INTERNATIONAL MONETARY FUND

IMF Country Report No. 18/187

CZECH REPUBLIC

June 2018

2018 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 2018 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 22, 2018 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 22, 2018, following discussions that ended on May 15, 2018, 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 7, 2018.
- 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

Press Release No. 18/258
FOR IMMEDIATE RELEASE
June 26, 2018

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

IMF Executive Board Concludes 2018 Article IV Consultation with the Czech Republic

On June 22, 2018, the Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation[1] with the Czech Republic.

Growth has been strong, broad-based and job rich. The economy grew at 4.4 percent last year, led by strong domestic demand. The unemployment rate fell to a record low of 2.3 percent in April 2018, even with increased participation, and real wage growth reached 6.5 percent in the first quarter of this year. Meanwhile, headline and core inflation are close to the target of 2 percent.

Growth is projected to remain strong this year, at 3.7 percent, but labor shortages are putting constraints on future growth. Firms report hiring problems, especially of those with appropriate skills, with more than one vacancy per unemployed person. Longer-term growth will depend on the potential for productivity to compensate for the decline in labor supply. In the near term, a decline in global trade (such as from increased protectionism) is a major risk for a small economy highly dependent on external demand, particularly from the euro area, but also indirectly from other regions given how tightly integrated is the Czech economy into supply chains.

Monetary policy has continued gradual normalization. The central bank has gradually raised the policy rate to 0.75 percent after foreign exchange interventions ceased in April 2017. The nominal effective exchange rate has appreciated by 6 percent since the floor was lifted, notwithstanding some recent depreciation.

The banking system is well capitalized, liquid, and profitable. Private credit growth is in line with nominal GDP growth, but household lending is growing more quickly and some households have become highly leveraged. To address risks, the Czech National Bank has further tightened the macroprudential stance by announcing recommended limits to debt-to-income and debt-service-to-income ratios.

[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.

Strong tax revenues and lower capital and social benefits spending resulted in significantly better fiscal balances than expected, with the overall balance reaching 1.6 percent of GDP in 2017. Together with a negative interest-growth differential, this drove public debt down to 35 percent of GDP. The overall balance is expected to be the same this year and then gradually ease to about 1 percent of GDP.

Several structural measures were implemented recently, including the simplification of building permits procedures, reform of regional education funding to improve the quality of regional education, and vocational training reform aimed at increasing coordination with businesses. However, challenges remain, in particular the need to increase participation and productivity as much as possible as the working population ages and shrinks in size.

Executive Board Assessment[2]

Executive Directors commended the Czech Republic's strong economic performance. They noted that the economy has strong fundamentals and a favorable outlook. Nonetheless, a decline in the labor force will pose a challenge to continued strong growth over the longer term. Directors encouraged the authorities to maintain prudent macroeconomic policies and step up structural reforms to boost potential growth and productivity.

Directors broadly concurred that, given the uncertainty about the inflation outlook and interest rates still close to zero, the gradual normalization of monetary policy remains appropriate. Directors noted, however, that the Czech National Bank (CNB) should continue to communicate its readiness to raise rates earlier than currently projected if inflationary risks intensify. Directors took note of the staff's external sector assessment and the authorities' views. They suggested that greater elaboration on the assumptions justifying the overall assessment would be useful.

Directors agreed that the high leverage of some households could become a source of financial vulnerability, and welcomed the additional macroprudential measures announced by the CNB. They recommended that the CNB be given binding powers over loan-to-value, debt-to-income, and debt-servicing-to-income ratios to ensure the enforceability of these prudential measures. Directors underscored the importance of better access to data for effective financial supervision.

Directors welcomed the authorities' continued fiscal discipline. They emphasized that fiscal policy should avoid procyclicality. Although some proposals such as extra spending on education and infrastructure could boost productivity, fiscal policy overall should avoid adding to demand pressures in the economy. Directors noted that demands on the budget will increase

[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.

over the longer term as the population ages, and urged the authorities to address long-run spending issues related to healthcare and pensions.

Directors underlined the need to step up structural reforms in the face of the unfavorable demographic outlook. Policies aimed at increasing the participation of young women and older workers could help slow the decline in the labor force. A number of measures could facilitate higher productivity, including realigning tax incentives to guarantee the best use of resources, enhancing the efficiency of public services, improving the business environment for smaller and younger firms, having a unified long-term plan for infrastructure, and enhancing the framework for life-long learning.

It is expected that the next Article IV consultation with the Czech Republic will take place on the standard 12-month cycle.

Czech Republic: Selected Economic Indicators, 2013–23
(Annual percentage change, unless noted otherwise)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
						Staff projections					
NATIONAL ACCOUNTS											
Real GDP (expenditure)	-0.5	2.7	5.3	2.6	4.4	3.7	3.2	2.5	2.5	2.5	2.5
Domestic demand	-0.6	3.4	5.9	1.5	3.7	4.0	3.7	3.1	3.1	3.1	3.1
Consumption	1.1	1.6	3.2	3.1	3.3	3.5	3.4	2.7	2.7	2.7	2.7
Public	2.5	1.1	1.9	2.0	1.5	2.0	2.5	2.0	2.0	2.0	2.0
Private	0.5	1.8	3.7	3.6	4.0	4.0	3.7	3.0	3.0	3.0	3.0
Investment	-5.1	8.6	13.0	-2.3	4.7	5.5	4.5	4.0	4.0	4.0	4.0
Exports	0.2	8.7	6.0	4.5	6.5	5.5	4.5	4.0	4.0	4.0	4.0
Imports	0.1	10.1	6.8	3.4	5.8	6.2	5.2	4.8	4.8	4.8	4.8
Contribution to GDP											
Domestic demand	-0.6	3.1	5.5	1.5	3.5	3.9	3.5	2.9	2.9	3.0	3.0
Net exports	0.1	-0.4	-0.2	1.1	0.9	-0.2	-0.3	-0.4	-0.4	-0.5	-0.5
Investment (percent of GDP)	25.1	25.1	26.5	25.0	25.2	25.7	25.7	25.9	26.0	26.2	26.4
Gross domestic investments (percent of GDP)	24.7	25.9	28.0	26.3	26.4	26.9	26.8	26.9	27.0	27.2	27.4
Gross national savings (percent of GDP)	24.1	26.1	28.2	27.9	27.5	26.7	26.3	26.2	26.0	25.8	25.5
LABOR MARKET											
Employment	1.0	0.8	1.4	1.9	1.6	0.9	-0.7	-0.6	-0.6	-0.3	-0.3
Total labor compensation	0.7	3.5	5.0	5.9	8.3	8.2	6.3	4.4	4.4	4.3	4.2
Unemployment rate (in percent)	6.9	6.1	5.0	3.9	2.9	2.5	3.0	3.2	3.5	3.5	3.5
PRICES											
Consumer prices (average)	1.4	0.3	0.3	0.7	2.4	2.3	2.3	2.0	2.0	2.0	2.0
Consumer prices (end-of-period)	1.4	0.1	0.0	2.0	2.4	2.7	2.1	2.0	2.0	2.0	2.0
Producer price index (average)	0.8	-0.7	-3.2	-3.2	1.8	...	...	...	...	...	...
MACRO-FINANCIAL											
Money and credit (end of year, percent change)											
Broad money (M3)	5.8	5.9	8.0	6.5	10.4						
Private sector credit	3.7	3.6	6.5	7.8	5.9						
Interest rates (in percent, year average)											
Three-month interbank rate	0.5	0.4	0.3	0.3	0.4	...	...	...	...	...	...
Ten-year government bond	2.1	1.6	0.6	0.4	1.0	...	...	...	...	...	...
Exchange rate											
Nominal effective exchange rate (index, 2005=100)	116.7	111.5	110.1	112.9	117.1	...	...	...	...	...	...
Real effective exchange rate (index, CPI-based; 2005=100)	116.3	110.1	108.2	110.7	115.3	...	...	...	...	...	...
PUBLIC FINANCE (percent of GDP)											
General government revenue	41.4	40.3	41.1	40.2	40.4	41.5	41.7	41.7	41.6	41.6	41.6
General government expenditure	42.6	42.4	41.7	39.4	38.8	40.0	40.6	40.8	40.6	40.6	40.6
Net lending / Overall balance	-1.2	-2.1	-0.6	0.7	1.6	1.5	1.1	0.8	1.0	1.0	1.0
Primary balance	-0.2	-1.0	0.3	1.5	2.2	2.2	1.7	1.5	1.6	1.6	1.5
Structural balance (percent of potential GDP)	0.2	-0.9	-0.5	0.9	1.2	1.0	0.6	0.5	0.8	0.9	1.0
General government debt	44.9	42.2	40.0	36.8	34.6	33.1	31.7	30.8	28.5	26.3	24.3
BALANCE OF PAYMENTS (percent of GDP)											
Trade balance (goods and services)	5.8	6.4	5.8	7.4	7.2	5.6	5.2	4.9	4.6	4.1	3.5
Current account balance	-0.5	0.2	0.2	1.6	1.1	-0.2	-0.5	-0.7	-1.0	-1.4	-1.9
Gross international reserves (billions of euros)	40.8	44.9	59.2	81.3	123.4	123.3	122.6	122.2	121.9	121.6	121.1
(in months of imports of goods and services)	4.5	4.1	5.6	7.7	10.8	9.7	8.5	7.8	7.2	6.6	6.1
(in percent of short term debt, remaining maturity)	103.1	88.0	105.6	121.2	119.8	120.0	117.9	115.3	112.0	108.0	103.1
MEMORANDUM ITEMS											
Nominal GDP (USD billions)	209.4	207.8	186.8	195.3	213.7	250.9	276.9	295.8	314.4	333.0	351.5
Population (millions)	10.5	10.5	10.5	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.7
GDP per capita (USD)	19,913	19,769	17,729	18,506	20,201	23,690	26,106	27,860	29,571	31,288	33,000
Real GDP per capita	-0.6	2.8	5.1	2.4	4.2	3.6	3.1	2.4	2.4	2.4	2.4
Output gap (percent of potential output)	-4.3	-3.0	-0.1	-0.2	1.2	1.5	1.6	1.2	0.7	0.4	0.2

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

INTERNATIONAL MONETARY FUND

CZECH REPUBLIC

STAFF REPORT FOR THE 2018 ARTICLE IV CONSULTATION

June 7, 2018

KEY ISSUES

The economy has been doing very well, with high growth and the lowest unemployment rate in the EU. So far, there are no major macroeconomic imbalances: wages have been increasing rapidly, but inflation remains close to the target; credit growth is broadly in line with the growth of nominal GDP; the banking system is well capitalized and funded; fiscal policy has been conservative; and the economy runs a small surplus with the rest of the world. But the economy is already hitting the limits of supply, and the labor force is expected to continue to shrink while the population ages.

The main challenge for policy is therefore to maintain sustained and stable growth over a prolonged period—this means setting policies to avoid overheating at this stage of the cycle and boosting the potential growth rate of the economy now and over the long term.

- To manage demand over the cycle, monetary policy will contribute by focusing on price stability. For financial stability, additional macroprudential measures are advisable to insure against household financial vulnerabilities. Fiscal policy should be careful to avoid procyclical stimulus.

- To boost long-run capacity and to deal with pressures arising from demographic changes, fiscal and structural policies should be coordinated to maximize the efficient use of resources. Demographic changes will increase pressures on the budget, especially from the increased demand for health care as the population ages. Taxes and spending should be reviewed with a view to providing a stable tax environment that provides the right incentives for the best use of resources. Government itself can play a key role, such as by facilitating planning and infrastructure and by raising the efficiency with which it provides its own services.

Approved By
Jörg Decressin (EUR) and Kevin Fletcher (SPR)

Discussions took place in Prague during May 2–16, 2018. The staff team comprised Messrs. Scott (head) and Harrison (EUR), Ms. Shabunina (EUR), and Ms. Yoon (STA). Ms. Erbenova and Mr. Stradal (OED) attended some meetings. Messrs. Park, Romero Martinez, and Smith and Ms. Nguyen (all EUR) assisted in the preparation of the staff report. The staff team met with Czech National Bank Governor Rusnok, CNB Board members, Deputy Ministers Pavlová, Picl and Dupakova, State Secretary Chmelař, other senior officials, and representatives from the private sector. The Czech Republic is an Article VIII country (Informational Annex: Fund Relations). Data provision is adequate for surveillance (Informational Annex: Statistical Issues).

CONTENTS

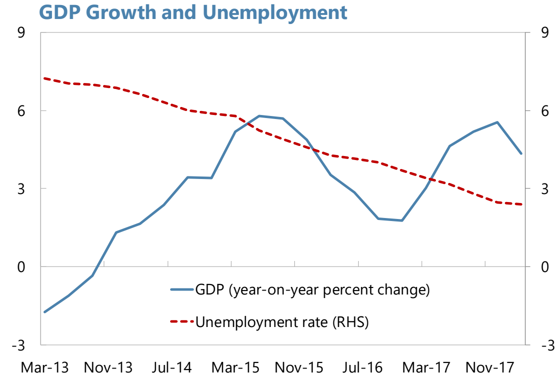
TABLES

ANNEXES

RECENT DEVELOPMENTS

1. **Recent growth has been strong and particularly job rich.** GDP growth accelerated in the second half of 2017, reaching 4.4 percent y/y. The unemployment rate has fallen to a record low of 2.3 percent in April 2018, even with increased participation.

GDP Growth and Unemployment



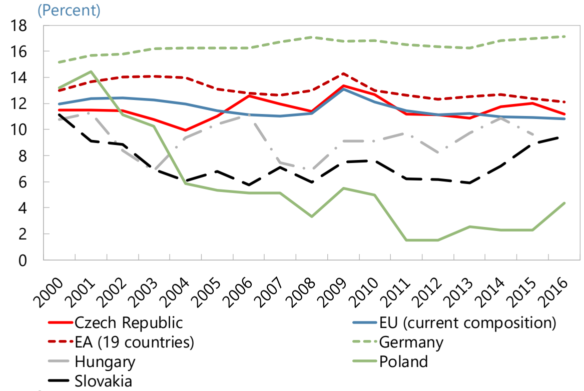
Source: Haver Analytics.

2. **Macro policies have tightened moderately.** The Czech National Bank (CNB) has increased the policy rate (Section A) and tightened macroprudential settings further (Section B). The overall budget surplus improved by 0.9 percent of GDP in 2017; staff estimates that fiscal policy will ease in 2018 and, in particular, 2019 (Section D).

3. **Notwithstanding the strong demand in goods and labor markets, major macroeconomic imbalances have so far been avoided:**

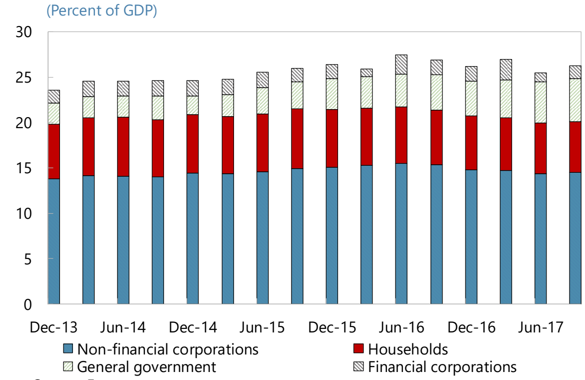
- **Growth has been broad based, without lower saving rates.** All sectors contributed positively, with the contribution of services overtaking manufacturing in the second half of the year. In terms of expenditures, private consumption was strong, supported by real wage growth of 4 percent and employment growth of 1.6 percent in 2017. Investment—notably private domestic capital formation—picked up in the second half of the year (Figure 1). Household and national savings rates remain stable, at about 11 and 25 percent of GDP, respectively.

Gross Savings Rate of Households
(Percent)



Source: Eurostat.

Gross Savings
(Percent of GDP)



Source: Eurostat.

- **Inflation has so far been moderate** (Figure 2). Nominal wage inflation has been very strong, averaging 8½ percent in the first quarter of the year. Labor productivity gains and decreasing margins have constrained domestic inflation thus far, while imported inflation has been negative. Headline and core inflation *fell* in the first quarter, but are now close to the target.

- **The current account posted a surplus in 2017** (Figure 3). The REER has appreciated by 8 percentage points from April 2017 to April 2018, but this has not dented the robust trade surplus. External debt increased in the run-up to the exit from the currency floor, driven by increased bank deposits, but has remained stable since then. The NIIP remains comfortable at -26 percent of GDP.[1] Staff assesses the external position in 2017 to have been stronger than warranted by medium-term fundamentals and desirable policies, consistent with the persistent current account surplus and the EBA CA model assessment of a 7 percent undervaluation. (Annex I).

- **The fiscal position is comfortable.** Staff projects overall and structural budget surpluses of 1.6 and 1.0 percent of GDP for this year; debt is estimated to have fallen to 35 percent of GDP in 2017.

4. But supply is hitting limits (Figure 4). The working age population has fallen by 7 percent from 2009 to 2017. A significant increase in the participation rate has so far compensated for this decline. Even so, firms report hiring problems, especially of those with appropriate skills, with more than one vacancy per unemployed person.

