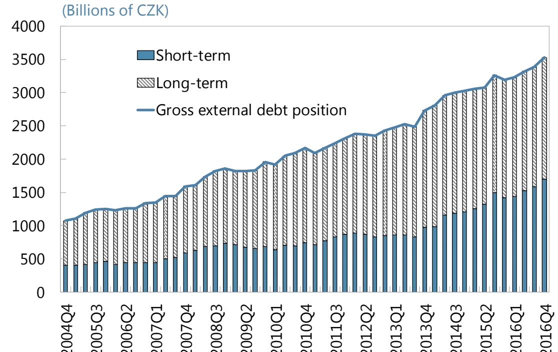
The external position appears comfortable. External liabilities are mainly long-term, and reserves provide a cushion against possible vulnerabilities. External debt, estimated at 75 percent of GDP in 2016, is also mostly long-term and is concentrated in "other sector", reflecting loans across affiliated corporations. The share of short-term debt has been increasing, mainly due to the increase in foreign-sourced deposits. However, the banking system as a whole has sufficient liquid assets to cover foreign deposits.

Financial account composition
(Billions of CZK)



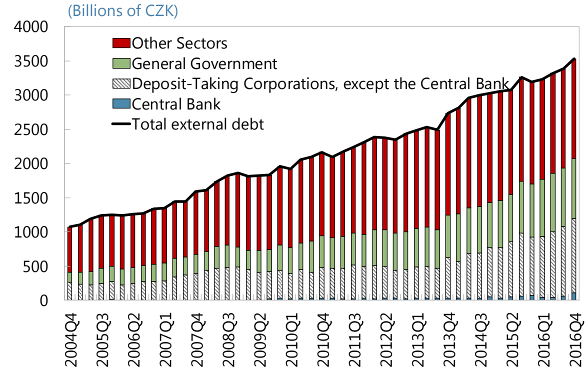
Source: Haver.

Gross External Debt by Maturity
(Billions of CZK)



Source: Czech National Bank.

External Debt Composition by Sector
(Billions of CZK)



Source: Czech National Bank.

Staff evaluates the real exchange rate to be moderately undervalued. Formal EBA evaluations conflict:

- The current account gap from the CA model (1.7 percent) indicates that the external position is moderately stronger than justified by macroeconomic variables. However, a policy gap of

1.4 percent suggests that Czech financial, fiscal and external policies are broadly appropriate. The methodology points to a cyclically-adjusted current account norm of -0.7 percent, whereas the actual current account is at 1.1. These results imply a moderate REER undervaluation, of -4 percent. The above estimates are for 2016 and are based on April 2017 vintage data, (and therefore do not take into account koruna appreciation following the removal of the FX floor).

- The REER model indicates a large overvaluation, of 17 percent. Staff considers this result problematic for a number of reasons: (i) the estimated overvaluation in this approach is driven by large residuals; (ii) the result is at odds with the CA model and the External Sustainability approach (which indicates a moderate undervaluation, by 4 percent); and (iii) overvaluation would seem inconsistent with strong export performance as shown by rising market share.

Staff also concludes that the real exchange rate is likely to appreciate over the medium term. Continued and gradual real exchange rate appreciation can be expected *if* Czech national income converges to the European mean and *if* concentration in manufacturing does not increase. Assume that Czech income levels resume convergence to the European mean. A number of theoretical models with tradeables/non-tradeables sectors and/or rich preference specifications predict exchange rate *appreciation* would be associated with higher relative growth rates.[1]

- On the supply side, the well-known Balassa-Samuelson mechanism predicts that higher productivity in tradeables sectors, together with equalization of wages across sectors, drives up the real exchange rate.[2]

- Demand side considerations also suggest appreciation: nonservices are luxuries; higher incomes generate relatively more demand for (nontradeable) services than (tradeable) goods, driving up the real exchange rate.[3]

Both supply side and demand side mechanisms would seem to be applicable to the Czech economy.[4] In terms of empirical evidence, widespread findings of substantial and non-diminishing deviations from Purchasing Power Parity provide support for models in which real exchange rates

---

[1] Simple one-good open economy models would suggest real *depreciation* with higher relative growth rates in the Czech Republic—in such models, the terms of trade (which is the same as the real exchange rate) would have to fall to persuade consumers in the rest of the world to buy surplus production from the Czech economy (on the assumption that Czech households do not want to consume everything produced).

[2] For formalized GE version, see Asea, Patrick and Enrique Mendoza (1994), "The Balassa-Samuelson Model: A General Equilibrium Approach", *Review of International Economics* 2(3), 244–67.

[3] See Jeffrey Bergstrand (1991), "Structural Determinants of Real Exchange Rates and National Price Levels: Some Empirical Evidence", *American Economic Review* 81(1), 325–34.

[4] An important caveat comes from Berka and Devereux (2013), who point out that real exchange rate appreciation is not guaranteed even with higher productivity in tradeables—if the elasticity of substitution between home and foreign goods is sufficiently low, then (relative) economic growth will lead to RER *depreciation*, even if growth is concentrated in the tradeables sector. See Martin Berka and Michael B. Devereux (2013), "Trends in European Real Exchange Rates", *Economic Policy* 28(74), 193–242.

change over long periods of time. In particular, Berka and Devereux (2015) look at European economies (both emerging and advanced) and find:

- Robust and strong correlations between RERs and relative GDP per capita for most countries. *Levels* cross-sectional variation across countries is explained very well by *levels* of relative GDP per capita.

- Generally consistently positive correlations between *growth* rates of relative GDP per capita and *changes* in real exchange rates over time for each country. Typically, a 1 percent increase in relative GDP per capita is associated with a 0.35–0.40 increase in the real exchange rate.

Annex II. Trade Concentration

The Czech economy is highly export oriented—exports are 80 percent of GDP, and net exports have been trending upward. This annex examines where that improved performance comes from.

Trade concentration is increasing. Export growth can be divided into the expansion of existing trade flows (the intensive margin) and the addition of new products and markets (the extensive margin). The measure plotted below assigns all product growth—and contraction—to one of seven categories:

Intensive Margin

1. Increase of existing products in established markets.
2. Decrease in existing products in established markets.
3. Extinction of exports of products in established markets.

Extensive Margin

1. Introduction of new products in new markets.
2. Introduction of new products in established markets.
3. Introduction of existing products in new markets.
4. Product diversification in established markets—e.g. France exports widgets to Guatemala and Singapore, but exports gizmos only to Singapore. The following year, France begins to also export gizmos to Guatemala, thereby diversifying its trade.

The seven components account for total export growth between 2010 and 2016. The data show that:

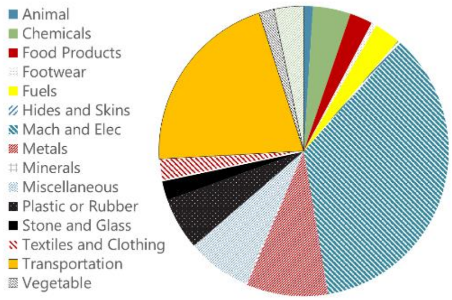
- More than 55 percent of Czech Republic's exports are concentrated in two sectors, transportation and machinery and electrical products, accounting for more than 50 percent of total exports.

- Between 2010 and 2015 diversification has not been a big driver of export growth: much of export growth in the Czech Republic has been driven by higher exports of existing products to *existing* markets, and product diversification in existing markets.

Trade in neighboring countries is also highly concentrated. Product concentration of exports, as measured by the Herfindahl-Hirschman index at the SITC 3-digit product level, is lower than in other central European peers, with the exception of Poland.