5. And there are signs of financial vulnerabilities (Figure 6). Overall credit growth remains in line with that of nominal GDP, and the overall indebtedness of households is not high by international standards. But real estate lending has accelerated and many households continue to borrow at high multiples of incomes, associated with buoyant housing markets (Section B).

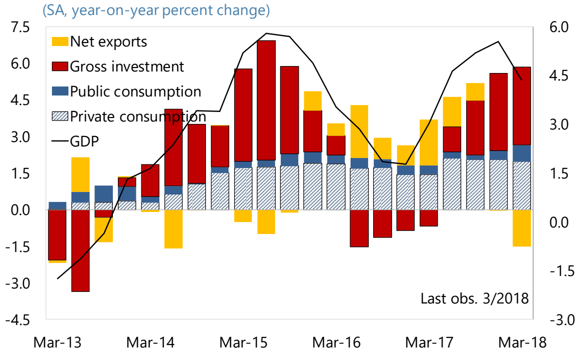
6. A new government has not yet been formed. The ANO party won the largest share of votes in the general elections in October 2017 but fell short of a majority of seats in parliament. Discussions to form a coalition continue; the most likely scenario is a coalition with cabinet formed from representatives from the ANO and center-left CSSD parties (the two parties in the previous coalition), with a separate agreement between ANO and the communist KSCM party to ensure a majority in votes of confidence. In the meantime, administration continues under the terms of the 2018 budget.

[1] The NIIP less official reserves is -89 percent of GDP; however, most of it is FDI and stable.

Figure 1. Czech Republic: Recent Growth

Private consumption and investment have driven recent strong GDP growth.

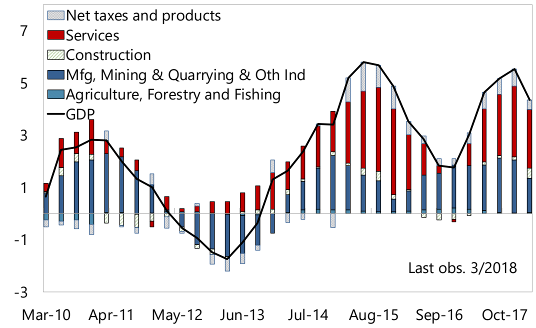
Contribution to Real GDP
(SA, year-on-year percent change)



Source: Haver Analytics.

Growth in services overtook manufacturing growth in the second half of 2017.

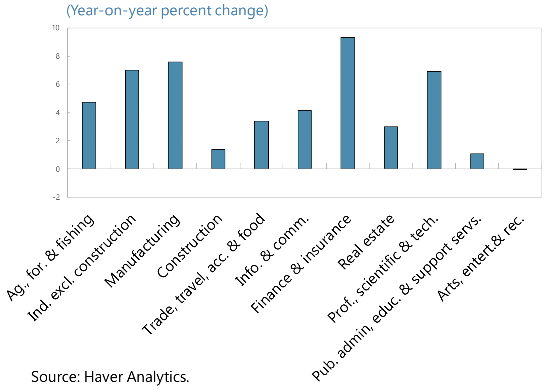
Contribution to Real GDP Growth, GVA
(SA, year-on-year percent change)



Source: Haver Analytics.

All sectors have recorded growth in value added…

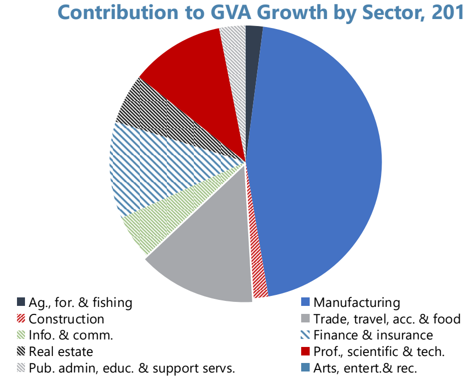
Gross Value Added, 2017
(Year-on-year percent change)



Source: Haver Analytics.

… with large contributions from manufacturing, trade, finance and professional services.

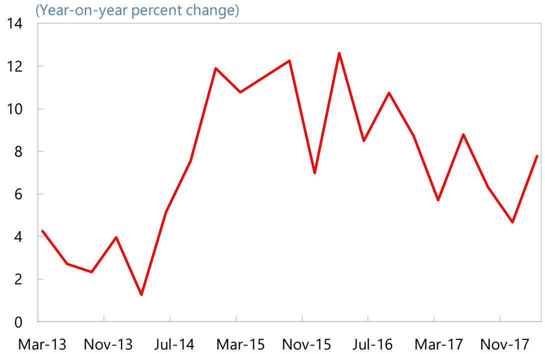
Contribution to GVA Growth by Sector, 2017



Source: Haver Analytics.

Durable goods consumption has been growing at a strong pace, indicating consumer confidence…

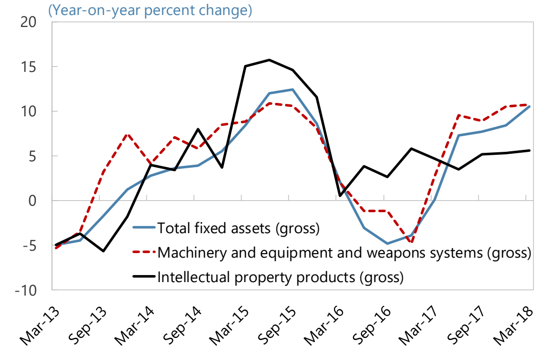
Household Consumption: Durable Goods
(Year-on-year percent change)



Source: Haver Analytics.

… while business investment has rebounded, led by investment in machinery and equipment.

Gross Fixed Capital Formation by Asset Type
(Year-on-year percent change)

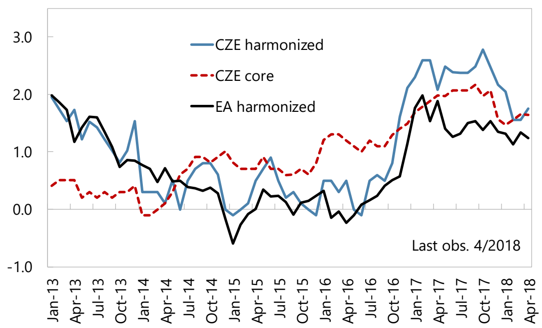


Source: Eurostat.

Figure 2. Czech Republic: Inflation

Inflation has recently declined, after overshooting the target in 2017…

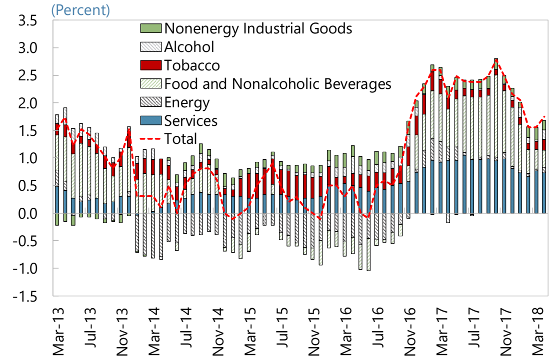
Consumer Price Index
(Year-on-year percent change)



Source: Haver Analytics.

… driven by food prices and services.

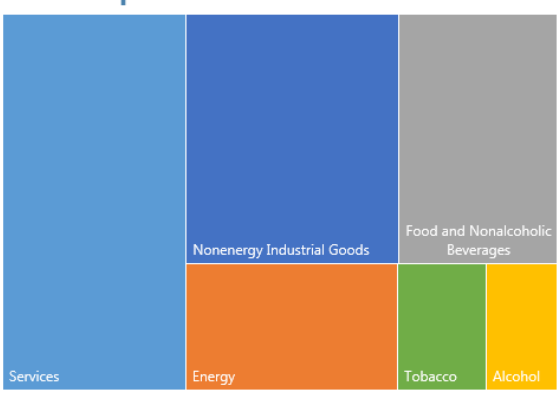
Contribution to Inflation
(Percent)



Source: Eurostat

The CPI basket has large share of tradeables…

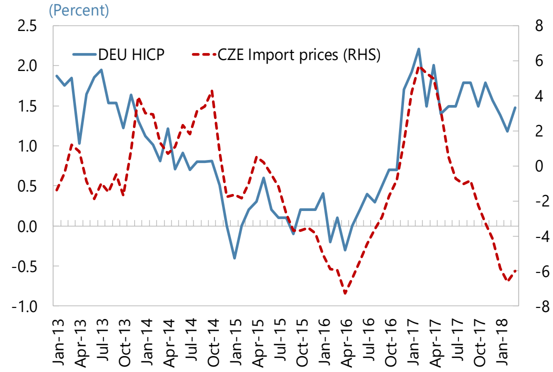
Composition of Consumer Basket



Source: Haver Analytics.

… and import prices have declined significantly, pulling the CPI and inputs prices down.

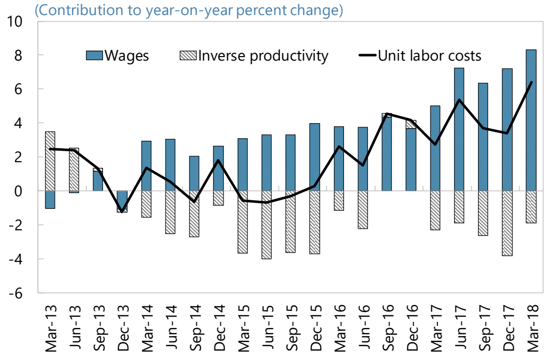
Import Prices
(Percent)



Source: Haver Analytics.

Wage inflation is pushing up unit labor costs…

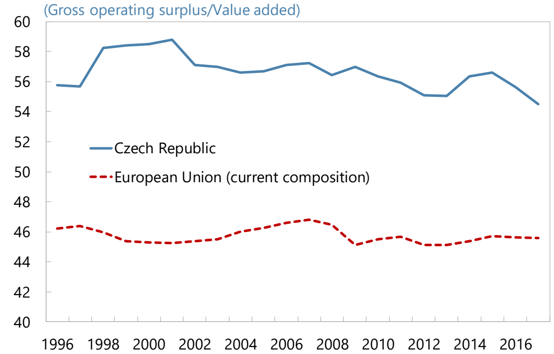
Unit Labor Cost Decomposition
(Contribution to year-on-year percent change)



Source: Haver Analytics.

… absorbed in part by declining profit margins.

Profit Share
(Gross operating surplus/Value added)

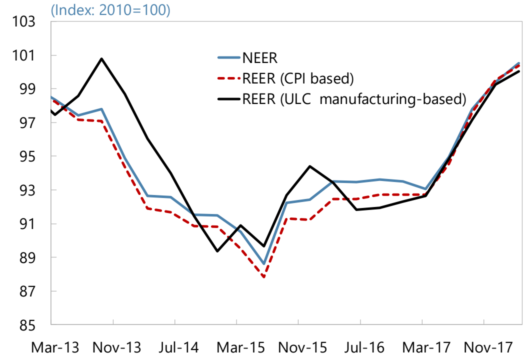


Sources: Eurostat

Figure 3. Czech Republic: External Position and Competitiveness

The NEER and REER have appreciated to the levels close to before the introduction of the Koruna floor.

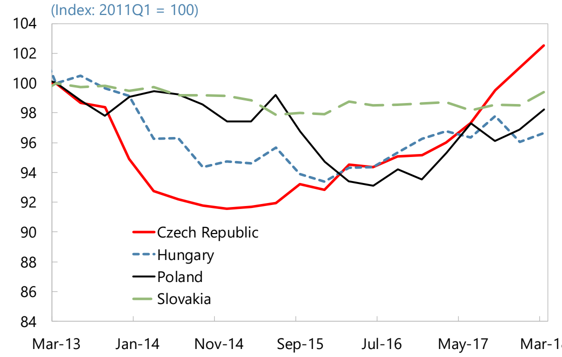
Real Exchange Rate
(Index: 2010=100)



Source: Haver Analytics.

REER appreciation was above that of competitors.

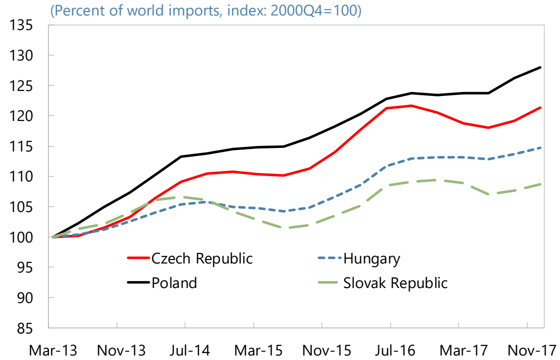
Real Effective Exchange Rate: CPI Based
(Index: 2011Q1 = 100)



Source: Haver Analytics.

But the share of exports has not yet fallen...

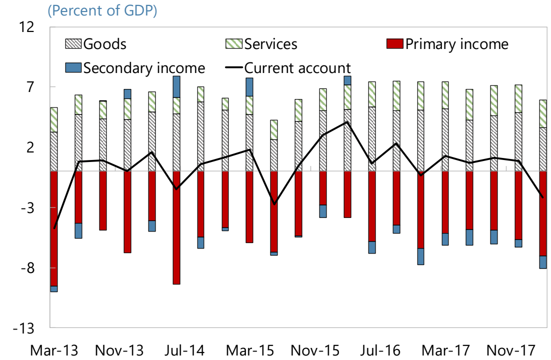
Share of World Imports
(Percent of world imports, index: 2000Q4=100)



Sources: Direction of Trade Statistics

... and the trade balance has remained very strong, and with the 2017 CAB in small surplus.

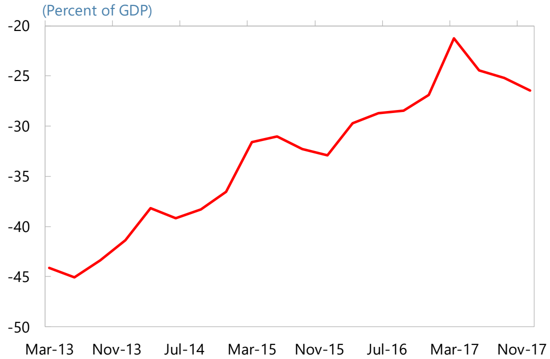
Current Account
(Percent of GDP)



Source: Haver Analytics.

NIIP is at a comfortable level.

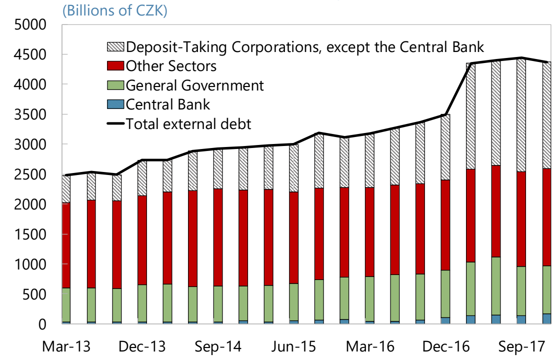
Net International Investment Position
(Percent of GDP)



Source: Haver Analytics.

External debt has increased, but only for the banking sector in the run-up to the FX exit.

External Debt Composition by Sector
(Billions of CZK)

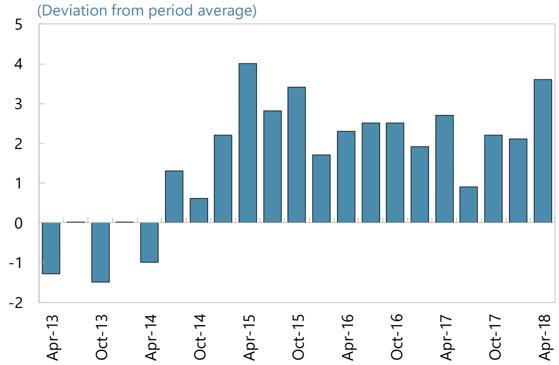


Source: Czech National Bank.

Figure 4. Czech Republic: Capacity Constraints

Capacity utilization is high…

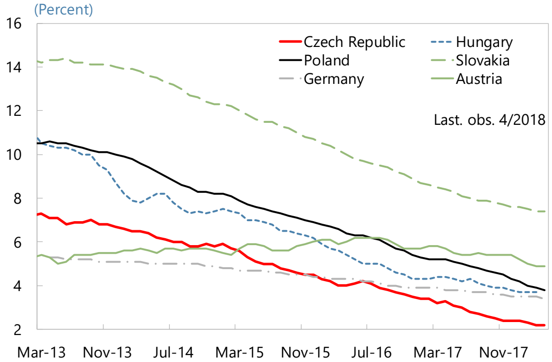
Capacity Utilization
(Deviation from period average)



Source: Haver Analytics.

… and the unemployment rate is the lowest in the EU.

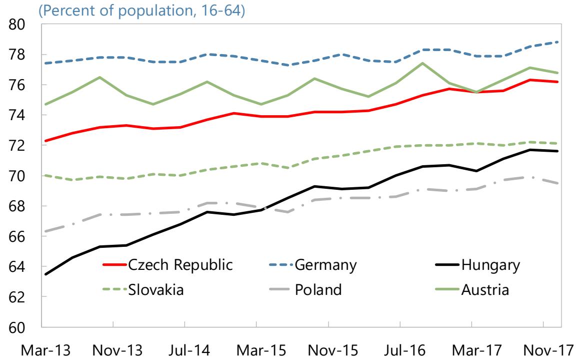
Unemployment Rate
(Percent)



Source: Haver Analytics.

Labor participation has increased significantly…

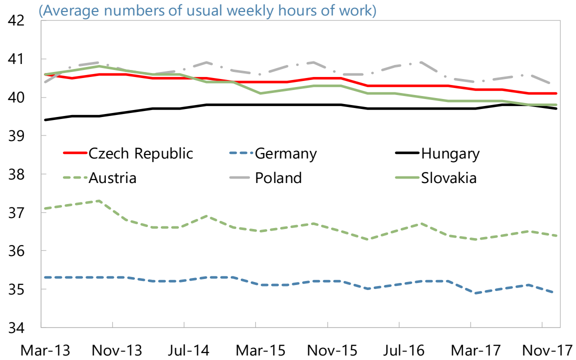
Labor Force Participation Rate
(Percent of population, 16-64)



Source: Haver Analytics.

… and the average number of hours worked is high.

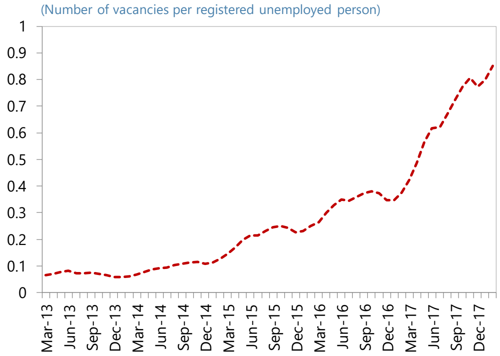
Hours Worked
(Average numbers of usual weekly hours of work)



Source: Eurostat.

The number of vacancies per unemployed person has shot up…

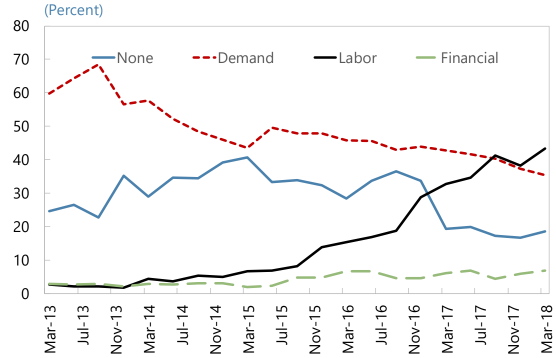
Vacancies
(Number of vacancies per registered unemployed person)



Source: CZSO

… and labor shortages have become the major constraint on growth.

Industry Survey: Factor Limiting Production
(Percent)



Source: Haver Analytics.

OUTLOOK AND RISKS

7. The outlook is favorable, but constrained by supply limits. Staff projects growth of 3.7 percent in 2018, gradually falling to 2.5 percent by 2023.

- Near-term domestic growth momentum is strong. Consumer and business confidence is high, consistent with strong demand for durable goods and production equipment (Figure 5).

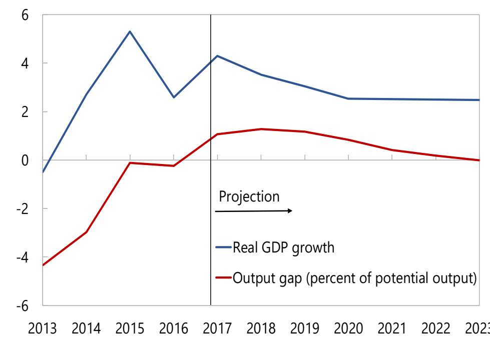
- Monetary conditions are assumed to follow the CNB's forecast of only one policy rate increase in 2018, with more rapid tightening in 2019 and beyond. Some fiscal stimulus is expected this year and the next (Section C).

- The external environment is also supportive: GDP growth for the euro area—the most important market for the Czech Republic—is projected to reach 2.5 percent this year (1 percentage point above previous projections). Euro area inflation is projected to remain subdued, and the policy stance of the ECB to remain accommodative.

- Employment gains are assumed to slow considerably, but wage growth is expected to remain strong, supporting private consumption. Investment is assumed to accelerate this year as firms attempt to compensate for labor shortages. Despite supportive external demand, the contribution from net exports is expected to be negative as the import intensity of domestic demand increases (Table 1).

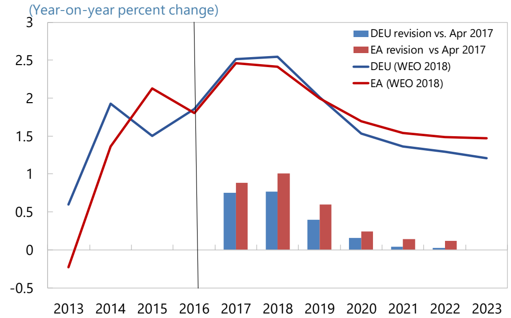
- CPI inflation is expected to increase in 2018 and remain slightly above target in 2019: the recent decline in margins is expected to slow somewhat, implying that increases in labor costs are passed on to domestic inflation; the exchange rate is expected to continue to appreciate, but at a lower rate, implying less disinflationary pressure than recently.

Real GDP growth and output gap
(Percent)



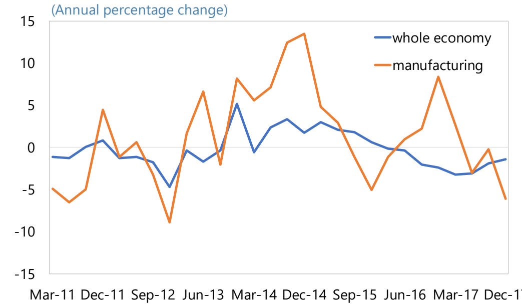
Source: Czech Statistical Office and IMF staff projections

Germany and Euro Area Real GDP Growth Revisions
(Year-on-year percent change)



Source: IMF, *World Economic Outlook database.*

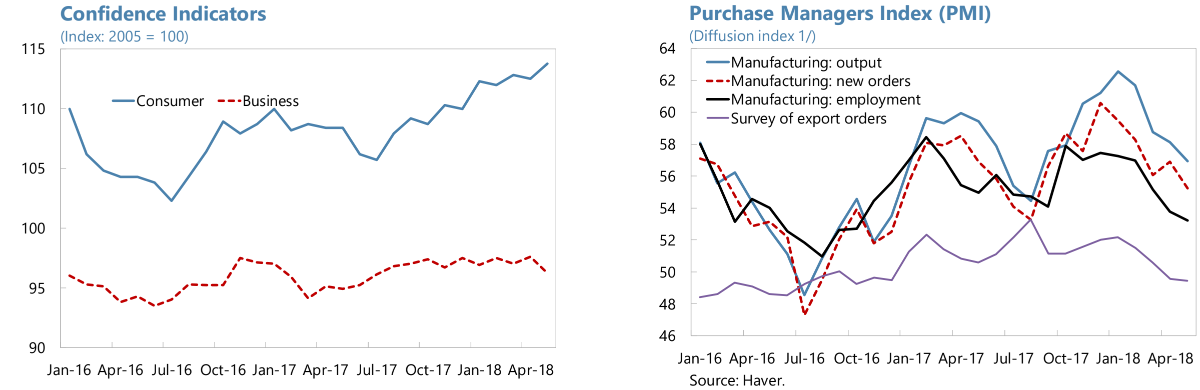
Profit Mark-Ups
(Annual percentage change)



Note: The mark-up is proxied here by the difference between the annual rates of change of the gross value added deflator and unit labor costs (see ECB Bulletin, December 2006)
Sources: Haver Analytics; and IMF staff calculations.

Figure 5. Czech Republic: Near-Term Growth Momentum

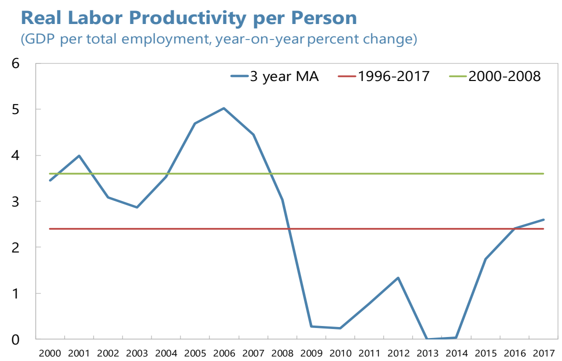
Consumer and business confidence continues to improve. *Export orders and PMIs are strong.*



Source: Haver Analytics.

Source: Haver.
1/ 50+ = expansion.

8. Longer-term growth will depend on the ability of productivity to accelerate above the historical trend and compensate for the decline in labor supply. Staff estimates potential growth at 2½ percent, which, given declining employment growth, implies an increase in labor productivity growth to 2¾ percent from the historical average of 2½ percent. Given the already-high capital stock, this implies an acceleration in TFP growth.[2]



Sources: Eurostat

9. In addition to demand pressures, the economy potentially faces important equilibrium adjustments. Structural transformation implies increased incomes and a likely shift toward more services and away from manufacturing over the long term; in turn this implies further equilibrium real exchange rate appreciation. Separately, agglomeration effects would imply job creation predominantly in cities, raising demand for urban housing.

10. Risks to the outlook are tilted to the downside and include potential external shocks, domestic vulnerabilities, and political uncertainty (Annex II):

- Near-term growth could be stronger than anticipated if domestic demand momentum surprises on the upside, such as from a boost to investment from faster absorption of EU funds; potential growth could be lower than assumed if the recent pick-up in labor productivity is not sustained.

- The inflation outlook is particularly uncertain, as the outcome will depend on which of domestic inflationary and imported disinflationary pressures dominate. The prospects for domestic inflation hinge crucially on the degree to which labor productivity and firms' markups absorb wage increases; here the risks are on the upside. Alternatively, disinflationary pressures could increase, especially if either the exchange rate or pass-through are stronger than anticipated.

[2] Projections assume the overall participation rate (16–64) and hours worked to stay largely unchanged. No substantial increase in inward migration is assumed.

- A decline in global trade is a major risk for a small economy highly dependent on external demand, particularly from the euro area, but high concentration in auto production and integration with Germany's production chain also make the economy vulnerable to indirect spillovers, such as from increased protectionism. Rapid wage growth could pose a risk to price competitiveness should the productivity growth disappoint. An increase in financial turbulence could see increased longer-term interest rates and exchange rate volatility.

- Persistently high mortgage lending growth coupled with high household leverage could pose a risk to financial stability.

- The domestic political situation remains in flux, potentially delaying structural reforms. Fiscal policy could become strongly procyclical if proposed public spending and tax changes are implemented (Annex V).

Authorities' Views

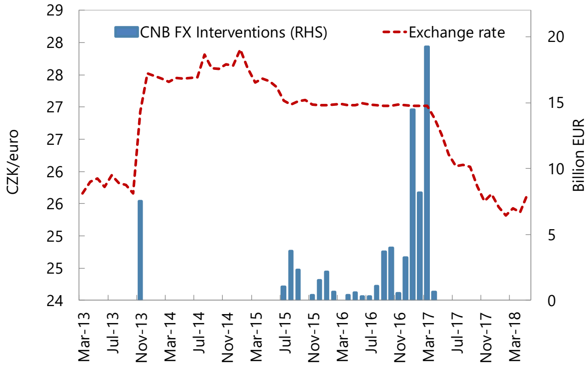
11. The authorities broadly agreed on the outlook and the balance of risks. The authorities expect growth to be close to 4 percent this year and 3½ percent in 2019, driven mainly by strong domestic demand. They shared the view that a tighter labor market would constrain supply, but were more optimistic about productivity growth, which would be boosted by investment. The CNB expects inflation to undershoot the 2 percent target this year and converge to the target at the monetary policy horizon, and the koruna, though currently at equilibrium, to appreciate further. The exchange rate and wage growth were key sources of uncertainty; the authorities were concerned with external risks related to external demand, such as from increased protectionism.

POLICY DISCUSSIONS

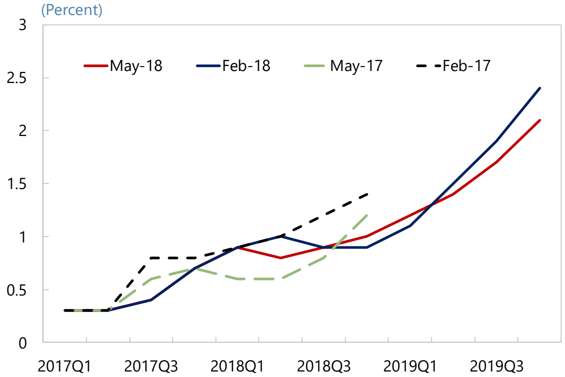
12. The main challenge for policy is to maintain sustained and stable growth over a prolonged period—this means setting policies to avoid overheating at this stage of the cycle and boosting the potential growth rate of the economy now and over the long term. Hence, all macroeconomic policies have an important role to play in navigating the path to sustained and stable growth.

A. Monetary Policy

13. The CNB has moved to gradually normalize monetary conditions. The repo rate has been raised to 0.75 percent, less and slower tightening than was projected by the CNB immediately before removing the koruna floor. FX interventions have ceased. The nominal effective exchange rate has appreciated by 8 percent from the exiting the floor through to April 2018; there has been some depreciation against the euro and most other currencies since then.



Source: Czech National Bank.



Source: Czech National Bank.

14. One additional rate hike is expected this year. The CNB's May 2018 inflation forecast was adjusted downwards, owing to lower observed inflation so far in 2018 and weaker regulated price inflation. On this basis, the CNB projects one more rate increase in 2018, followed by a series of increases in 2019.

15. Given the uncertainty about inflation, the CNB's gradual approach to normalizing policy is appropriate. In the current situation, in which there is a risk that disinflationary pressures could increase while policy rates are still close to zero, this is the right approach.[3] That said, given the strength of domestic inflation, the CNB should continue to communicate its readiness to raise rates earlier than currently projected if needed to fulfil its mandate.

16. The CNB has adopted a new FX reserves management strategy. FX reserves increased to 62 percent of 2017 GDP during the period of the koruna floor. The CNB is not planning to sell the reserves. To increase expected returns, the CNB has tranched its FX reserves: a core, currently 45 percent of FX reserves, will be invested in short-term and highly-liquid assets, and the remainder in longer-term investments with higher expected returns, including shares and mortgage-backed securities. This approach is appropriate so long as liquidity, market, and other risks are contained.

Authorities' Views

17. The CNB favors continued gradual normalization of interest rates, seeking to avoid undue appreciation of the exchange rate that would put pressure on the tradeables sector. It assesses the risks to the inflation forecast—and consequently the interest rate path—as broadly balanced, reflecting, in particular, uncertainties about the transmission of labor costs and import prices to CPI. CNB Board members did not favor a schedule of earlier and more regular policy rate increases, noting that the regular meetings of MPC gave ample opportunity to avoid falling behind necessary policy adjustment.

[3] As laid out in the 2017 *Selected Issues Paper*, some more inflation overshooting would be less harmful than an overly-rapid tightening of rates causing renewed deflation due to excessive exchange rate appreciation, given the difficulty of easing policy once rates hit the effective lower bound.

B. Macroprudential Policy

18. Private credit growth is in line with nominal GDP growth, but household lending is growing more quickly. Bank lending to residents eased to 4 percent (y/y) in April, of which loans to resident non-financial corporations grew by only 1½ percent. However, loans to households increased by 7½ percent; mortgage loans to households increased by 9½ percent, off the recent peak in mid-2017 of 10½ percent, but nonetheless outpacing nominal income growth. Consumer credit also grew relatively strongly.

19. Some households are highly leveraged. The aggregate household debt-to-income (DTI) ratio has not increased further over the year, given the strong growth of disposable income. But many households continue to borrow at high loan-to-income multiples (Figure 6), associated with escalating price-to-income and price-to-rent ratios (Figure 7).

20. The CNB has tightened macroprudential recommendations (Annex III). New, non-binding recommendations implemented in 2017: Q2 included a 90 percent LTV cap on individual loans and a 15 percent cap on the share of new loans originated with LTV ratios between 80 and 90 percent. In June 2017, the CNB recommended that banks pay extra attention to debt-to-income and debt-service-to-income ratios. Reported lending standards have subsequently tightened, and the share of new household mortgage loans with LTVs above 90 percent has declined, with many loans at around 80 percent LTV. However, concerns were expressed that this improvement may have been flattered by inflated valuations.[4]

21. Additional measures are needed to insure against household financial vulnerabilities. DTI ratios on new mortgages are only indirectly addressed by LTV restrictions—to safeguard household finances, the financial authority needs more comprehensive tools and access to data sufficient for a comprehensive picture of households' finances (¶22).

- The CNB should be given *binding* powers over maximum LTV, DTI, and Debt-Service-To-Income (DSTI) ratios as soon as possible.[5] Debt-based measures would provide a more comprehensive assessment of financial risks than loan-based measures, and are increasingly standard in advanced economies. In the absence of legislation granting binding powers, the CNB should immediately issue *recommendations* over DTI and DSTI ratios, to reinforce those over LTVs and better target high leverage.