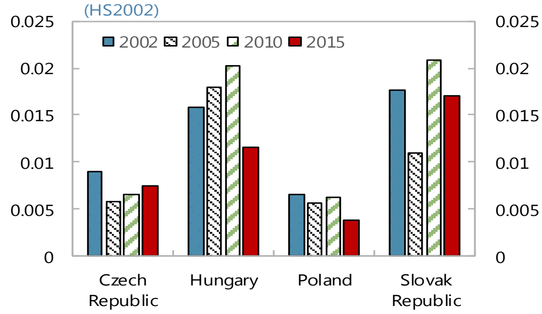
On the plus side, trade sophistication is increasing. Although concentration is cause for concern, it is also true that the quality and sophistication of Czech exports has been increasing. This is captured by the export sophistication index of Rodrik et al. (EXPY) available in the WITS database. In this measure, the Czech economy compares relatively well to neighboring competitors.

Export products
(Percent, share of total export 2016)



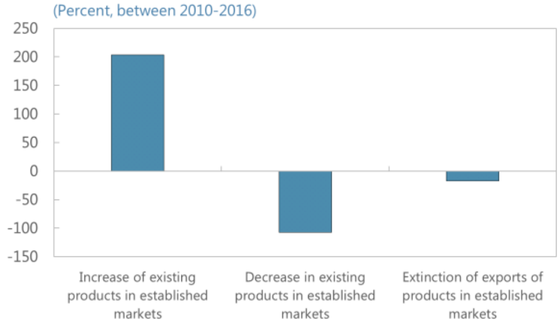
Sources: World Bank WITS

Herfindahl-Hirschman Product Concentration Index
(HS2002)



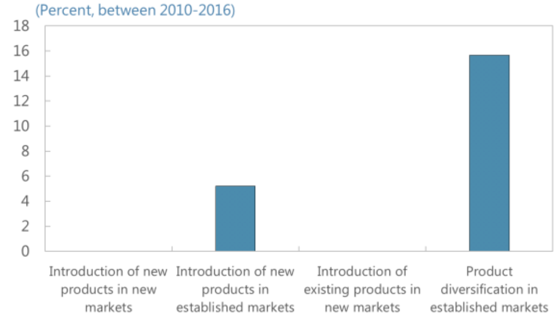
Source: World Bank WITS.

Decomposition of total export growth - Intensive Margin
(Percent, between 2010-2016)



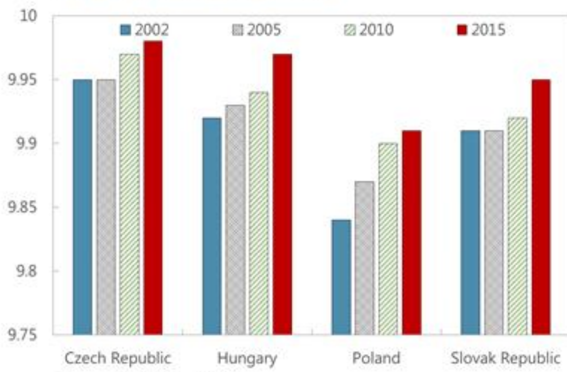
Sources: World Bank, WITS, and IMF Staff calculation

Decomposition of total export growth - Extensive Margin
(Percent, between 2010-2016)



Sources: World Bank, WITS, and IMF Staff calculation

Export sophistication index



Sources: World Bank WITS

Annex III. Risk Assessment Matrix

Source of Risk	Likelihood of Risk	Time Horizon	Expected Impact	Policy Response
		External risks		
Retreat from cross-border integration. A fraying consensus about the benefits of globalization could lead to protectionism and economic isolationism, leading to reduced global and regional policy collaboration with negative consequences for trade, capital and labor flows, sentiment, and growth.	**High**	**Short to Medium Term**	**Medium** Damage to global supply chains that benefit the Czech economy	A temporary easing bias would be appropriate.
Policy and geopolitical uncertainties: - **Policy uncertainty and divergence.** Two-sided risks to U.S. growth with difficult-to-predict policies and global spillovers. In Europe, uncertainty associated with negotiating post-Brexit arrangements and with upcoming major elections. Policy divergence could lead to rising global imbalances and exacerbate exchange rate and capital flow volatility.	**High**	**Short to medium term**	**Medium** Border closures and restrictions on the free movement of goods, services, and labor weigh on trade. Banking system is funded mainly from domestic deposits.	Maintaining accommodative monetary conditions, while loosening fiscal stance .
- **Intensification of the risks of fragmentation/security dislocation in part of the Middle East, Africa, and Europe,** leading to a sharp rise in migrant flows, with negative global spillovers.	**High**	**Short to medium term**	**Low**	
Weaker-than-expected global growth: - in China and other large emerging/frontier markets;	**Low/ Medium**	**Short/ Medium Term**	**Medium** External demand would wane, weighing on Czech Republic's exports and growth.	Policies supporting domestic demand, as well as diversifying trade partners and specialization could help cushion the impact on the economy.
- structurally weak growth in key advanced and emerging economies: Low productivity growth (U.S., the Euro Area, and Japan), a failure to fully address crisis legacies and undertake structural reforms, and persistently low inflation (the Euro Area, and Japan) undermine medium-term growth in advanced economies;	**Medium**	**Short Term**	**High** As a small open economy, Czech Republic growth is highly dependent on export growth, especially to Germany and the euro area. On the upside, stronger-than-expected demand from trading partners would have a positive impact on growth.	
Financial conditions: - **Significant further strengthening of the US dollar and/or higher rates.** As investors reassess policy fundamentals, as term premia decompress, or if there is a more rapid Fed normalization, leveraged firms, lower-rated sovereigns and those with un-hedged dollar exposures could come under stress. Could also result in capital account pressures for some economies.	**High**	**Short Term**	**Low** The banking system is well capitalized, liquid, and profitable (para 25).	Maintaining accommodative monetary conditions would buffer shocks.
- **European bank distress:** Strained bank balance sheets amid a weak profitability outlook could lead to financial distress in one or more major banks with possible knock-on effects on the broader financial sector and for sovereign yields in vulnerable economies.	**Medium**	**Short term**	**Low** Czech banks are funded mainly from domestic deposits.	

Lower energy prices, Production cuts by OPEC and other major producers may not materialize as agreed while other sources of supply could increase production.	**Low**	**Short to Medium Term**	**Medium** Household real incomes would be boosted and lower production costs would support growth. Lower import prices would temporarily lower inflation away from the target.	Consistent monetary framework emphasizing the priority of the inflation objective.
Domestic risks				
Economy's adjustment to FX floor exit	**Medium**	**Short Term**	**High** Costs of policy errors are asymmetric given the uncertainty. Overtightening of monetary conditions could lead to sharply decreased output and inflation. On the upside, cheaper imported goods could drive private consumption growth higher.	Gradual approach in the setting policy interest rates, communicated through interest rate projections.
Financial stability risks arising from rapid growth in lending, especially to real estate.	**Medium**	**Medium Term**	**Medium** Some households appear overextended and vulnerable to house price, interest rate, or income shocks.	The CNB should be given powers of direction over LTV, LTI, and (depending on data adequacy) DTI measures. Fiscal and structural initiatives should be taken to support macroprudential tools.
Stalled income convergence and structural reforms.	**Medium**	**Long Term**	**Medium** Convergence was set back by the financial crisis. A demographic outlook is poor and productivity growth has stalled. On the upside, better-than-expected absorption of EU funds could boost public and private investment.	Measures should target labor participation incentives; training and skills; connectivity and infrastructure, supported by improved expenditure efficiency (notably in healthcare); improved tax compliance; and reduced regulatory burdens on small firms and start-ups.
The Risk Assessment Matrix (RAM) shows events that could materially alter the baseline path (the scenario most likely to materialize in the view of IMF staff). The relative likelihood is the staff's subjective assessment of the risks surrounding the baseline ("low" is meant to indicate a probability below 10 percent, "medium" a probability between 10 and 30 percent, and "high" a probability between 30 and 50 percent). The RAM reflects staff views on the source of risks and overall level of concern as of the time of discussions with the authorities. Non-mutually exclusive risks may interact and materialize jointly. "Short term" and "medium term" are meant to indicate that the risk could materialize within 1 year and 3 years, respectively.				

Annex IV. Implementation of the 2016 Article IV Key Recommendations

	Key recommendations	Actions
Monetary	Prepare for an exit from the exchange rate floor to a floating exchange rate and be ready to use other non-conventional tools.	*Implemented*. The CNB removed the koruna:euro floor on April 6 and has not intervened since then. At the announcement of the floor's removal, the CNB stated that it stands ready to intervene against "excessive" exchange rate fluctuations. The CNB stated that the removal of the floor should be followed by a gradual increase in interest rates, although negative interest rates could be used in exceptional circumstances.
Macroprudential	Make LTV restrictions binding. Potentially use other measures (e.g. DTI).	*In progress.* Legislation providing powers over the LTV, DTI and DSTI ratios is currently under review in Parliament.
Fiscal	Legislate fiscal framework	*Implemented.* A new fiscal responsibility framework was adopted in January 2017.
	Reduce tax avoidance	*Implemented*. To combat tax evasion and improve tax administration, the authorities introduced electronic VAT reporting and electronic registration of sales.
	Increase public investment	*Not yet implemented.* Public investment contracted due to very low EU funds absorption. Last year's absorption was even lower than expected (it is typically low in the first years of a programming period), in part due to the incompatibility of an environmental impact assessment with revised EU standards.
Structural	Boost potential growth by increasing labor market participation of certain population groups, and enhancing investment in human and physical capital.	*In progress.* The authorities implemented new tax and benefits instruments supporting working parents with children and measures aimed at enhancing regional labor mobility. National spending on R&D has been increased. Functioning and transparency of public administration is being further enhanced through the development of online government services.

Annex V. Public Sector Debt Sustainability Analysis

Public debt declined to 37.2 percent of GDP in 2016, due to an improvement in the headline balance driven by strong revenue collection and capital underspending, favorable financing conditions, and the continued economic recovery. Public debt in staff's projections is projected to decline to 26 percent of GDP in 5 years, assuming fiscal targets outlined in the Convergence Program are met and growth continues. Public debt and gross financing needs are relatively immune to interest and exchange rate shocks; a negative shock to real GDP growth would slow debt reduction.

Baseline and Realism of Projections

The baseline scenario assumes small surpluses and steady growth. A slight relaxation of the fiscal stance from a structural surplus of 0.5 percent in 2016 to a structural surplus of 0.2 percent is expected in 2017, and subsequent tightening, with the headline balance maintaining surpluses of 0.5 percent of GDP, is projected over the medium term. The short-term relaxation is mostly driven by increased government consumption with higher compensation of employees and higher social benefits payments. Healthy domestic demand is projected to drive sustained growth, with real GDP slightly above potential at 3.0 percent of GDP in 2017. The inflation rate is projected to increase to 2.3 percent in 2017 and then settle at the 2 percent target by 2019.

The outlook for debt and funding needs is benign in this scenario. Debt declines from 37 percent of GDP in 2016 to 26 percent in 2022. The ratio declines in 2017 despite a slightly relaxed fiscal stance, as the contribution of nominal GDP growth and the primary surplus are projected to exceed the contribution of interest payments to the debt burden. Gross financing needs are projected to be 5.2 percent of GDP at the end of projection period.

Shock and Stress Tests

A negative shock to real GDP growth would slow the fall in debt. In this scenario, a 1 standard deviation shock to real GDP growth (3.0 percentage point decline) for 2 years, with its attendant impact on the primary balance, inflation, and the real interest rate, causes public debt to rise to 38.7 percent of GDP and gross financing needs to increase to 10.8 percent of GDP by 2019.[1] Afterward, public debt would decline to 34.8 percent of GDP and gross financing needs would fall to 7.1 percent of GDP by 2022.

Other shocks are not as important. For instance, following an interest rate shock in which the nominal rate increases by 367 basis points (the difference between the maximum real interest rate over the last 10 years and the average real interest rate over the projection period), debt continues to fall, to 29.3 percent of GDP by 2022.

[1] The shock is calibrated using historical real GDP growth data from 2007–2016. Every 1 percent point decline in real GDP growth is assumed to reduce inflation by 0.25 percentage points while non-interest revenues and non-interest expenditures are assumed constant.

Czech Republic Public Sector Debt Sustainability Analysis (DSA) - Baseline Scenario

(in percent of GDP unless otherwise indicated)

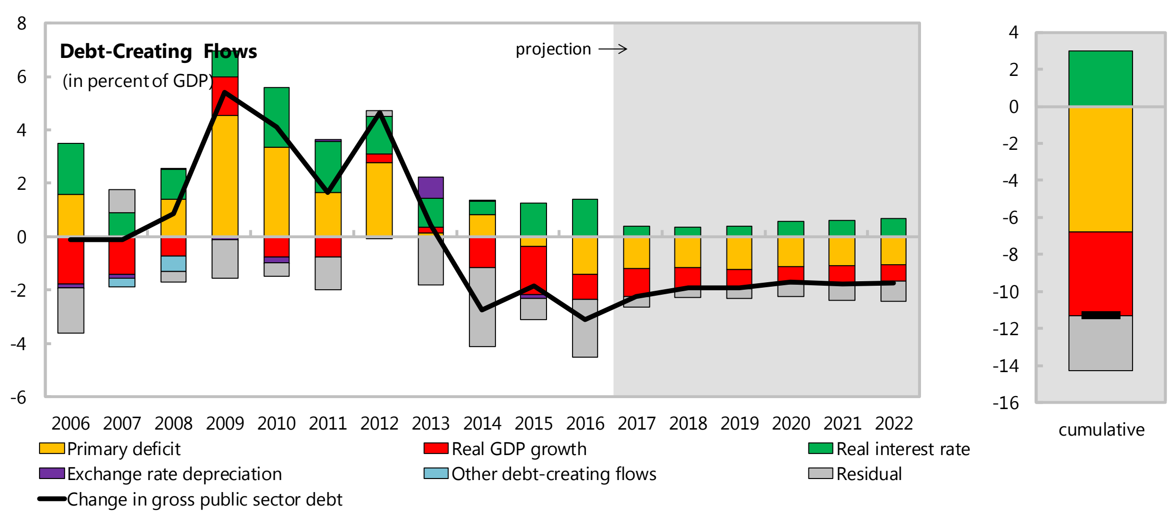
Debt, Economic and Market Indicators [1/]