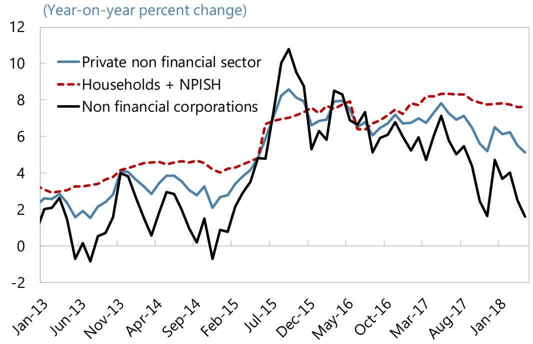
[4] See the January *Financial Stability Review Update* from the CNB, available at https://www.cnb.cz/miranda2/export/sites/www.cnb.cz/en/financial_stability/risk_fs/download/rizika_pro_financni_stabilitu_a_jejich_indikatory_leden_2018_en.pdf

[5] Legislation to grant such powers was voted down in the parliament last year.

Figure 6. Czech Republic: Credit Developments

Credit to the private sector continues to grow…

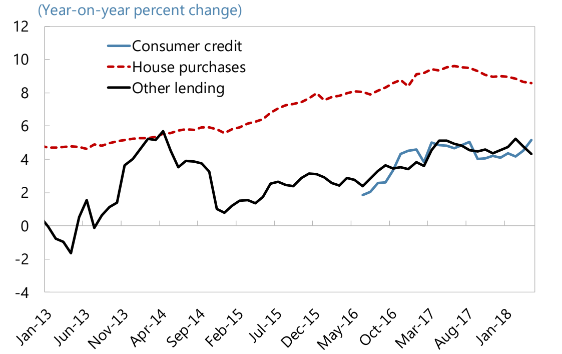
Private Sector Credit
(Year-on-year percent change)



Source: ARAD database.

… driven primarily by growth in mortgages…

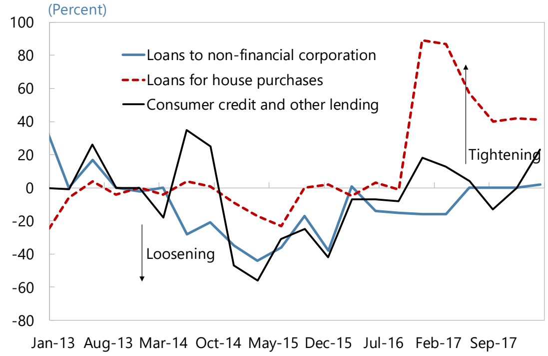
Household and NPISH Credit
(Year-on-year percent change)



Source: ARAD database.

… despite the reported tightening in credit standards…

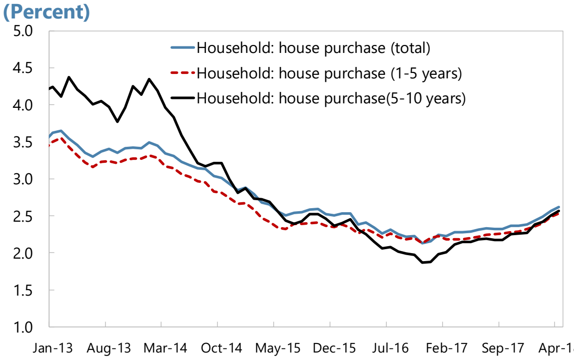
Credit Standards
(Percent)



Source: Czech National Bank lending survey.

… as lending rates increased only marginally from the historic lows.

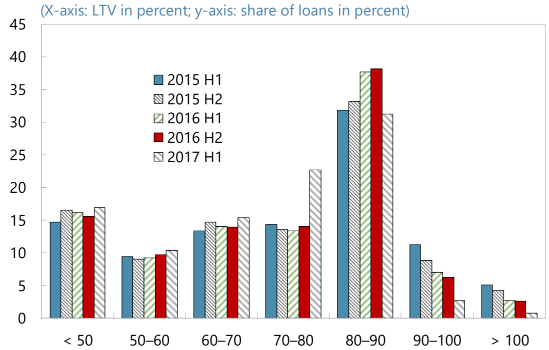
Lending Rates
(Percent)



Source: Haver Analytics.

The share of new housing loans with loan-to-value ratios above 80 percent remains high…

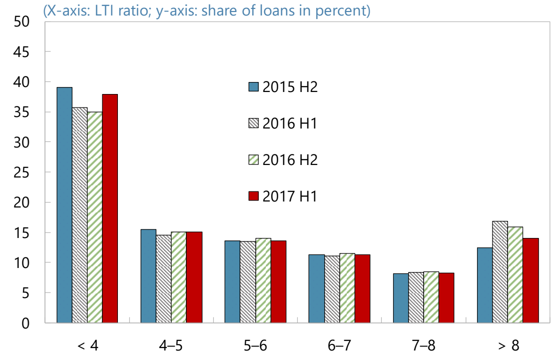
LTV Distribution of New Loans
(X-axis: LTV in percent; y-axis: share of loans in percent)



Source: Czech National Bank.

… and 14 percent of new housing loans feature loan-to-income multiples above 8.

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



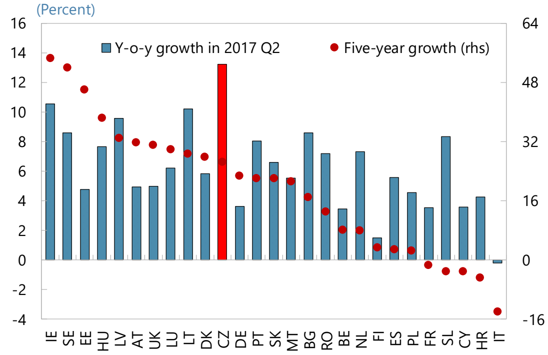
Source: Czech National Bank.

Figure 7. Czech Republic: Housing Market

Property prices growth was the highest in EU in second half of 2017…

Transaction Prices of Residential Property in EU

(Percent)

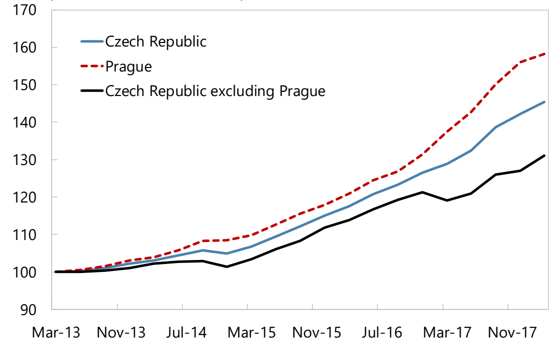


Source: Czech National Bank.

… especially for apartments in Prague.

Apartment Price Index, Offer Price

(Index number: 2013Q1=100)

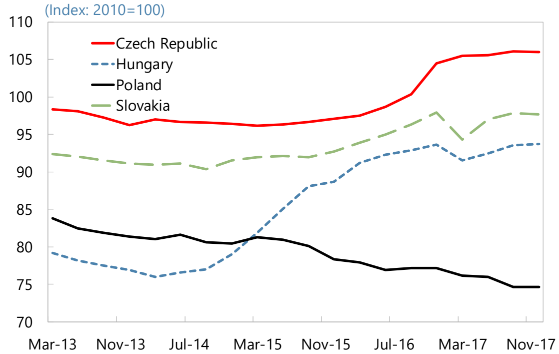


Source: Haver Analytics.

Prices continued to grow relative to income…

Price to Income Ratio

(Index: 2010=100)

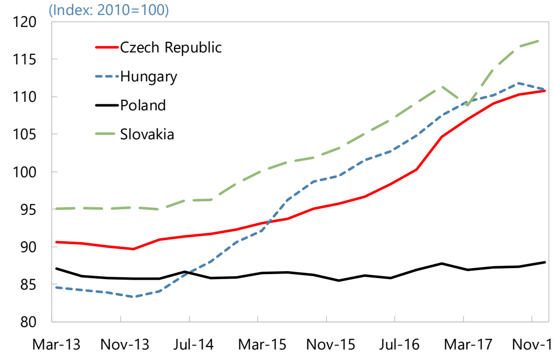


Source: OECD.

… and relative to yields.

Price to Rent Ratio

(Index: 2010=100)

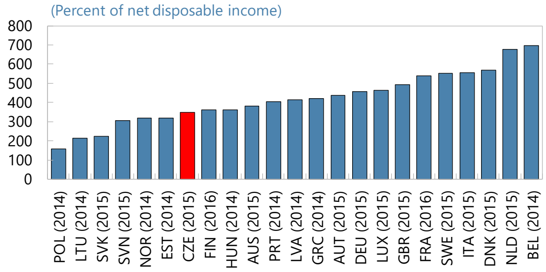


Source: OECD.

Household net worth has increased in recent years but remains relatively low.

Household Net Worth 1/

(Percent of net disposable income)



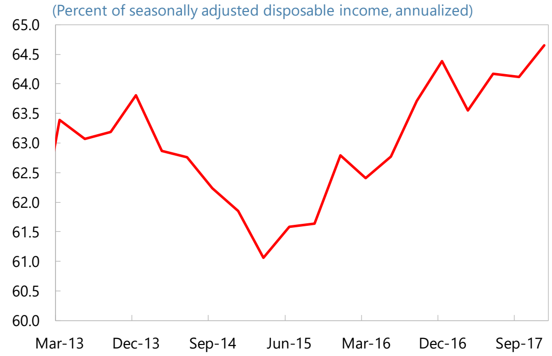
Source: OECD.

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.

Household outstanding debt increased in recent years, but has stabilized recently.

Household Outstanding Debt

(Percent of seasonally adjusted disposable income, annualized)



Source: Haver.

- If such "demand side" (i.e. borrower-based) tools are not implemented, additional "supply side" measures could be considered, but these would only indirectly address the underlying problem of high household leverage. Risk weight add-ons or minimum risk weights for property exposures could provide insurance against growing real estate exposures, but a substantial increase would likely be required to make a meaningful difference to lending conditions, given that capital ratios are above regulatory requirements.[6] The CNB has discretion over capital requirements under Pillar II, but it is not guaranteed that the effects would "pass through" to mortgage borrowers.

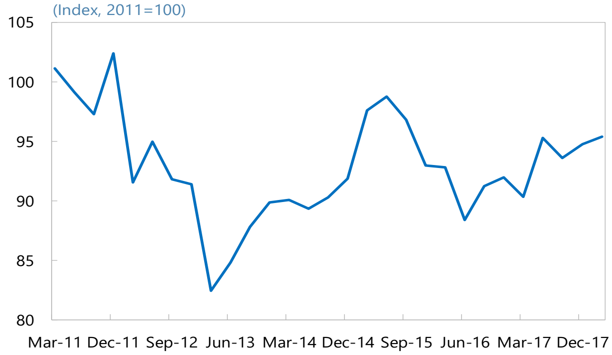
22. Better data are needed for monitoring risks. The use of DTI and DSTI measures puts great demands on data—to accurately assess risks and to be fully sure of compliance, the CNB needs access to comprehensive household loan data.[7] Better data on commercial real estate transactions would also be helpful.

23. Macroprudential measures should be supported by addressing fiscal and structural policies. Increasing house prices in major metropolitan areas reflects equilibrium adjustment, and demand has consistently outstripped supply, especially in Prague. Planning and zoning laws contribute to housing supply constraints that add to pressures on prices. Some progress has been made in streamlining procedures for building permits, but construction levels remain below pre-crisis highs (Box 1). In addition, the tax environment adds to housing demand (¶39). Without attention to such problems, the housing market is likely to remain tight.

Box 1. Demand and Supply Pressures in the Housing Market

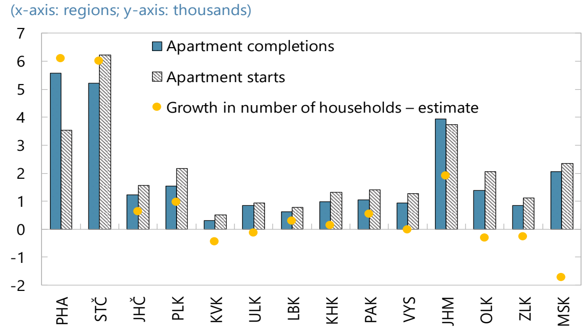
Construction activity declined after the financial crisis and has yet to recover to levels seen in 2009. The effect is particularly noticeable in Prague, for which housing completions have not kept pace with housing demand. Low numbers of housing starts imply that the problem will continue for some time. Demand has been driven mainly by migration within the country and strong demand for prime properties by foreigners; demand for investment properties is also believed to play a significant role.

Construction Output
(Index, 2011=100)



Source: Czech Statistical Office.

Apartment construction and population growth in regions in year 2017
(x-axis: regions; y-axis: thousands)



Sources: CZSO, Eurostat, CNB calculations.

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[6] Under the terms laid out in the EU Capital Requirements Regulation, the CNB would have to submit a request to change risk weights to the European Parliament, European Council, European Commission, European Systemic Risk Board, and European Banking Authority. A case would have to be made to raise risk weights above their existing level of 22 percent (on secured retail lending, for banks using internal models).

[7] Such data are already collected and available to banks.

Authorities' Views

24. The CNB seeks additional borrower-based tools to complement existing measures. The authorities felt lending was cooling, both in terms of prices and volumes, indicating that LTV measures and consumer credit legislation were having desired effects. Nonetheless, they would prefer to have binding powers over LTV, DTI, and DSTI ratios. They were open to making recommendations over DTI and DSTI ratios before being granted binding powers. They noted the importance of access to detailed loan-by-loan data. They did not favor changing risk weights, as they regarded procedures as burdensome, but had pointed to discretion under Pillar II to raise capital requirements.

C. Financial Policy

25. The banking system is well capitalized, with stable funding (FSI Table, Figure 8).

- The banking sector maintains capital above required levels.[8] Average risk weights for banks using the IRB approach have been declining somewhat, but are not especially low. The leverage ratio decreased over the previous year, but mostly because of a sharp increase in holdings of central bank reserves and government bonds through the period of the koruna floor that increased total assets; tier 1 capital itself continued to increase.

- The share of liquid assets remains relatively high, and banks are funded largely by deposits.[9] Net interest margins, though slightly lower than previously, remain high, and returns are relatively high.

26. Credit risk continues to decline. Nonperforming loans for NFCs and households have continued to decline, and those for secured consumer loans are lower than the average. Default rates are also falling, both for NFCs and households.

27. The main risk could arise from growing real estate market exposures. Recent stress tests by the CNB indicate that the banking sector is resilient overall, but risks to the banking system would increase if the share of real estate loans in total loans were to increase further and risk weights were to fall. Demand for commercial real estate has also been strong, but lending to developers has not increased significantly, as many developers are equity financed.

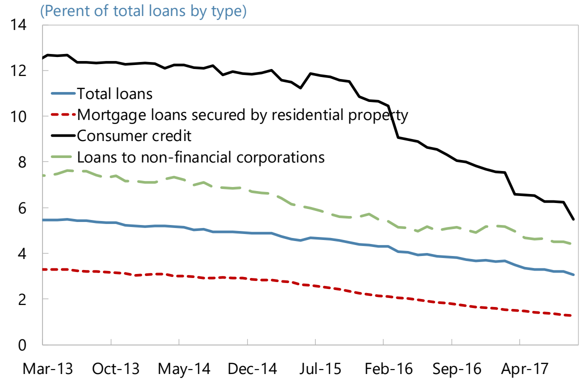
[8] As of 2017: Q4, the regulatory capital ratio was 18 percent, compared with a required ratio of 14.8 percent, made up of Pillar 1 capital (8 percent), additional Pillar 2 capital (1.9 percent), the systemic risk buffer (1.9 percent), the countercyclical capital buffer (0.5 percent), and the capital conservation buffer (2.5 percent).

[9] The loan-to-deposit ratio was 78 percent in 2017: Q4.

Figure 8. Czech Republic: Financial Sector Developments

NPL ratios are declining, driven by strong credit growth…

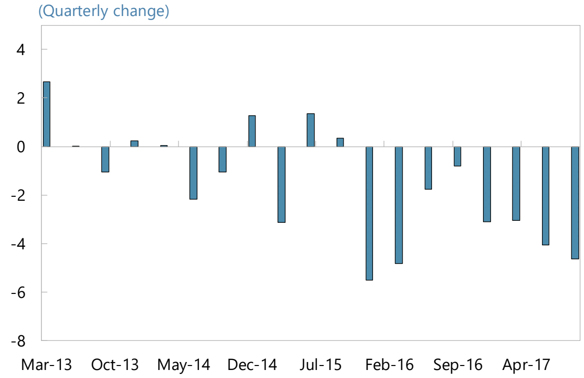
Non-performing Loans
(Perent of total loans by type)



Source: Czech National Bank.

… but also by declining absolute levels.