	Actual			Projections					
	2006-2014 [2/]	2015	2016	2017	2018	2019	2020	2021	2022
Nominal gross public debt	36.4	40.3	37.2	35.0	33.1	31.1	29.4	27.7	26.0
Public gross financing needs	7.3	5.9	4.5	5.6	7.3	6.3	4.7	4.7	5.2
Real GDP growth (in percent)	1.8	4.5	2.4	3.0	2.4	2.3	2.3	2.3	2.3
Inflation (GDP deflator, in percent)	1.4	1.0	1.1	1.3	1.6	1.8	1.7	1.7	1.7
Nominal GDP growth (in percent)	3.2	5.6	3.5	4.3	4.0	4.1	4.0	4.1	4.0
Effective interest rate (in percent) [4/]	3.7	2.7	2.4	2.5	2.7	3.1	3.6	3.9	4.3

As of May 15, 2017		
Sovereign Spreads		
EMBIG (bp) 3/		50
5Y CDS (bp)		21
Ratings	Foreign	Local
Moody's	A1	A1
S&Ps	AA-	AA
Fitch	A+	A+

Contribution to Changes in Public Debt

	Actual			Projections							
	2006-2014	2015	2016	2017	2018	2019	2020	2021	2022	cumulative	debt-stabilizing primary balance [9/]
Change in gross public sector debt	1.6	-1.9	-3.1	-2.2	-1.9	-1.9	-1.7	-1.8	-1.7	-11.3	
Identified debt-creating flows	2.6	-1.1	-0.9	-1.8	-1.6	-1.5	-1.2	-1.1	-1.0	-8.3	
Primary deficit	1.8	-0.4	-1.4	-1.2	-1.2	-1.2	-1.1	-1.1	-1.0	-6.8	0.1
Primary (noninterest) revenue and gra	39.2	41.3	40.3	40.7	40.9	40.9	41.0	40.9	40.9	245.4	
Primary (noninterest) expenditure	41.0	40.9	38.9	39.5	39.8	39.7	39.8	39.9	39.9	238.6	
Automatic debt dynamics [5/]	0.8	-0.7	0.5	-0.6	-0.4	-0.3	-0.1	-0.1	0.1	-1.5	
Interest rate/growth differential [6/]	0.8	-0.6	0.5	-0.6	-0.4	-0.3	-0.1	-0.1	0.1	-1.5	
Of which: real interest rate	1.3	1.3	1.4	0.4	0.3	0.4	0.6	0.6	0.7	3.0	
Of which: real GDP growth	-0.5	-1.8	-0.9	-1.1	-0.8	-0.7	-0.7	-0.7	-0.6	-4.5	
Exchange rate depreciation [7/]	0.0	-0.1	0.0	…	…	…	…	…	…	…	
Other identified debt-creating flows	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
General government net privatizatior	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Please specify (2) (e.g., ESM and Euro	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Residual, including asset changes [8/]	-1.0	-0.8	-2.2	-0.4	-0.3	-0.4	-0.5	-0.6	-0.8	-3.0	



Source: IMF staff.

1/ Public sector is defined as general government.

2/ Based on available data.

3/ Long-term bond spread over German bonds.

4/ Defined as interest payments divided by debt stock (excluding guarantees) at the end of previous year.

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

6/ The real interest rate contribution is derived from the numerator in footnote 5 as $r - \pi(1+g)$ and the real growth contribution as -g.

7/ The exchange rate contribution is derived from the numerator in footnote 5 as $ae(1+r)$.

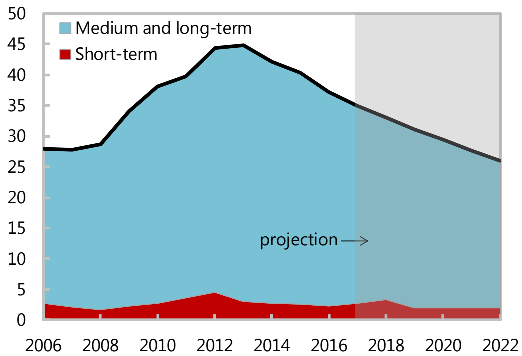
8/ Includes asset changes and interest revenues (if any). For projections, includes exchange rate changes during the projection period.

9/ Assumes that key variables (real GDP growth, real interest rate, and other identified debt-creating flows) remain at the level of the last projection year.

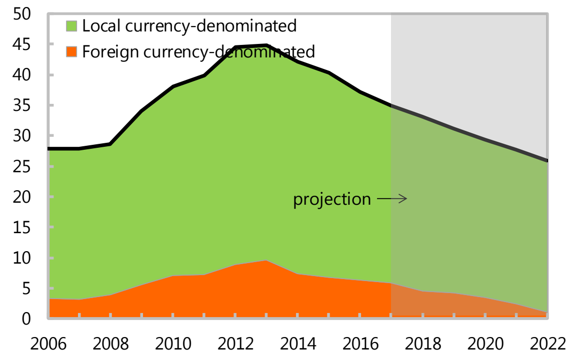
Czech Republic Public DSA - Composition of Public Debt and Alternative Scenarios

Composition of Public Debt

By Maturity
(in percent of GDP)



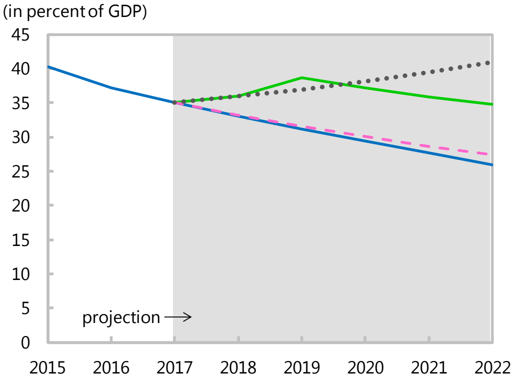
By Currency
(in percent of GDP)



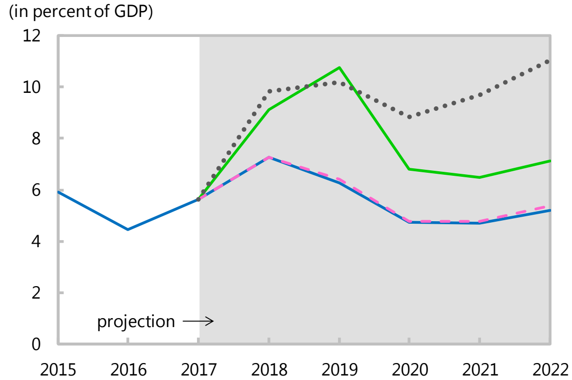
Alternative Scenarios

Baseline — Historical — Real GDP growth — Constant Primary Balance

Gross Nominal Public Debt
(in percent of GDP)



Public Gross Financing Needs
(in percent of GDP)



Underlying Assumptions
(in percent)

Baseline Scenario	2017	2018	2019	2020	2021	2022
Real GDP growth	3.0	2.4	2.3	2.3	2.3	2.3
Inflation	1.3	1.6	1.8	1.7	1.7	1.7
Primary Balance	1.2	1.2	1.2	1.1	1.1	1.0
Effective interest rate	2.5	2.7	3.1	3.6	3.9	4.3
Constant Primary Balance Scenario						
Real GDP growth	3.0	2.4	2.3	2.3	2.3	2.3
Inflation	1.3	1.6	1.8	1.7	1.7	1.7
Primary Balance	1.2	1.2	1.2	1.2	1.2	1.2
Effective interest rate	2.5	2.7	3.1	3.6	3.9	4.2
Real GDP growth						
Real GDP growth	3.0	-0.6	-0.7	2.3	2.3	2.3
Inflation	1.3	0.9	1.1	1.7	1.7	1.7
Primary Balance	1.2	-0.3	-1.8	1.1	1.1	1.0
Effective interest rate	2.5	2.7	3.2	3.7	4.0	4.3

Historical Scenario	2017	2018	2019	2020	2021	2022
Real GDP growth	3.0	1.6	1.6	1.6	1.6	1.6
Inflation	1.3	1.6	1.8	1.7	1.7	1.7
Primary Balance	1.2	-1.3	-1.3	-1.3	-1.3	-1.3
Effective interest rate	2.5	2.7	3.1	3.6	3.9	4.2

Source: IMF staff.

Annex VI. Developments in Macroprudential and Regulatory Measures

The CNB has been issuing recommendations on loan-to-value ratios on new loans secured by residential property during the past two years. As of April 2017, new residential loans secured with residential property should not exceed an LTV of 90 percent, and no more than 15 percent of new retail loans secured by residential property should have LTVs of 80 to 90 percent in any given quarter. Although lower than it has been, the recommended limit of 90 percent remains somewhat high compared with those in other European countries that have LTV stipulations (recommended or binding).

The CNB has issued other recommendations to manage risks associated with residential property loans: (i) institutions should assess the capacity of prospective clients to service loans, under current and adverse economic conditions; (ii) the term of retail loans secured by residential property should not exceed 30 years, and the term of unsecured consumer credit provided to clients with retail loans should not exceed 8 years; and (iii) institutions should identify owner-occupied and buy-to-let portfolios. LTV ratios for buy-to-let loans should not exceed 60 percent.

Powers of direction are in legislation. The Czech Parliament is currently discussing legislation that would enable the CNB to set legally binding limits on Loan-to-Value (LTV), debt-service-to-income (DSTI), and debt-to-income (DTI) ratios for retail loans secured by residential property. In the draft proposal, debt in the DSTI and DTI indicators includes all debt extended to the relevant household. Violation of the stipulated limits will be fined by an amount up to 10 million CZK.

A new consumer credit law has come into effect. The law, introduced in December 2016, imposes stricter requirements on credit issuance from banks as well as non-banks. Inter alia, it requires credit providers to supply more transparent information about products, restricts total fees for delayed payment, and requires credit providers to duly assess whether a consumer can repay credit. Failure to do the latter can result in a loan contract being deemed invalid. The law also consolidates the licensing and super-vision authority for all credit providers under the CNB.

Capital requirements are relatively high. Capital requirements are higher than those of European peers (although actual capital ratios are below average). A capital conservation buffer of 2.5 percent was implemented fully in 2014, in line with Basel III requirements and ahead of the required time line. The counter-cyclical capital buffer increased to 0.5 percent in January 2017. This year the CNB has put in place systemic risk buffers on 5 banks in the range of 1–3 percent. However, some elements of Basel III regulations are not yet implemented: the leverage ratio requirement, the net stable funding ratio, and the liquidity coverage ratio.

Annex VII. Capital Inflows and the Balance Sheet of the Financial Sector

Historically, most inward capital flows to the Czech economy have happened via the financial account. Recently, those inflows have accelerated. On the Czech liability side, this has resulted in an increase of foreigners' holdings of commercial bank deposits and government securities. On the Czech asset side, it has caused an increase in the official reserves held by the central bank.

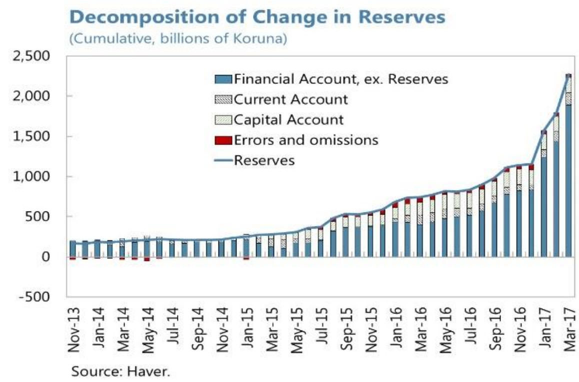
The development has also been associated with changes on the balance sheets of the central bank and commercial banks. On the balance sheet of the central bank the increase in reserves has been associated with an increase in the monetary base (the balancing item to official reserves). At the same time, the balance sheet of Czech commercial banks has expanded.

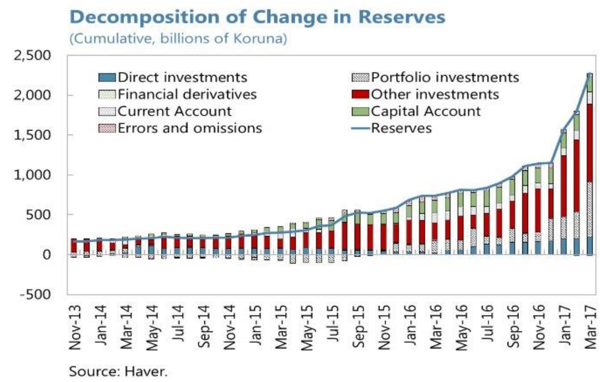
This annex attempts to connect recent developments on the balance of payments to changes on the balance sheets of Czech banks. The data indicate the following:

- A substantial part of the increase (around 40%) in the reserves can be accounted for via inflows of "Other investments" in the financial account, which includes currency and deposits.
- The accumulative inflow of "Other investments" is matched with the accumulative increase in "Loans and deposits of non-residents" on the liability side of Czech banks.
- The increase in "Loans and deposits to non-residents" has primarily been coming from "Other credit institutions" rather than from clients.
- The increase in "Loans and deposits from non-residents" has been associated with an increase in deposits of commercial banks at the central bank. This is potentially explained by banks exchanging foreign currency received from non-residents to deposits with the central bank.

The balance of payments

Changes in official reserves can be decomposed into contributions from the current account and capital flows. In particular, the balance of payments identity allows changes in the reserves to be expressed as the sum of (i) the current account, (ii) the capital account, (iii) (minus) the financial account, and (iv) errors and omissions. Using this, around 80 percent of the increase in reserves of CZK 2072 bn from November 2013 to March 2017 can be accounted for via the financial account. Decomposing the financial account into sub-components, approximately 40 percent of the increase can be accounted for via net inflows in the form of "Other investments".

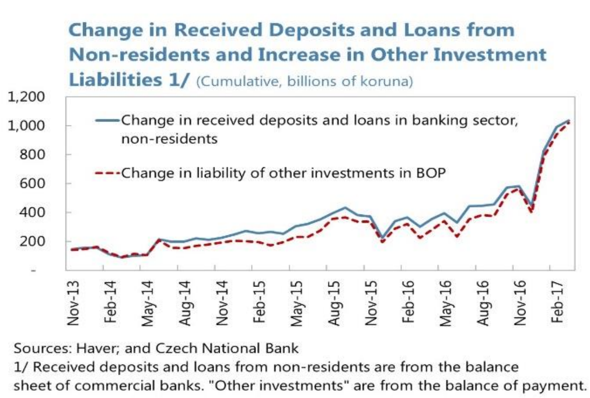


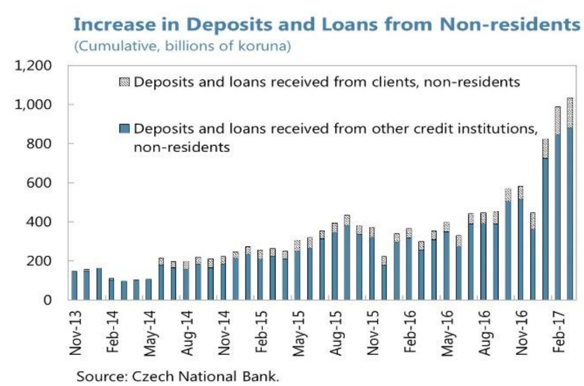


The net inflows of "Other investment" were driven by inflows rather than outflows. Indeed, over the period foreign inflows increased by CZK 1018 bn, while domestic outflows only decreased with CZK 42 bn.