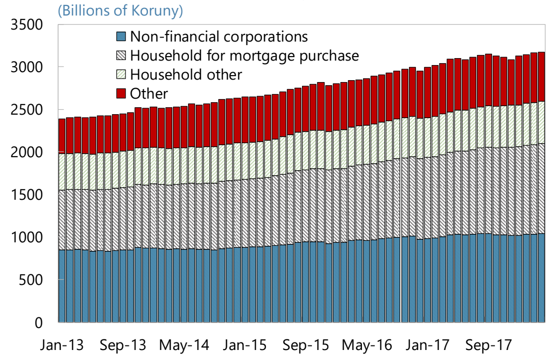
Stock of Non-performing Loans
(Quarterly change)



Source: Czech National Bank.

The share of loans to households for house purchase is growing…

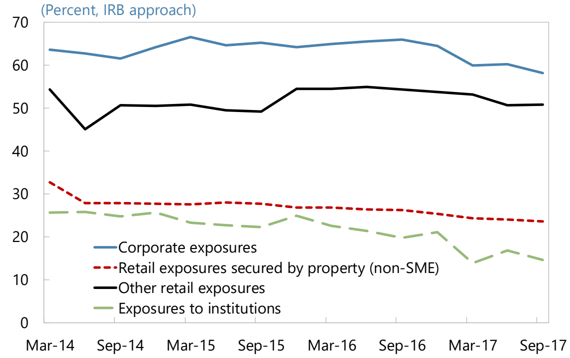
Commercial Bank Loans by Sector
(Billions of Koruny)



Source: Haver Analytics.

… and risk weights on housing market exposures are declining.

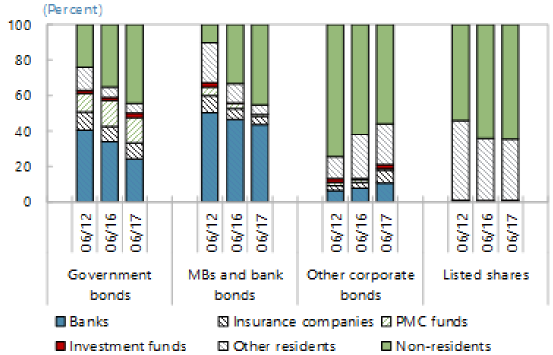
Average Risk Weights
(Percent, IRB approach)



Source: Czech National Bank.

Holdings of domestic assets by foreign residents have increased.

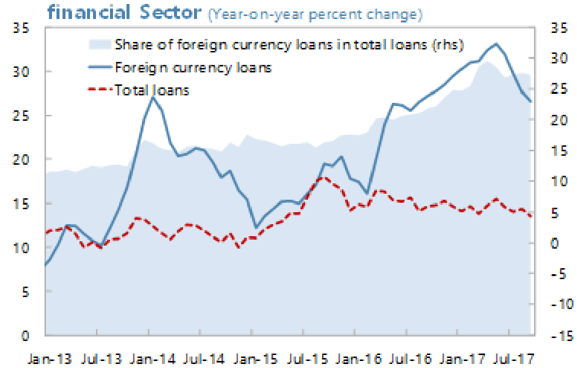
Holding of Financial Assets Issued by Residents
(Percent)



Source: Czech National Bank.

The share of foreign currency bank loans remains high.

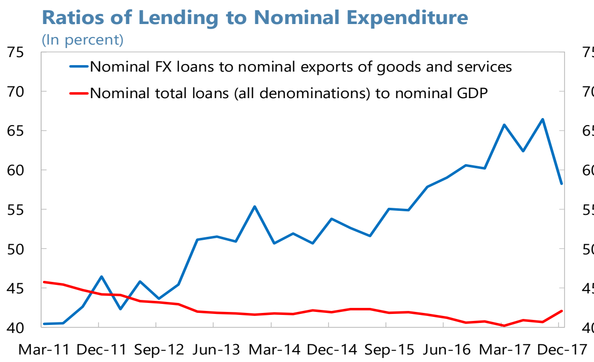
Foreign Currency Bank Loans to Private Non-financial Sector (Year-on-year percent change)



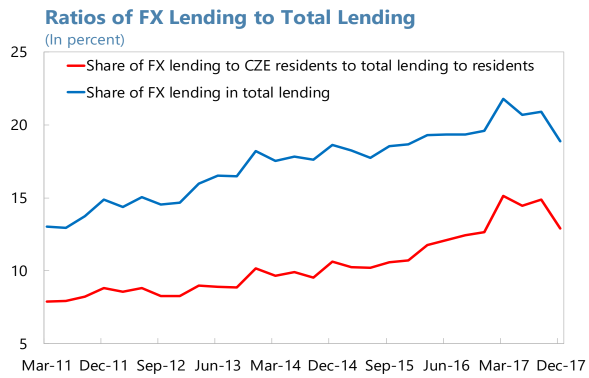
Source: Czech National Bank.

28. Other risks arise from FX loans and the large deposit inflows during the period of the koruna floor:

- *Foreign currency loans* present a risk to unhedged firms that either do not invoice in euros or are momentarily short on euros. Much of the recent FX lending may have been driven by expectations of koruna appreciation once the floor was removed—the growth rate of FX lending has subsequently plunged to zero—but the share of foreign currency bank loans nonetheless stands at 20 percent. Some argue that FX lending a natural consequence of increased trade openness, noting that it is almost entirely to firms and mainly in euros. But the growth of FX lending has for some years exceeded that of exports, indicating that intrusive supervision is needed to monitor risks.

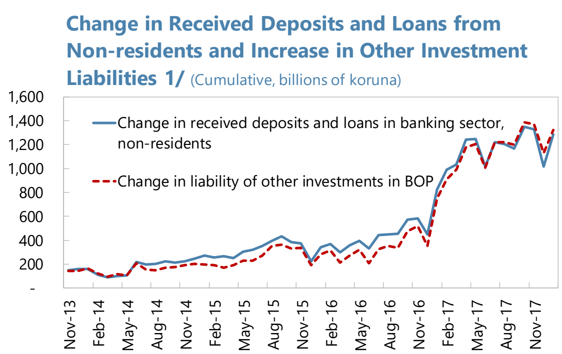


Sources: Czech Statistical Office; Czech National Bank; and IMF staff calculations.

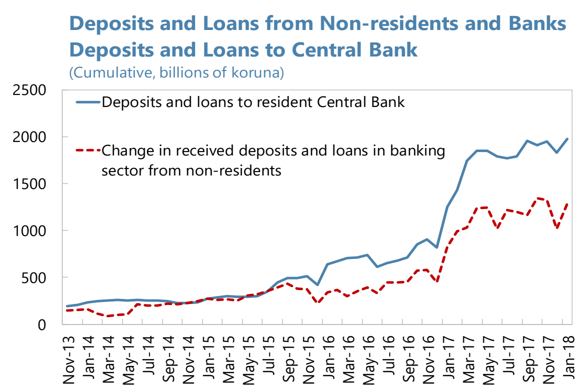


Sources: Czech National Bank; and IMF staff calculations.

- *Non-resident inflows:* Non-residents' holdings of commercial bank deposits increased significantly in early 2017 and have since remained largely unchanged. Risks associated with these developments include a sudden withdrawal of foreign-sourced deposits, although this would likely be manageable. The ultimate source of the inflows is mostly unknown. Non-resident deposits, including from parent banks, should be subject to adequate customer due diligence requirements (CDD), which should be effectively supervised. Although a domestic bank may be permitted to rely on a parent bank to perform elements of the CDD measures, under international standards the ultimate responsibility for CDD measures remains with the domestic bank.



Sources: Haver; and Czech National Bank
1/ Received deposits and loans from non-residents are from the balance sheet of commercial banks. "Other investments" are from the balance of payment.



Source: Czech National Bank.

29. The CNB has appropriately tightened its prudential stance. The CNB has increased the capital buffer for three systemically-important banks effective from January 2017. The countercyclical capital buffer will increase to 1 percent in July 2018, compared with the current level of 0.5 percent, and to 1.25 percent in January 2019.

30. Better access to data would help the financial supervisor. Access to more granular data on real estate, individual loans, and household debt would help back supervision. The supervisor should also continue to monitor both foreign currency and nonresident exposures.

31. Progress has been made on the implementation of the Bank Recovery and Resolution Directive (BRRD). A Resolution Fund has been set up. A "single point of entry" approach has been agreed by the CNB and Single Resolution Board (SRB) for three banking groups. Decisions on MREL, including deadlines, have been made at the *consolidated* level, but the exact composition is not yet clear with respect to the types of instruments, subordination, and cross-holdings—decisions over "internal" MREL will follow, pending policy from the SRB.

Authorities' Views

32. The authorities considered the banking system to be robust and generally operating with low risk. They agreed that real estate exposures presented one of the risks to credit institutions. FX lending was judged to be consistent with natural hedging strategies by firms to manage cashflow. Foreign deposits were largely sourced from parent banks prior to the exit from the FX commitment—for AML purposes, parent banks are responsible for application of Know Your Customer rules in this case, as the funds at Czech subsidiaries and branches are kept in accounts of the foreign parent financial institutions. The Czech Republic has been implementing AML/CFT measures, in line with the FATF recommendations and the EU legislation; from April 2018, supervision has been fully in line with the Joint Guidelines on Risk-based Approach to AML/CFT Supervision, issued by European supervisory authorities in November 2016.[10]

D. Fiscal Policy

33. Fiscal balances in 2017 outperformed expectations. The overall balance is estimated to have reached 1.6 percent of GDP in 2017, compared with 0.4 percent of GDP projected in the Convergence Programme, owing to reduced social benefit outlays and improvements in social security contributions, personal income tax revenues, and VAT collections. A primary surplus of 2.2 percent of GDP and a negative interest-growth differential drove public debt down to 35 percent of GDP.

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[10] An amendment to the AML Act, implementing the 4th EU AML Directive, was enacted in January 2017, ahead of the implementation deadline. A Registry of Beneficial Owners and a Central Register of Accounts has been operational from January this year. Preparations are underway for the implementation of the 5th EU Directive.

34. Lower surpluses are expected over the medium term.

- The overall balance is expected to be the same in 2018 as 2017, and then gradually ease to about 1 percent of GDP. Higher public sector wages and infrastructure spending will be offset by higher revenues and further gains from previously-implemented tax administration measures. This projection is based on staff's judgment of most likely policies: it includes the expected-but-as-yet-not-approved increase in state employee compensation, but does not include other recently-proposed changes to taxes and spending (Annex V).
- A surplus is also projected for the structural balance, but lower than previously, implying fiscal stimulus of 0.1 and 0.5 percent of GDP in 2018 and 2019, respectively. Staff calculations indicate that, were EU grants to be excluded, the structural balance would be negative in 2019 and 2020.

Czech Republic: Fiscal Stance
(In percent of GDP)

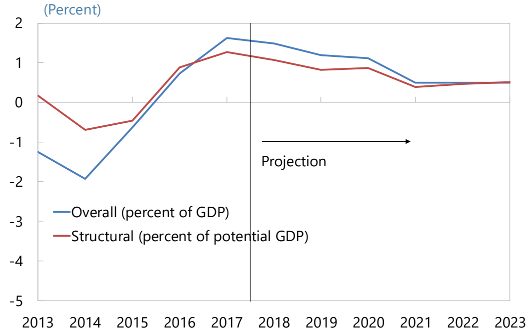
	2017	2018	2019	2020	2021	2022	2023
				Proj.			
Net lending/borrowing (overall balance)	1.6	1.6	1.2	0.9	1.0	1.0	1.0
Primary balance	2.2	2.3	1.8	1.5	1.6	1.5	1.5
Structural balance	1.2	1.0	0.6	0.6	0.8	0.9	1.0
Change in cyclically adjusted primary balance	0.3	-0.1	-0.5	-0.1	0.2	0.1	0.0
Structural balance excl revenues from EU [1]	0.6	0.0	-0.4	-0.5	0.0	0.1	0.2
Public debt	34.6	32.8	31.3	30.4	28.0	25.9	23.9

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

35. Public debt is expected to decline over the medium term, but debt will rebound in the long-term if age-related expenditures are left unaddressed.

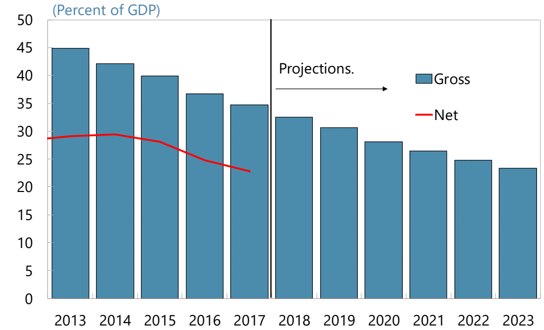
- Staff projects general government gross debt to decline to about 33 percent in 2018. The projected budget surpluses and steady nominal growth would bring debt to around 24 percent of GDP by 2023 (Annex IV).

General Government Fiscal Balances
(Percent)



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

General Government Debt
(Percent of GDP)



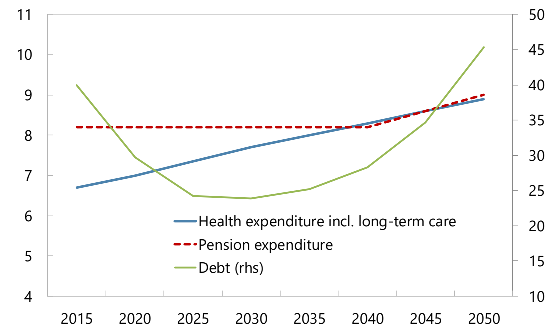
Sources: Czech Republic Ministry of Finance; and IMF staff projections.

- Over the long term, increased healthcare and pension expenditures and declining GDP growth would increase debt. Healthcare costs pose the biggest challenge, increasing 2 percentage points of GDP by 2050 to 9 percent, due to high costs and aging. Pensions spending would increase ¾ of a percentage point, to 9 percent of GDP in 2050.[11] This combination implies that public debt would start increasing from around 2030, passing 45 percent by 2050.

36. Fiscal policy therefore faces the challenge of avoiding procyclicality, addressing medium- and long-term spending challenges, and appropriately setting incentives to raise employment and productivity.

- *Avoiding procyclicality:* Proposed expenditure and tax changes would significantly add to aggregate demand, at a time when the economy is already running above its capacity.

Age-Related Expenditures and Debt
(Percent of GDP)



Source: IMF Staff Projections

- *Long-term spending:* As the population ages, the demand for health care will increase—decisions will have to be made to ensure that spending is well targeted. The old-age dependency ratio, currently 28 percent, is projected to reach nearly 40 percent by 2030 and nearly 60 percent by 2050.[12] Given that the Czech Republic is increasingly well-off compared to other European countries, it is likely to receive less EU funding in the next EU budget, and should accordingly plan alternative sources of finance for long-term projects.

- *Incentives:* Tax policies play a major role in shaping incentives; some effectively penalize labor participation, while property taxes do not encourage good matching in the housing market.

37. Tax and spending changes should be timed to avoid procyclicality. Some of the proposed spending increases—for example, more resources for education and investment—are justified, especially given the need to boost productivity. But they could significantly add to demand if not phased in gradually. For example, if proposed tax changes were implemented later this year, the fiscal stimulus would amount to about 1 percent of GDP in 2019.

Czech Republic: Fiscal Stance with Income Tax Reform
(In percent of GDP)

	2017	2018	2019	2020	2021	2022	2023
				Proj.			
Net lending/borrowing (overall balance)	1.6	1.6	0.6	0.4	1.0	1.0	1.0
Primary balance	2.2	2.3	1.2	1.0	1.6	1.5	1.5
Structural balance	1.2	1.0	0.1	0.1	0.8	0.9	1.0
Change in cyclically adjusted primary balance	0.3	-0.1	-1.0	-0.1	0.7	0.1	0.0
Structural balance excl revenues from EU [1]	0.6	0.0	-0.9	-1.0	0.0	0.1	0.2
Public debt	34.6	32.8	31.8	31.4	29.0	26.8	24.8

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

[11] The baseline scenario incorporates estimates of the population aging impact on the labor force and on labor productivity, assuming a steady decline in GDP growth to 1 percent in 2040, from 2 percent in 2023. The scenario assumes the nominal interest rate is equal to the 2023 forward rate on 10-year CZE bonds and that inflation is at the 2 percent target.

[12] Projections are taken from the United Nations *World Population Projections*, 2017.

38. Staff advises healthcare and retirement age measures to address long-term challenges from demographics:

- *By increasing health spending efficiency:* Cost efficiency of hospitals is low; the authorities are implementing reforms to improve the efficiency and transparency of hospital financing, but progress is slow. The system could benefit from more use of performance indicators. The number of annual doctor consultations per capita is the third highest in the OECD—strengthening the role of primary care through gate-keeping and re-introducing co-payments, for example, would deter overconsumption of health care resources.