The financial sector balance sheet

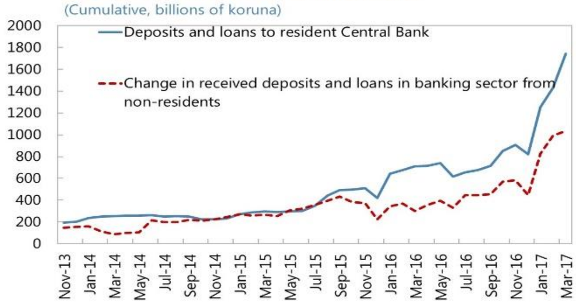
The inflow of "Other investments" from the balance of payment can be linked to balance sheet developments in the financial sector. Indeed, "Other investments" includes loans currency and deposits, and "Loans and deposits to non-residents", on the liability side of Czech banks, has been rising in tandem with the inflows of "Other investments". The increase in loan and deposits has predominately been coming from "Other credit institutions" rather than "Clients".





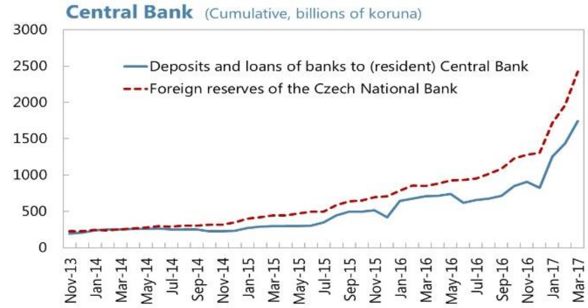
The increase in bank liabilities to non-residents has been associated with an increase in bank deposits with the central bank. Specially, the increase in "Received loans and deposits" has been associated with a rise in banks' deposits with the central bank. This development has in turn been associated with an increase in foreign reserves on the central banks' asset side. This could be explained by Czech banks exchanging foreign currency (received from non-domestic deposit-takers) to deposits in the Czech central bank.

Deposits and Loans from Non-residents and Banks Deposits and Loans to Central Bank
(Cumulative, billions of koruna)



Source: Czech National Bank.

Accumulative Changes in Banks Deposits/Loans with Central Bank and Foreign Exchange Reserves of Central Bank (Cumulative, billions of koruna)



Source: Czech National Bank and Haver Analytics

INTERNATIONAL MONETARY FUND

CZECH REPUBLIC

June 6, 2017

STAFF REPORT FOR THE 2017 ARTICLE IV CONSULTATION—INFORMATIONAL ANNEX

Prepared By European Department

CONTENTS

FUND RELATIONS

(As of April 30, 2017; unless specified otherwise)

Membership Status: Joined 01/01/1993; Article VIII

General Resources Account

	SDR Million	Percent of Quota
Quota	2,180.20	100.00
IMF's Holding of Currency (Holding Rate)	1,838.29	84.32
Reserve Tranche Position	341.92	15.68
Lending to the Fund		
Borrowing Agreement	1208.96	

SDR Department:

	SDR Million	Percent Allocation
Net Cumulative Allocation	780.20	100.00
Holdings	457.14	58.59

Outstanding Purchases and Loans: None

Financial Arrangements:

Type	Amount Approval Date	Amount Expiration Date	Approved (SDR Million)	Drawn (SDR Million)
Stand-By	March 17, 1993	March 16, 1994	177.00	70.00

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

	Forthcoming				
	2017	**2018**	**2019**	**2020**	**2021**
Principal					
Charges/Interest	1.06	1.54	1.54	1.54	1.54
Total	1.06	1.54	1.54	1.54	1.54

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. The de jure exchange rate arrangement is floating. The external value of the koruna is determined by supply and demand in the interbank foreign exchange market, in which the Czech National Bank (CNB) participates. In November 7, 2013, with inflation below target and continued undershooting expected, the CNB announced, that it would (if needed) intervene in the foreign exchange market to weaken the koruna to bring its exchange rate against the euro close to CZK 27. While the exchange rate appears to be floating since the Czech Central Bank removed the koruna/euro floor on April 6, 2017, more observations are necessary to determine the new trend. Until then, the de facto exchange rate arrangement remains classified as stabilized.

The Czech Republic has accepted the obligations of Article VIII and maintains an exchange system that is free of restrictions and multiple currency practices 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).

Last Article IV Consultation:

The last Article IV consultation with the Czech Republic was concluded on June 24, 2016. The staff report and the press release were published on July 7, 2016.

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. An FSAP update was carried out in 2011. 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.

Technical Assistance: See attached table.

Implementation of HIPC Initiative: Not Applicable.

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

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

Safeguards Assessments: Not Applicable.

Czech Republic: Technical Assistance, 1991–2016

Department	Timing	Purpose
FAD	December 1991–September 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	Bond issuance and monetary management
	February 1993	Follow-up visit on bond issuance and monetary management and management of cash balances
	November 1993	Data management and monetary research
	April 1994	Foreign exchange laws (jointly with LEG) and external liberalization
	January 1995	
	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
		GFSM 2001 implementation

STATISTICAL ISSUES

I. Assessment of Data Adequacy for Surveillance

General:

- Data provision is adequate for surveillance.

National Accounts:

- 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. The Czech Republic adopted the *European System of Accounts 2010 (ESA 2010)* in September 2014. The transition from the *ESA 1995 (ESA95)* required the revision of national accounts data.

Price Statistics:

- The Czech Statistical Office (CSO) compiles and disseminates a monthly consumer price index (CPI) using a weighting structure based on expenditure data collected during 2012. Weights are updated biannually. A monthly Harmonized Index of Consumer Prices (HICP) is disseminated according to European regulations. The producer price index is released monthly with coverage including manufacturing, construction, agriculture, and select business services (business to business only). The CSO also compiles and releases monthly import and export price indexes based on data collected directly from establishments engaged in export and/or import activities.

Government Finance Statistics:

- Annual and quarterly fiscal data are compiled on *ESA2010* basis by the Czech Statistical Office, including non-financial accounts, financial accounts, and financial balance sheets. The Ministry of Finance uses the ESA methodology for the Convergence Program targets. The *ESA 2010* methodology includes a wider coverage of the general government sector, different classification of some government transactions, and impacts the calculation of GDP. Government transactions are recorded on an accrual basis.

Monetary and Financial Statistics:

- Monthly MFS data is sent to STA by ECB and is based on standardized report forms (SRFs). Monetary survey data is also provided to the European Department for policy purposes. MFS data covers the central bank (CNB) and the other depository corporations which comprises other monetary financial institutions which are defined under the European Union law to include deposit-taking corporations, electronic money institutions and other issuers of deposits and close substitutes of deposits. Data from the other financial corporations are currently not compiled.

Financial sector surveillance:

- CNB is reporting financial soundness indicators for Deposit Takers on a quarterly basis to STA.

External sector statistics:

- The CNB compiles and disseminates balance of payments and international investment position statistics in line with the sixth edition of the *Balance of Payments and International Investment Position Manual (BPM6)* and in accordance with legal requirements of the ECB and Eurostat. CNB generally derives balance of payments financial account transactions from changes in position data adjusted by exchange rate, price, and other changes. The CNB monthly disseminates the data template on International Reserves and Foreign Currency Liquidity. Czech Republic also participates in the Coordinated Direct Investment Survey (CDIS) and the Coordinated Portfolio Investment Survey (CPIS), and reports quarterly external debt statistics to the Quarterly External Debt Statistics (QEDS) database.

II. Data Standards and Quality

The Czech Republic adheres to the SDDS Plus since April 2016.	Data ROSC was published on July 1, 2000.

Table of Common Indicators Required for Surveillance

(As of June 7, 2017)

	Date of Latest Observation	Date Received	Frequency of Data[7]	Frequency of Reporting[7]	Frequency of Publication[7]
Exchange Rates	current	current	D	D	D
International Reserve Assets and Reserve Liabilities of the Monetary Authorities[1]	Apr. 2017	May 2017	D	M	M
Reserve/Base Money	Apr. 2017	May 2017	M	M	M
Broad Money	Apr. 2017	May 2017	M	M	M
Central Bank Balance Sheet	May 2017	May 2017	M	M	M
Consolidated Balance Sheet of the Banking System	Mar. 2017	Apr. 2017	M	M	M
Interest Rates[2]	Current	Current	D	D	D
Consumer Price Index	Apr. 2017	May 2017	M	M	M
Revenue, Expenditure, Balance and Composition of Financing[3] – General Government[4]	2016 Q4	May 2017	Q	Q	Q
Revenue, Expenditure, Balance and Composition of Financing[3]– Central Government	Mar 2017	Apr. 2017	M	M	M
Stocks of Central Government and Central Government-Guaranteed Debt[5]	2016 Q4	May 2017	Q	Q	Q
External Current Account Balance	Mar. 2017	May 2017	M	M	M
Exports and Imports of Goods and Services	Mar. 2017	May 2017	M	M	M
GDP/GNP	2017 Q1	May 2017	Q	Q	Q
Gross External Debt	2016 Q4	Mar. 2017	Q	Q	Q
International Investment Position[6]	2016 Q4	Mar. 2017	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).

Statement by Michaela Erbenova, Executive Director for Czech Republic
And Ondra Stradal, Advisor to the Executive Director
June 21, 2017

On behalf of the Czech authorities, we would like to thank staff for a comprehensive set of reports reflecting the candid and constructive discussions in Prague. The authorities broadly agree with staff's assessment of the Czech Republic's economic and financial stability developments and appreciate the thorough policy dialogue and staff's recommendations.

Economic and Political Developments

The Czech economy is performing well, as observed by staff. Economic growth slowed down to 2.4 percent in 2016, but is expected to pick up to almost 3 percent this year and next, with the growth rate marginally above the estimated potential output growth. Growth will be driven by robust household consumption, reflecting consumers' optimism in an environment of record low unemployment, rising labor force participation, growing wages, and a renewed growth in gross capital formation, underpinned by an increased drawdown of EU funds. The economy will continue to benefit from the ongoing recovery in the Czech Republic's main trading partners, Germany, Slovakia, and Poland. However, the positive contribution of net exports to economic growth is projected to dissipate as the koruna appreciates and domestic demand accelerates boosting imports.

The unemployment rate as measured by the Eurostat methodology dropped in April to 3.2 percent, the lowest in the European Union and less than half of the EU average. Employment growth reached 1.8 percent in 2016, the fastest pace since 2008, and is expected to grow 1.1 percent in 2017. An increasing supply in the labor market is reflected in the participation rate which climbed close to 75 percent after stagnating around 71 percent in 2005 – 2013. A further increase in the participation rate is expected in the next several years as a result of demographic developments, the gradual rise in the statutory retirement age and recent policy measures, such as labor mobility support, incentives for families with children to work as well as the earlier return to work for mothers.

The inflation rate picked up to slightly above the Czech National Bank's (CNB) two percent target recently, but remains within the tolerance band of one percentage point above and below the target after more than three years of hovering just above the zero bound. This allowed the CNB to discontinue the exchange rate commitment as a monetary policy tool after almost 3½ years as the first step toward a gradual return of the overall monetary conditions to normal with interest rates as the main policy instrument. The latest inflation reading in May was 2.4 percent year-on-year, slightly below the CNB's expectation. The CNB forecasts inflation to stay in the upper half of the tolerance band for most of this year and to return to the target in late 2017 or early 2018.

Political stability has reinforced good economic outcomes. Regular parliamentary elections are scheduled for mid-October. The voting system in the Czech Republic is proportionate and traditionally produces coalition governments. Sharp turns in economic policies are unlikely.

History suggests that the coalition agreements tend to carefully balance the priorities of their constituent parties. Currently, six to seven parties stand a realistic chance to be represented in the new Parliament‘s Lower Chamber. Presidential elections are scheduled for early 2018 and are unlikely to significantly alter economic policies reflecting the limited prerogatives of the President in this area as stipulated by the Constitution.

Improvements in tax collection and fiscal framework

Last year, the general government recorded a fiscal surplus of 0.6 percent of GDP, the best result in the history of the Czech Republic. The main reason was an increase in tax revenues and social security contributions, reflecting better tax collection and continued solid economic growth. A drop in government investments co-financed with EU funds, related to the beginning of a new EU funds programming period, contributed to this outcome to some extent.

Indirect tax revenue rose by 5.4 percent in 2016 relative to the previous year. The VAT revenue growth can be explained by the introduction of electronic VAT reporting which enables to pair individual input and output transactions in two different entities, thus effectively eliminating fraudulent invoices. Its budgetary impact for 2016 surpassed the original expectations. The Act on Evidence of Sales was legislated in 2016 whose main goal is to prevent concealment of taxable income. The first phase of electronic registration of sales was launched on December 1, 2016 and applies to the restaurant and accommodation services sectors. The second phase commenced on March 1, 2017 applies to the retail and wholesale sectors. In March 2018, liberal professions, including doctors, lawyers and accountants and entrepreneurs in transport and agriculture will fall in scope. The final phase is to commence in June 2018 and will apply to select trade and manufacturing activities. The sectoral reverse charge mechanism on specific goods and services, a complementary measure tackling VAT evasion, was broadened to the maximum allowable extent in 2016. It transfers the obligation to declare and pay tax from the supplier to the customer, which is an efficient tool to fight against so called “missing trader frauds” which exploit the way VAT is imposed on intra-EU trading where the movement of supplies between jurisdictions is VAT-free.

Both social security contributions and personal income tax revenues rose by over 6 percent, mainly due to higher wages and salaries reflecting the strong labor market and an increase in the minimum wage by 7.6 percent.

The new legislation on budgetary responsibility enacted in February 2017, anchors the fiscal framework in line with the EU standards for both the central and local governments. Its main tenets are described in the Staff Report. In March 2017, the majority of senators filed a complaint to the Constitutional Court concerning the provisions relating to the new fiscal rules for local governments for alleged state interference into municipalities’ autonomy in their fiscal affairs. The decision of the Constitutional Court is expected later this year and will not in any case affect the remaining provisions, including importantly the expenditure frameworks for the state budget and state funds.

General government expenditures decreased by 2.2 percentage points in 2016 to 39.9 percent of GDP, well-below the EU average. Nominal investments dropped by almost 33 percent due to the slow transition to the new 2014–2020 EU funds programming period. However, excluding a one-off outlay for leasing military aircraft in 2015, purely Czech government financed investments increased by 3.5 percent year-on-year in 2016. General government expenditures on final consumption grew by 3.9 percent year-on-year in 2016.

The pension system reform has been passed. The legislative amendment limiting the statutory retirement age at 65 years by 2030 has recently been approved by both Chambers of the Parliament and remains to be signed by the President in the coming days to become effective. The amendment also establishes a procedure for regular revision of the retirement age in five-year intervals with the aim to regularly adjust the retirement age to life expectancy.