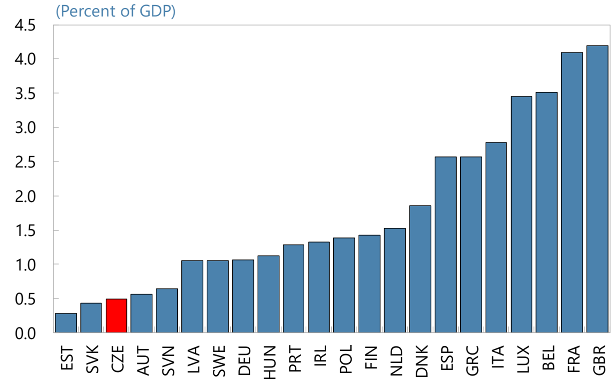
- *By establishing an automatic link between state pension eligibility and life expectancy*: The statutory retirement age is currently around 63 years; it is increasing, but will be capped at 65 years in 2030, with government approval required for subsequent adjustments to ensure that a maximum of a quarter of expected life is spent in retirement. Staff recommends establishing an automatic link between the statutory retirement age and life expectancy, to boost labor and supply and growth, in addition to supporting the public finances.[13]

39. Staff recommends a comprehensive review of taxes and spending to provide the right incentives for best use of resources. Tax rates should be consolidated to keep the system simple and avoid leakages—for example, the proposed changes to VAT would increase complexity and undermine efficiency, without clear gains. Particular issues that deserve attention include:

- *Labor taxes*. Staff estimates that reducing disincentives for women as second earners to work—such as the non-working spouse benefit—could increase female labor force participation; the savings could be directed toward increased provision of public childcare facilities. Gains from improved tax administration should be prioritized toward reducing the high labor tax wedge, by lowering social security contributions.

- *Property taxes*. Revenue from property taxation overall is low, suggesting potential to raise more revenue and reduce distortionary taxation. Staff encourages moving toward recurrent taxes, rather than transaction taxes, including formalizing more uniform value-based property taxation.[14] Introducing a tax-deferral system in which tax obligations accrue to a deferred-tax

Property Income Tax, 2016
(Percent of GDP)



Source: Eurostat.

[13] This arrangement is employed in several European countries including Denmark, Finland, and Slovakia.

[14] Existing property taxes are applied based on based on square footage, structural features of the property (e.g., rate goes up for each higher floor), and location. Municipalities can impose additional rates i.e., there are municipality level coefficients that raise the cost per square meter. Capital gains tax is 15 percent, but zero if the individual has lived in the residence for at least two years before the sale or if the proceeds are used for buying another principal residence. There is a 4 percent transaction tax. There is no inheritance tax.

asset liquidated at point of sale could help alleviate concerns about asset-rich, cashflow-poor households. Mortgage interest deductibility encourages households to take on debt to own a property and should be eliminated on a steady and predictable schedule.[15]

- *Public infrastructure spending*. Both the stock of public capital and the quality of infrastructure are gauged to be low (Figure 9). Staff recommends that the authorities establish a unified and transparent plan for infrastructure over a long horizon. The absorption of EU funds has improved, but infrastructure investment could be further accelerated with less frequent changes in regulations and methodologies and increased processing capacity.[16]

- *Investment support* should also be reviewed to see whether it is providing a good return for the economy. In practice, most grants and tax concessions are still given to large firms in manufacturing—the criteria for providing support should be redesigned to facilitate the best use of resources across the economy, and help the spread of technology and best practices.

40. The debt management office has extended maturities, albeit at rates higher than a year ago. Staff welcomes these developments. Debt management should continue to pursue a strategy of minimizing costs for an acceptable level of risk over the medium term; to this end, extending the time horizon of the strategy beyond the current 3 years would be useful.[17]

41. The fiscal framework adopted last year has strengthened the accountability and transparency of fiscal policy and should be fully implemented. The fiscal rules were rightly aimed at limiting debt while providing space for counter-cyclical fiscal policy. The authorities should strive to make the fiscal council fully operational soon and add the fiscal law to the constitution.

Authorities' Views

42. The authorities considered policies to be appropriate. They were aware of procyclicality, but noted that surpluses would still be maintained. They judged there to be little potential to reduce social security taxation, as it is a major source of revenues, and alternatives would yield little revenue. At the same time, they considered the effective VAT rate to be high, justifying reduced rates for some items. They did not believe the mortgage interest deductibility to play a major role in house purchase decisions and felt that there is flexibility for municipalities to gather more property tax revenues if needed. They noted that grants were directed to underdeveloped regions and to boost employment and pointed to support for SMEs through lending guarantees. Debt maturities were increasing, but constrained by weak demand for longer-term CZK-denominated assets.

[15] Mortgagees may deduct up to CZK 300,000 in interest payments on mortgages used to finance primarily living.

[16] See IMF Staff Reports 2016 and 2017.

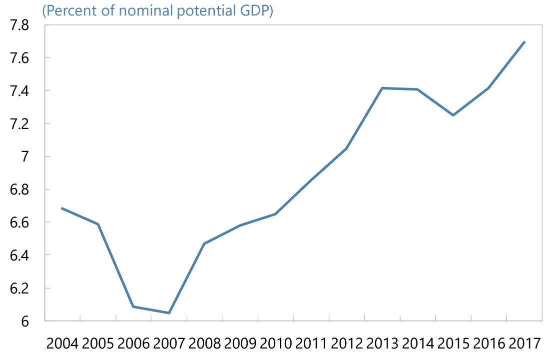
[17] At present, the Ministry operates with a three-year simulation horizon, matching the horizon of budget projections (Chapter 396: State Debt as a part of the Medium-term Outlook of the State Budget of the Czech Republic).

Figure 9. Czech Republic: Fiscal Sector

Cyclically-adjusted VAT revenues have increased in recent years, helped by tax administration measures…

Cyclically-adjusted VAT Revenue

(Percent of nominal potential GDP)

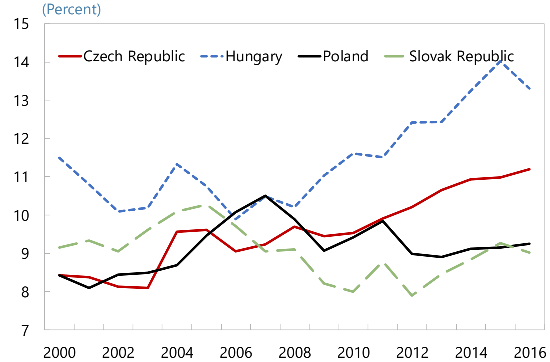


Source: Czech Republic Ministry of Finance.

… but the effective VAT rate is held back by the growing number of product groups with lower VAT rate.

Effective VAT rate

(Percent)

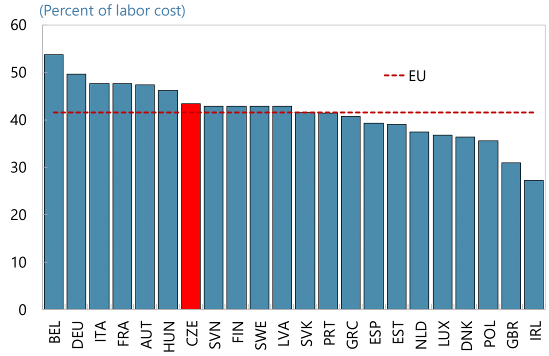


Sources: IMF WEO

The tax wedge on labor remains high…

Tax Wedge, 2017

(Percent of labor cost)

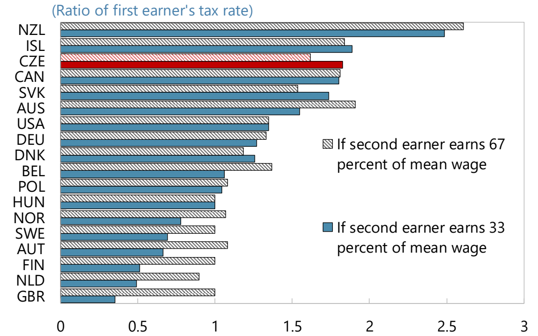


Source: OECD Taxing Wages 2018.

… and the relative tax rate of second earners compared to first earners is high, discouraging female participation.

Relative Tax Rate by Second Earner Income, 2014

(Ratio of first earner's tax rate)

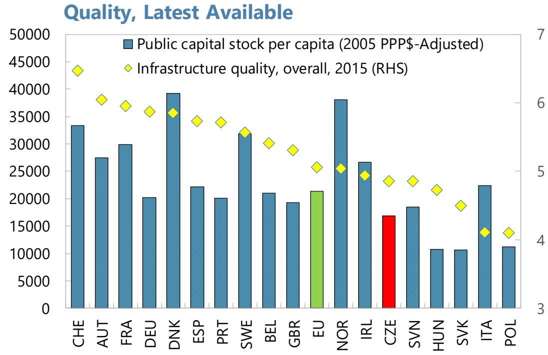


Source: Christiansen et al (2016a), based on OECD data.

Note: Tax rate of second earner divided by tax rate of first earner in a childless household.

The public capital stock is below the EU average and infrastructure quality is suboptimal.

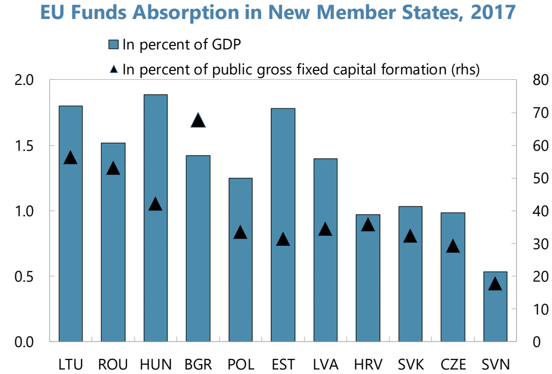
Public Capital Stock per Capita and Infrastructure Quality, Latest Available



Sources: OECD and IMF staff estimates.

Effective EU funds absorption could help boost public investment in infrastructure.

EU Funds Absorption in New Member States, 2017



Sources: Haver Analytics; IMF's *World Economic Outlook*; and staff calculations.

E. Structural Policies

43. The main challenges for structural policies is to boost capacity, made harder—and more important—by demographic changes already underway (Box 2). The economy is already relatively liberalized, but some well-targeted policies could raise employment and productivity.

44. Participation of young women and older workers could increase further.

- Although overall female labor participation is now in line with that of peers, younger women have relatively low participation (Figure 12). Lack of childcare facilities and tax disincentives are cited as causes for low participation of younger women, which is also associated with a relatively high gender pay gap. There has been a substantial increase in participation from older workers; nonetheless, the participation rates of those aged 60+ is below the highest in the EU.

Box 2. Challenges to Boost Employment and Productivity

The demographic outlook is poor. Although the Czech population is younger than that of western Europe, it is expected to shrink in the coming years. The working-age population is projected to decrease even more—under existing policies, including legislated increases in the retirement age, staff projects labor force to decline by 5 percent by 2030 and 21 percent by 2050. (Figure 10).[1/] Participation has increased over the past few years to relatively high levels (Figure 11), and participation rates for prime-age workers are already at the EU maximum levels. Additionally, average hours worked are among the highest in Europe and are unlikely to increase as incomes grow (Selected Issues Paper: Labor Supply).

Labor productivity has been middling since the crisis, but this does not appear to be linked to lack of capital or a misdirected economy. Although average labor productivity in the Czech Republic over the last 20 years was above that of advanced economies, it was below those of peers (Figure 13). Capital investment has been very high—indeed, non-ICT capital has been the largest and most consistent contributor to labor productivity growth over the past two decades. Even during the pre-crisis period, in which TFP growth reached 3 percent per year, non-ICT capital deepening averaged nearly 2 percent. The capital stock is in line with peers, including Germany. Nor is the economy obviously misdirected: aggregate labor productivity has increased with the increasing concentration in manufacturing; there is some room to improve the allocation of capital and labor across and within sectors, but no more so that peer economies (Selected Issues Paper: Labor Productivity).

These findings are consistent with a relatively liberalized economy with no major restrictions in labor markets, on the flow of capital, and on trade. Overall, the Czech Republic has relatively unrestricted product and labor markets, and does not suffer from trade restrictions (Figure 14).[2/]

Going forward, demographic shifts will likely provide an extra challenge to TFP: higher shares of older workers have been found to be associated with lower labor productivity growth rates.[1/] According to UN projections, the Czech Republic will have the highest rate of increase in the share of older workers in its workforce.

[1/] See United Nations World Population Projections, 2017.

[2/] See Aiyar, Shekhar, Christian Ebeke and Xiaobo Shao (2016), "The effect of workforce aging on European productivity", IMF Working Paper 16/238

- Staff's analysis indicates that policies aimed at increasing participation of these cohorts could slow, but not reverse, the decline in the labor force. Increasing the participation rates of women and older workers, while also linking the statutory retirement age to life expectancy, would reduce the fall in the labor force to 2 percent by 2030 (14 percent by 2050). A more ambitious scenario—including raising participation rates to EU country maxima and the retirement age to 67—could increase the labor force by 2030, but it would fall from there (Selected Issues Paper: Labor Supply).

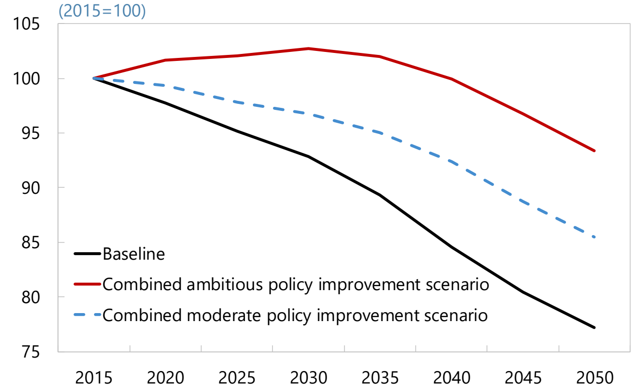
45. To boost productivity, policymakers should particularly address policies that can hold back smaller and younger firms.

- Staff analysis shows that the productivity of better-performing firms is increasing healthily. But productivity in the lower tail of firms has stalled. These firms tend to be smaller, younger, and more leveraged.[18]

- Factors that can present particular difficulties for smaller and younger firms include: a complex regulatory environment, with multiple layers across central, regional, and municipal governments; inconsistent application of regulations; and the structure of tax incentives and subsidies. Survey indicators suggest regulatory and planning complexity, administrative burdens, and inconsistent enforcement are significant problems. (Selected Issues Paper: Labor Productivity)

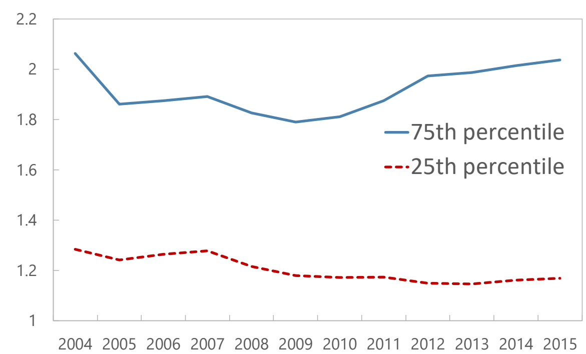
Labor force, index

(2015=100)



Sources: Czech Statistical Office and IMF staff calculations.

TFP level of firms in top 25 and bottom 25 percentile



Sources: Orbis, IMF staff estimates

World Bank "Doing Business" Indicators

(rank, from 1 to 190)

Sources: World Bank

[18] These findings are corroborated by discussions with industry groups—unlike in some European economies, weak productivity does not appear to be caused by sclerotic older firms or by problems with access to credit.

46. Government itself can contribute to the environment in which firms operate, such as public infrastructure and life-long learning.

- Infrastructure quality is assessed to be worse than in other advanced European economies.[19] A single plan for public infrastructure, coordinated across all branches of government, would be an important contribution.

- Participation in adult learning is at the OECD average,[20] but the framework for life-long learning should be enhanced further, given the demands of an aging workforce that will be retiring later in life. It is important to ensure equal access to adult learning across regions and the coordination of schemes across government.[21]

47. Government can also raise the efficiency with which it provides its own services, with potentially large spillover effects to the rest of the economy. Staff recommends measures to increase processing and auditing capacity, to reduce holdups in public administration. Increasing digitalization of government services could help address fragmentation in public administration. A good example comes from initiatives currently underway to bundle all information concerning planning applications into a single "e-binder" that is shared across all agencies responsible for planning approval. This could facilitate parallel processing of applications, in turn speeding up the planning process and reducing pressures on supply, especially in the real estate market. Such initiatives in "e-government" are welcome and to be encouraged more broadly.

Authorities' Views

48. The authorities agreed with the importance of boosting capacity. They pointed to several recently-implemented measures. The new amendment to the Building Act simplifies the conditions for starting construction and accelerates building permit proceedings. A National Investment Plan is expected by the end of June. Education funding has been changed to improve the quality of regional education. Additionally, vocational training reform aims to increase coordination with businesses and improving the skills matching. New measures to aid child care include an increase in child-related tax deductions, introduction of one week of paternity leave, and a guaranteed placement in nursery schools for children aged four and older. The efficiency of public administration would be helped by the extension of electronic procurement.

[19] EC Country Report 2018.

[20] See http://www.oecd.org/skills/piaac/.

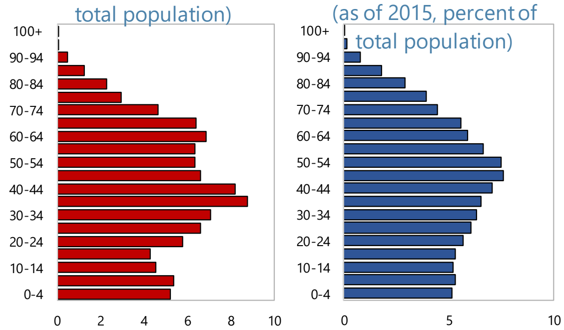
[21] The National Institute for Education formulates policies on life-long learning, separate from ministries of Education, Trade and Industry, and Regional Development.

Figure 10. Czech Republic: Demographics and Working Age Population

The Czech Republic currently has the advantage of a younger population than Western European peers, with a higher share of those of prime working age.

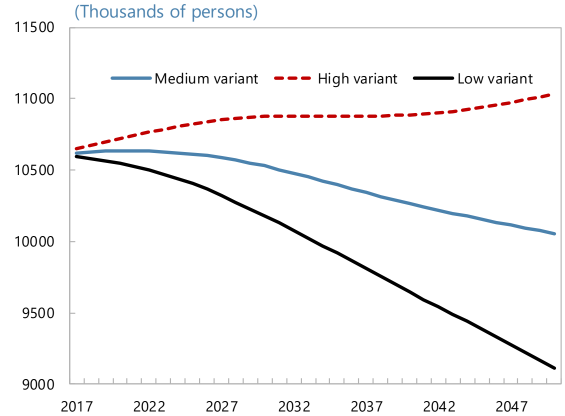
CZE: population distribution by age cohort
(as of 2015, percent of total population)

Western Europe: population distribution by age cohort
(as of 2015, percent of total population)



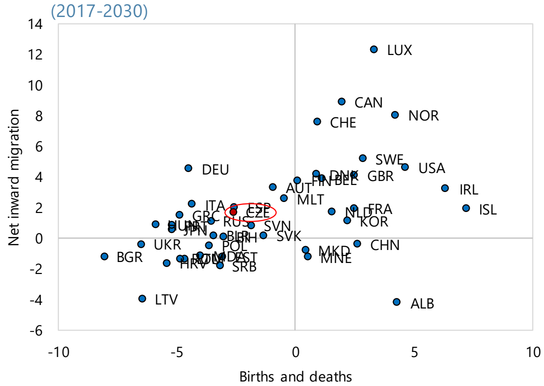
But the population is expected to decrease in the baseline ("medium") and pessimistic scenarios, and only slightly increase under the optimistic scenario…

Aggregate Total Population
(Thousands of persons)



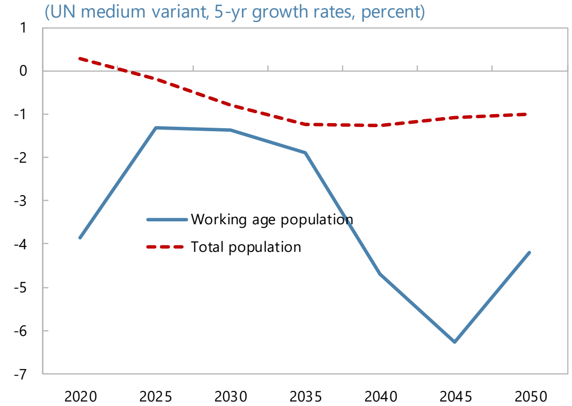
… even assuming a net inflow of migrants.

Contributions to Total Population Growth
(2017-2030)



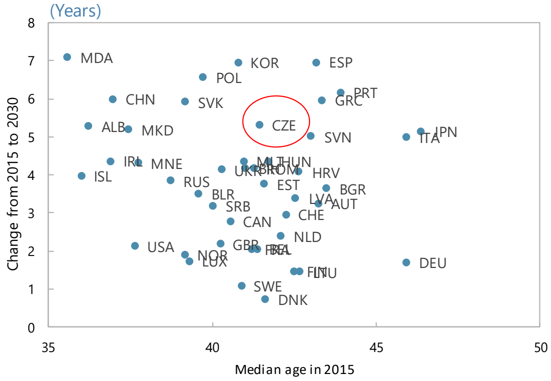
The working age population is projected to decrease even more rapidly than the total population…

Total and Working Age (15-64) Population
(UN medium variant, 5-yr growth rates, percent)



… associated with population aging…

Median Age: Starting Point vs Change
(Years)



… and a substantial increase in the old-age dependency ratio.

Old-age Dependency Ratio (65+/(20-64)): Levels

	2015	2020	2025	2030	2035	2040	2045	2050
Czech Republic	30.5	32.5	37.1	44.2	51.3	54.9	56.5	59.4
Austria	28.8	35.0	41.1	46.7	51.8	55.9	61.8	66.8
Germany	30.6	33.1	37.1	41.6	45.4	47.9	49.5	51.0
Hungary	33.0	35.1	39.2	43.6	50.6	58.3	66.8	73.4
Poland	34.6	38.3	42.4	47.7	53.3	61.4	69.0	73.2
Slovakia	30.6	33.8	38.6	44.9	52.6	62.4	72.8	77.5
EU ex CZE average	30.2	33.5	37.7	42.5	46.9	50.7	54.2	57.2

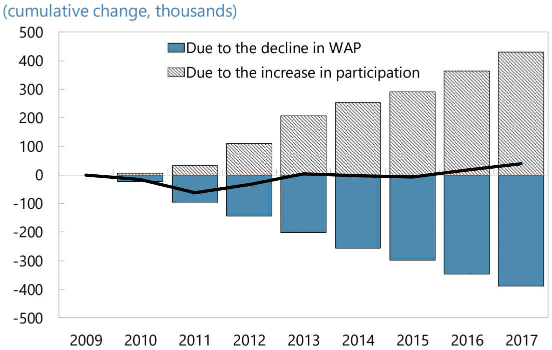
Source: United Nations, World Population Prospects, 2017.

Figure 11. Czech Republic: Labor Force Participation Decomposition

A significant increase in participation has so far compensated for the fall in working age population.

Labor Force

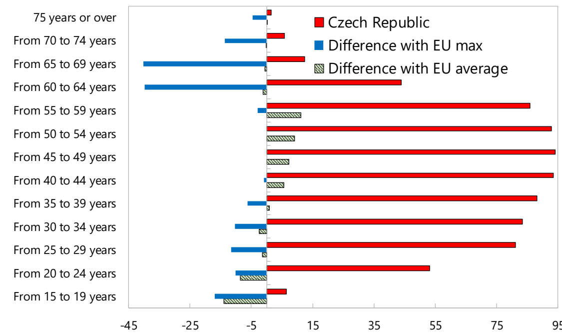
(cumulative change, thousands)



Sources: Eurostat

Activity rates for prime-age groups have exceeded the EU average and reached maximum EU levels.

Labor Force Participation Rate by Age Group Total, 2017

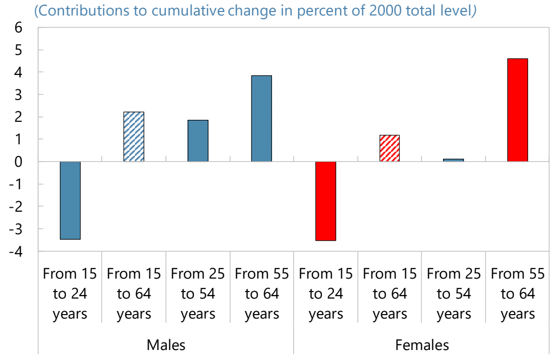


Source: Eurostat.

The largest contribution to the active population has come from older workers…

Active Population by Age and Gender, 2017

(Contributions to cumulative change in percent of 2000 total level)

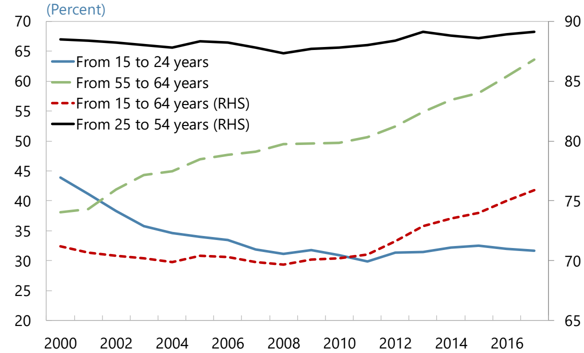


Source: Eurostat.

… while participation of the young has declined.

Labor Force Participation Rate

(Percent)

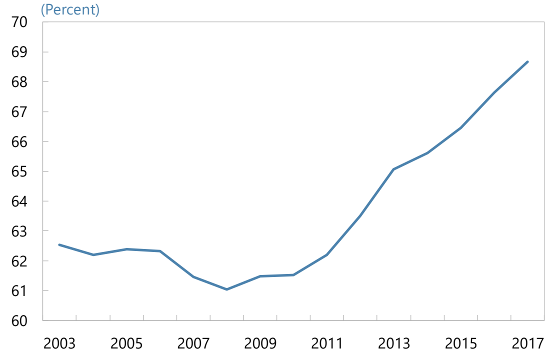


Source: Eurostat.

Figure 12. Czech Republic: Female Labor Supply

Female labor force participation in the Czech Republic has increased in recent years…

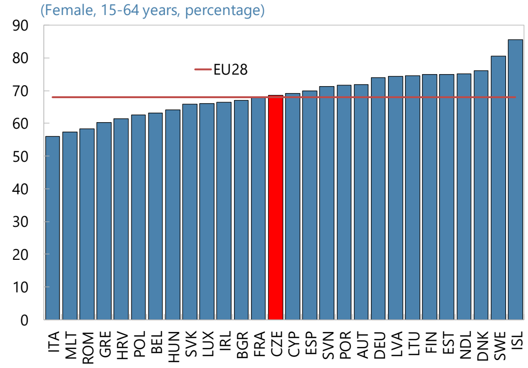
Female Labor Force Participation
(Percent)



Source: OECD.

… and is close to the EU average.

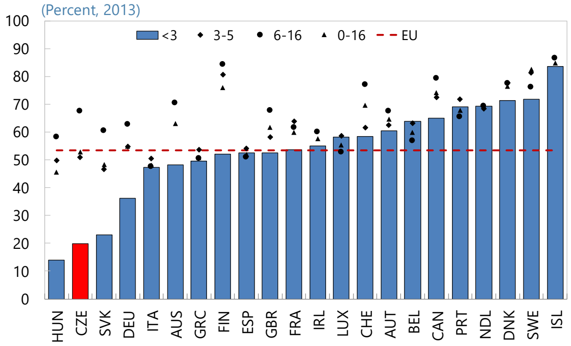
Labor Force Participation Rate, 2017
(Female, 15-64 years, percentage)



Source: OECD.

But the employment rate is particularly low for mothers with children under 3 years old…

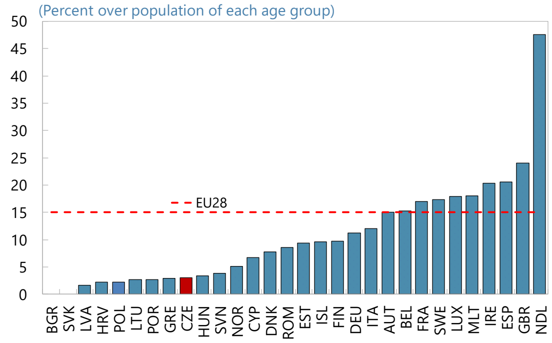
Maternal Employment Rates by Age of Youngest Child
(Percent, 2013)



Source: OECD.

… and formal childcare for children under the age of 3 is among the lowest in the EU.

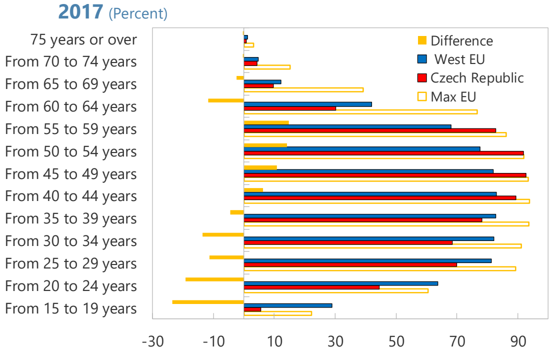
Formal Childcare Under the Age of 3, 2016 1/
(Percent over population of each age group)



Source: Eurostat.
1/ 2012 data for Lithuania.

Young Czech women do not work as much as young Western EU women, but middle aged Czech women work more than middle-aged Western EU women.

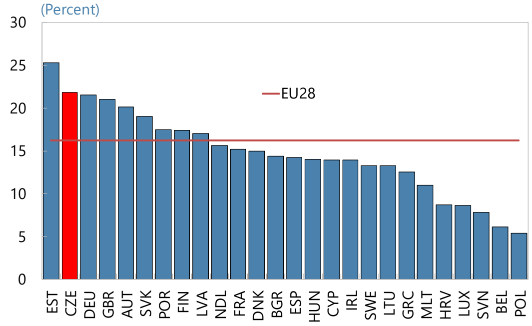
Female Labor Force Participation Rate by Age Group, 2017 (Percent)



Sources: Eurostat

The gender pay gap is relatively large.

Gender Pay Gap, Unadjusted, 2016 1/
(Percent)

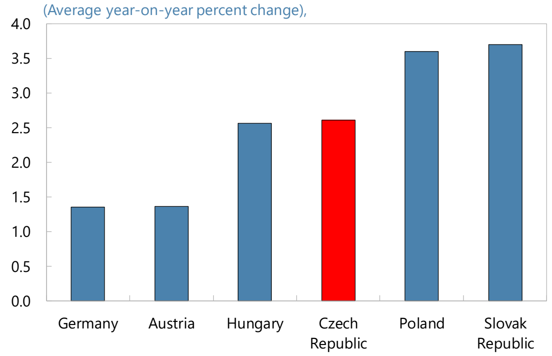


Sources: Eurostat
1/ Difference between average gross hourly earnings of male and female employees as percent of male gross earnings.

Figure 13. Czech Republic: Labor Productivity

Czech labor productivity growth has lagged peers.

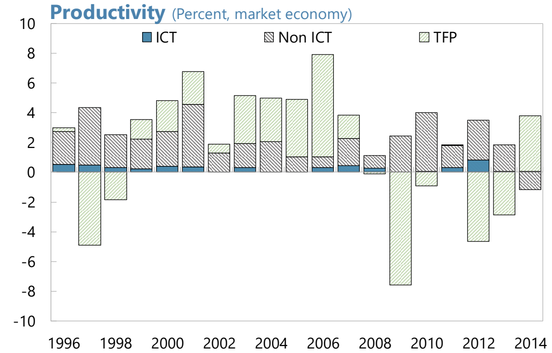
Total Real GVA per Hour Worked, 1996-2017
(Average year-on-year percent change),



Source: OECD.

Non-ICT capital deepening was the major source of labor productivity growth.

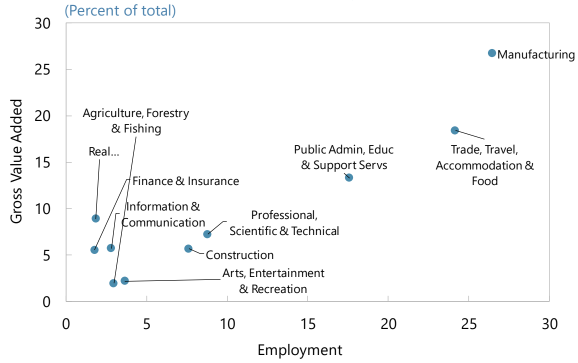
Contribution of Capital Deepening to Labor Productivity (Percent, market economy)



Source: EU KLEMS database.

Manufacturing has the highest share of employment and value added.

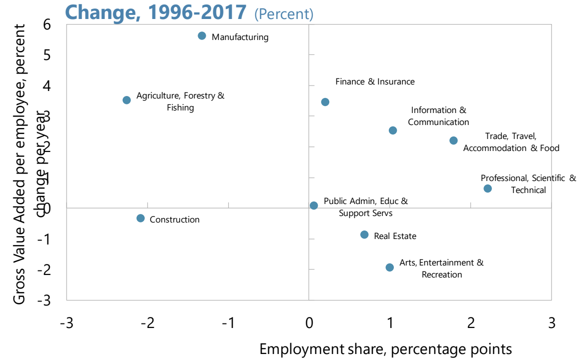
Gross Value Added and Employment Shares, 2017
(Percent of total)



Source: Haver Analytics.

Manufacturing had the highest productivity growth since 1996, but its share in employment has declined.