Fiscal prudence is a stance shared to a large extent by all mainstream political parties. It reflects the historically conservative approach of the Czech population towards debt. The upcoming elections are unlikely to trigger a major fiscal stimulus, neither in the run-up to the elections nor as a result of it. There is general awareness of the longer-term pressures on public finances caused by population ageing, as well as the medium-term uncertainty concerning the availability of the EU investment funds, once the current programming period comes to an end. The general government debt is thus likely to continue its downward path to 36 percent of GDP in 2017 and below 33 percent in 2020, with projected small general government budget surpluses and low refinancing rates in the forecast horizon.

Monetary Policy

The CNB is one of the most transparent central banks according to a number of renowned studies. It is convinced that credible monetary policy effectively anchors inflation expectations, thereby significantly helping to maintain price stability and overall macroeconomic stability.

On April 6, 2017, the CNB decided to end the exchange rate commitment with immediate effect. The CNB has held its monetary policy rate at “technical zero” (+0.05 percent) since November 2012. In November 2013, the CNB started to use the exchange rate as an additional monetary policy instrument for easing monetary policy amid mounting deflationary pressures. The CNB had committed to intervene on the foreign exchange market in unlimited amounts to floor the exchange rate close to 27 koruna to the euro. This monetary policy strategy has proved successful and the discontinuation of the exchange rate commitment came into effect once conditions for sustainable fulfilment of the CNB’s inflation target had been met. The latest inflation forecast is broadly in line with staff’s views. The CNB assumes that inflation will stay in the upper half of the tolerance band and will return to the target early next year. Consistent with this forecast is an increase in domestic market interest rates in the third quarter of 2017 and later also in 2018. The Bank Board assesses the risks to the inflation forecast at the monetary policy horizon as being slightly inflationary.

The main source of uncertainty is the path of the exchange rate in the next few quarters, which will reflect past hedging of the exchange rate risk by exporters before the exit from the exchange rate commitment and the closing of koruna positions by financial investors after the exit. The CNB is ready to make flexible use of its instruments to continue to fulfill its primary statutory mandate of price stability. The Bank Board stipulated that the CNB stands ready to mitigate potential excessive exchange rate fluctuations.

The high degree of economic openness implies that a change in the exchange rate has a significant pass-through to domestic prices. The actual impact on inflation can differ from econometric estimates based on data from past years following the recent exchange regime change, adding another uncertainty to the inflation forecast. In this regard, the Czech authorities concur with the staff report's preference for gradualism in the process of tightening the monetary conditions. Nevertheless, the authorities view the analytical support for the simulation results presented in the Selected Issues Paper (SIP) as weak. Information is missing on how the model properties were verified and important aspects of the construction of the scenarios are not described sufficiently. The baseline scenario in the SIP differs from the CNB staff's assessment in assuming a significantly more positive output gap and in the pace of koruna appreciation.

Macroprudential Policies

The Czech financial sector has been sound and resilient to possible adverse shocks, as evidenced by the new CNB's Financial Stability Report issued on June 13, 2017. Continued growth in economic activity is reflected in an increase in profitability, sustained high capitalization, stable funding sources, and favorable liquidity conditions of the banking sector. Banks' return on equity reached 17.9 percent and return on assets was 1.3 percent in 2016. The non-performing loans ratio declined by another 0.7 percentage points to 3.7 percent in 2016, with sufficient provisions at the aggregate level to cover the current expected losses. Insurance companies are also well capitalized and most of them are maintaining stable profitability. Investment funds continue to show dynamic growth. The importance of pension funds as a household investment vehicle is also increasing.

The CNB is actively using available prudential tools to ensure prudent bank capitalization. With the ongoing economic recovery, the cyclical and structural risks increased modestly due to a rise in maturity transformation of deposits and loans in the banking sector, a rising share of non-residents in the domestic debt securities market and growing concentration of bank exposures to the residential and commercial property sector. The countercyclical capital buffer (CCyB) has been set at 0.5 percent of total risk exposures located in the Czech Republic since January 2017. On May 25, 2017, the CNB decided to increase the CCyB to 1 percent with effect from July 2018. If credit growth remains high, lending standards ease and systemic risks relating to the financing of residential property purchases grow, the CNB will stand ready to increase the buffer further. The CNB simultaneously applies a systemic risk buffer to prevent systemic risks arising from the potential destabilization of systemically important banks. These requirements were set for the first time in 2014 and the CNB is required by law to review their use every two years. After the first such review in 2016, the number of systemically important banks rose from four to five and the buffer was increased for two banks with effect from January 2017.

The most significant risk to financial stability is the potentially spiraling tandem of residential property prices and house purchase loans. Apartment prices rose by 15 percent year-on-year in 2016 and appear mildly overvalued on several metrics. The CNB issued a recommended loan-to-value (LTV) limit in 2016 which was gradually tightened and currently stands at 90 percent, with an additional limitation for loans with LTV in the 80 – 90 percent range to not exceed 15 percent of total extended loans. The CNB extended the scope of its recommendation on provision of mortgage loans further in 2017. All credit providers including the non-bank ones should monitor the debt-to-income (DTI) and debt-service-to-income (DSTI) ratios and set internal limits for them. In face of the insufficient enforcement power over the recommendations and the limited set of institutions it pertains to, the authorities further submitted a legislative proposal giving the CNB the powers to set binding LTV, DTI DSTI limits. After the approval by the Czech Government in January 2017, the legislative amendment is set to be discussed by the Parliament. The CNB will continue increasing the intensity of microprudential supervision of provisioning of secured and unsecured retail loans by credit institutions, including the management of intermediary distribution networks.

Public Investment and Structural Policies

The Czech authorities realize that significant gaps exist in a number of areas that prevent the Czech Republic from fully realizing and further expanding its potential. The government is committed to pursuing an economic program based on support for business, an effective labor market, a functioning and transparent state administration and investment in education, science and research.

The Government adopted a legislative proposal on the management and control of public finance in December 2016. It outlines the basic principles and rules for verification mechanisms of management and control of public finance at all levels of public administration. The Act on Contracts Registry became effective in July 2016, aiming to increase transparency in the use of public procurement, limit the scope for corruption and ultimately reduce the costs of publicly purchased goods and services. It obliges state and public institutions, local governments and state-owned enterprises to publish new contracts exceeding CZK 50,000 (approximately USD 2,000) within 30 days of their conclusion.

The project “Initiative 202020” intends to help ensure a functioning and transparent public administration through further development of e-government in the Czech Republic. Its purpose is to improve the position of the Czech Republic in the area of digitalization of state administration with a goal of ranking among the top 20 countries as per the quality and scope of e-government by the end of 2020.

Reforms to the governance of the R&D system are being pursued by the Government. A new evaluation methodology was approved in February 2017, which intends to strengthen the mechanisms related to the allocation of funding for basic and applied research. A series of measures is being taken to facilitate stronger links between academia and businesses, building on the structuring effect of the national innovation platforms.

The Parliament adopted amendments to the Education Act in March 2016, extending compulsory education to the last year of pre-school education starting in September 2017, and ensuring that younger children are entitled to a place in a kindergarten. This measure would improve labor force participation opportunities for parents of young children.

Final Remarks

The Czech authorities are grateful for the meaningful discussions and policy advice which will be carefully assessed. More specifically, the authorities appreciate staff's constructive policy engagement in the course of surveillance in the past several years with regards to the introduction and implementation of, as well as exit from, the use of the exchange rate as a monetary policy instrument.