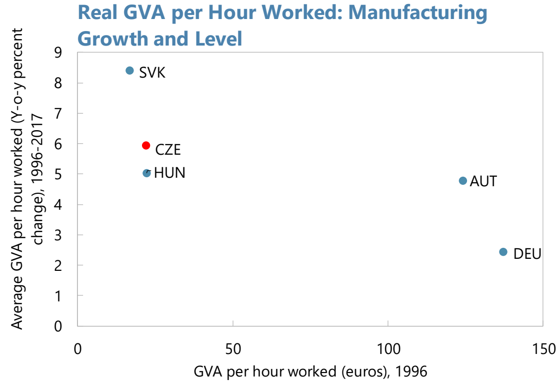
Average Labor Productivity and Employment Share Change, 1996-2017 (Percent)



Source: Haver Analytics.

Labor productivity in manufacturing is converging, but the remaining gap is large.

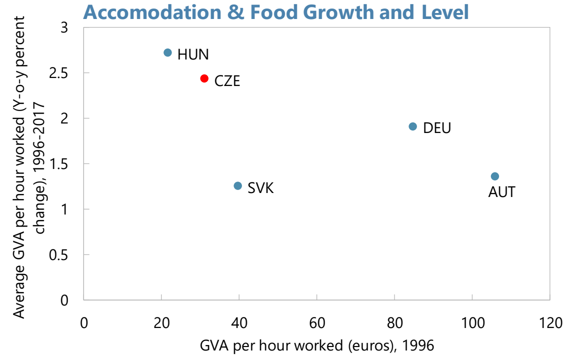
Real GVA per Hour Worked: Manufacturing Growth and Level



Source: Haver Analytics.

Productivity growth in trade, travel and food services was above those in most peer countries.

Real GVA per Hour Worked: Trade, Travel, Accomodation & Food Growth and Level



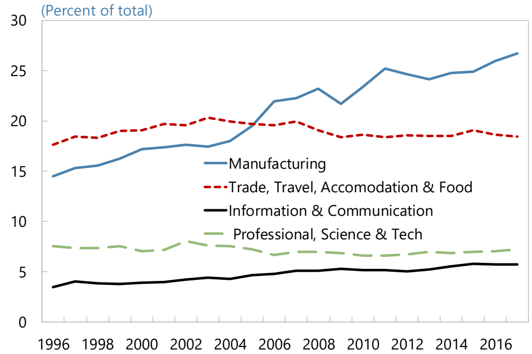
Source: Haver Analytics.

Figure 13. Czech Republic: Labor Productivity (concluded)

The share of manufacturing value added has increased...

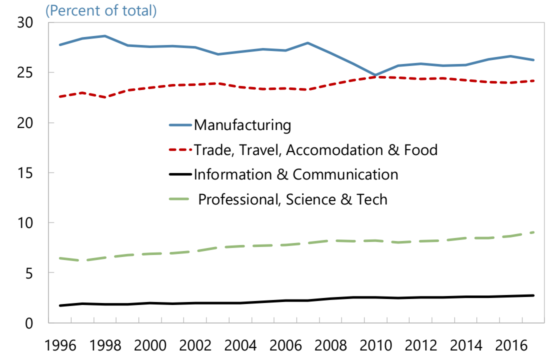
... while manufacturing's share of employment has remained stable after the crisis.

Real Gross Value Added
(Percent of total)



Source: Haver Analytics.

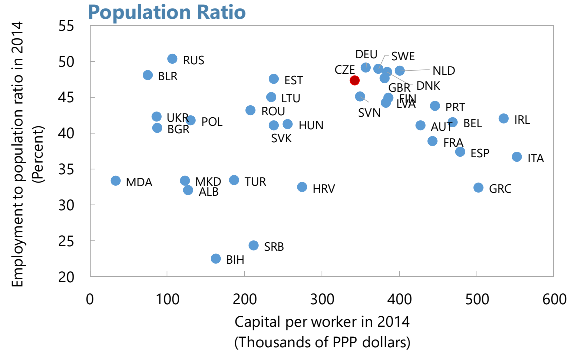
Employment
(Percent of total)



Source: Haver Analytics.

Capital stock per employee is high.

Capital per Worker vs. Employment to Population Ratio



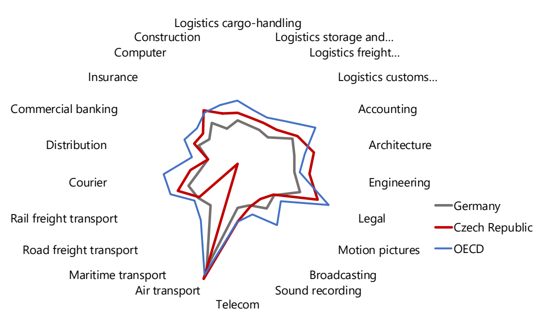
Sources: Penn World Table; and International Labour Organization.

Figure 14. Czech Republic: Trade Restrictiveness and Sectoral Regulation

The Czech Republic has lower service restrictions than the OECD average, but higher than Germany.

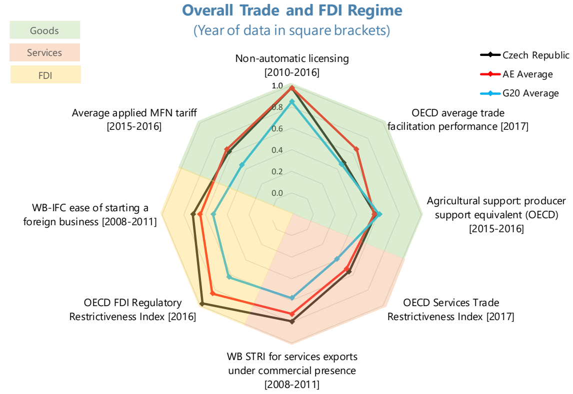
The Czech Republic scores well on trade and FDI openness.

Services Trade Restrictions



Source: OECD STRI.
Note: STRI indices take the value from 0 to 1. Complete openness to trade and investment gives a score of zero, while being completely closed to foreign services providers yields a score of one.

Overall Trade and FDI Regime
(Year of data in square brackets)



Source: Cerdeiro, D.A. and R.J. Nam. 2018. "A multidimensional approach to trade policy indicators," IMF Working Paper.

Source: Cerdeiro, D.A. and R.J. Nam. 2018. "A multidimensional approach to trade policy indicators," IMF Working Paper

Notes: The indicators reflect no judgment as to WTO compliance of underlying measures, nor whether certain measures (such as trade defense) are an appropriate response to the actions of other countries. The "ease of starting a business" indicator is based on perceptions as part of an established IFC survey process.

Sources: Tariff data are from the WTO, *World Tariff Profiles;* the import licensing measure is based on UNCTAD TRAINS and COMTRADE data; the average trade facilitation performance, agricultural support measure, Services Trade Restrictiveness Index (STRI), and FDI Restrictiveness Index are from the OECD; WB STRI is from the World Bank; the post-GFC indicators are from Global Trade Alert.

1\ Import (export) coverage ratio, except for the case of FDI (number of measures).

STAFF APPRAISAL

49. The economy has been doing very well, but supply constraints are biting. So far, there are no major imbalances, and the economy is expected to continue to perform strongly. But the working age population is shrinking and aging, and old-age dependency ratios are set to increase sharply.

50. The real exchange rate appears to remain undervalued, and likely to appreciate over the medium term. Since moving off the koruna floor early last year, the exchange rate has appreciated steadily. But the external position remains stronger than warranted by medium-term fundamentals. The projected gradual monetary tightening should help to address this.

51. The gradual approach to normalizing monetary conditions should continue, given uncertainty about the inflation outlook. The CNB should continue to communicate its readiness to raise rates earlier than currently projected if needed to fulfil its mandate.

52. More measures are needed to insure against financial vulnerabilities. Some households are highly leveraged. The best response would be limits on DTI and DSTI ratios, to complement those already in place on LTV ratios. That said, macroprudential tools do not remove the need for strong microprudential supervision, nor can they fix underlying problems caused by insufficient supply and tax policies that boost demand for real estate.

53. Fiscal policy should avoid procyclicality, address long-run spending issues, and set incentives for the best use of resources. Some proposals—such as extra spending on education and infrastructure—could boost productivity, but care is needed that they do not add to the pressure the economy is already experiencing to meet demand. Challenges to the budget will increase over the longer term as the population ages. Taxes and spending should be reviewed, particularly grants and tax concessions, tax expenditures that can affect incentives to work, property taxation, and the proposed changes to personal income tax and VAT.

54. Structural policies can contribute by facilitating higher productivity. To this end, a single plan for public infrastructure, an enhanced framework for life-long learning, and easier planning processes would be important contributions.

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

Table 1. Czech Republic: Selected Economic Indicators, 2013–23
(Annual percentage change, unless noted otherwise)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
						Staff projections					
NATIONAL ACCOUNTS											
Real GDP (expenditure)	-0.5	2.7	5.3	2.6	4.4	3.7	3.2	2.5	2.5	2.5	2.5
Domestic demand	-0.6	3.4	5.9	1.5	3.7	4.0	3.7	3.1	3.1	3.1	3.1
Consumption	1.1	1.6	3.2	3.1	3.3	3.5	3.4	2.7	2.7	2.7	2.7
Public	2.5	1.1	1.9	2.0	1.5	2.0	2.5	2.0	2.0	2.0	2.0
Private	0.5	1.8	3.7	3.6	4.0	4.0	3.7	3.0	3.0	3.0	3.0
Investment	-5.1	8.6	13.0	-2.3	4.7	5.5	4.5	4.0	4.0	4.0	4.0
Exports	0.2	8.7	6.0	4.5	6.5	5.5	4.5	4.0	4.0	4.0	4.0
Imports	0.1	10.1	6.8	3.4	5.8	6.2	5.2	4.8	4.8	4.8	4.8
Contribution to GDP											
Domestic demand	-0.6	3.1	5.5	1.5	3.5	3.9	3.5	2.9	2.9	3.0	3.0
Net exports	0.1	-0.4	-0.2	1.1	0.9	-0.2	-0.3	-0.4	-0.4	-0.5	-0.5
Investment (percent of GDP)	25.1	25.1	26.5	25.0	25.2	25.7	25.7	25.9	26.0	26.2	26.4
Gross domestic investments (percent of GDP)	24.7	25.9	28.0	26.3	26.4	26.9	26.8	26.9	27.0	27.2	27.4
Gross national savings (percent of GDP)	24.1	26.1	28.2	27.9	27.5	26.7	26.3	26.2	26.0	25.8	25.5
LABOR MARKET											
Employment	1.0	0.8	1.4	1.9	1.6	0.9	-0.7	-0.6	-0.6	-0.3	-0.3
Total labor compensation	0.7	3.5	5.0	5.9	8.3	8.2	6.3	4.4	4.4	4.3	4.2
Unemployment rate (in percent)	6.9	6.1	5.0	3.9	2.9	2.5	3.0	3.2	3.5	3.5	3.5
PRICES											
Consumer prices (average)	1.4	0.3	0.3	0.7	2.4	2.3	2.3	2.0	2.0	2.0	2.0
Consumer prices (end-of-period)	1.4	0.1	0.0	2.0	2.4	2.7	2.1	2.0	2.0	2.0	2.0
Producer price index (average)	0.8	-0.7	-3.2	-3.2	1.8	...	...	...	...	...	...
MACRO-FINANCIAL											
Money and credit (end of year, percent change)											
Broad money (M3)	5.8	5.9	8.0	6.5	10.4						
Private sector credit	3.7	3.6	6.5	7.8	5.9						
Interest rates (in percent, year average)											
Three-month interbank rate	0.5	0.4	0.3	0.3	0.4	...	...	...	...	...	...
Ten-year government bond	2.1	1.6	0.6	0.4	1.0	...	...	...	...	...	...
Exchange rate											
Nominal effective exchange rate (index, 2005=100)	116.7	111.5	110.1	112.9	117.1	...	...	...	...	...	...
Real effective exchange rate (index, CPI-based; 2005=100)	116.3	110.1	108.2	110.7	115.3	...	...	...	...	...	...
PUBLIC FINANCE (percent of GDP)											
General government revenue	41.4	40.3	41.1	40.2	40.4	41.5	41.7	41.7	41.6	41.6	41.6
General government expenditure	42.6	42.4	41.7	39.4	38.8	40.0	40.6	40.8	40.6	40.6	40.6
Net lending / Overall balance	-1.2	-2.1	-0.6	0.7	1.6	1.5	1.1	0.8	1.0	1.0	1.0
Primary balance	-0.2	-1.0	0.3	1.5	2.2	2.2	1.7	1.5	1.6	1.6	1.5
Structural balance (percent of potential GDP)	0.2	-0.9	-0.5	0.9	1.2	1.0	0.6	0.5	0.8	0.9	1.0
General government debt	44.9	42.2	40.0	36.8	34.6	33.1	31.7	30.8	28.5	26.3	24.3
BALANCE OF PAYMENTS (percent of GDP)											
Trade balance (goods and services)	5.8	6.4	5.8	7.4	7.2	5.6	5.2	4.9	4.6	4.1	3.5
Current account balance	-0.5	0.2	0.2	1.6	1.1	-0.2	-0.5	-0.7	-1.0	-1.4	-1.9
Gross international reserves (billions of euros)	40.8	44.9	59.2	81.3	123.4	123.3	122.6	122.2	121.9	121.6	121.1
(in months of imports of goods and services)	4.5	4.1	5.6	7.7	10.8	9.7	8.5	7.8	7.2	6.6	6.1
(in percent of short term debt, remaining maturity)	103.1	88.0	105.6	121.2	119.8	120.0	117.9	115.3	112.0	108.0	103.1
MEMORANDUM ITEMS											
Nominal GDP (USD billions)	209.4	207.8	186.8	195.3	213.7	250.9	276.9	295.8	314.4	333.0	351.5
Population (millions)	10.5	10.5	10.5	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.7
GDP per capita (USD)	19,913	19,769	17,729	18,506	20,201	23,690	26,106	27,860	29,571	31,288	33,000
Real GDP per capita	-0.6	2.8	5.1	2.4	4.2	3.6	3.1	2.4	2.4	2.4	2.4
Output gap (percent of potential output)	-4.3	-3.0	-0.1	-0.2	1.2	1.5	1.6	1.2	0.7	0.4	0.2

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, 2013–23
(Percent of GDP)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
						Staff Projections					
Current account balance	-0.5	0.2	0.2	1.6	1.1	-0.2	-0.5	-0.7	-1.0	-1.4	-1.9
Trade balance	4.1	5.1	4.1	5.1	4.8	3.4	3.1	2.8	2.6	2.2	1.7
Exports	65.4	70.5	68.6	66.9	66.8	65.4	64.9	64.5	64.4	63.8	63.1
Imports	61.4	65.4	64.5	61.7	62.1	62.0	61.8	61.6	61.8	61.7	61.4
Nonfactor services	1.7	1.3	1.7	2.3	2.4	2.2	2.1	2.0	2.0	1.9	1.8
Receipts	11.5	12.1	12.2	12.4	12.4	12.2	12.1	12.0	12.0	11.9	11.8
Payments	9.7	10.8	10.5	10.2	10.0	10.0	10.0	10.0	10.0	10.0	9.9
Factor income (net)	-6.1	-6.0	-5.5	-5.3	-5.2	-5.1	-5.1	-5.0	-5.0	-4.9	-4.9
Transfers	-0.2	-0.2	0.0	-0.6	-0.9	-0.7	-0.7	-0.6	-0.6	-0.6	-0.5
Capital account	2.0	0.7	2.2	1.2	1.2	1.2	0.9	0.9	0.9	1.0	1.1
Errors and omissions	0.2	0.5	1.4	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial account (change in stocks, + = increase)	1.7	1.5	3.8	2.4	2.3	1.0	0.4	0.1	-0.2	-0.4	-0.8
Direct investment, net	0.2	-1.9	1.1	-3.9	-2.7	-1.7	-1.7	-1.7	-1.6	-1.6	-1.6
Portfolio investment, net	-2.3	2.1	-3.6	-3.6	-5.3	0.9	1.3	1.3	1.3	1.3	1.4
Other investment and derivatives, net	-0.8	-0.5	-1.3	-2.1	-14.1	2.7	2.3	1.9	1.5	1.1	0.8
Reserve assets	4.6	1.7	7.6	11.8	24.7	-0.9	-1.5	-1.4	-1.3	-1.3	-1.3
Memorandum items											
Gross official reserves (billions of euros)	40.8	44.9	59.2	81.3	123.4	123.3	122.6	122.2	121.9	121.6	121.1
in months of the current year's imports	4.5	4.1	5.6	7.7	10.8	9.7	8.5	7.8	7.2	6.6	6.1
as a ratio to the short-term debt	103.1	88.0	105.6	121.2	119.8	120.0	117.9	115.3	112.0	108.0	103.1
External debt, percent of GDP	63.2	68.0	68.5	73.3	90.5	80.5	71.8	67.4	63.7	60.8	58.3

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

Table 3. Czech Republic: General Government Operations, 2013–23

(Percent of GDP)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
						Staff Projections					
Revenue	**41.4**	**40.3**	**41.1**	**40.2**	**40.4**	**41.4**	**41.5**	**41.5**	**41.5**	**41.5**	**41.5**
Taxes	19.9	19.1	19.5	19.9	20.2	20.3	20.4	20.3	20.3	20.3	20.3
Personal income tax	3.7	3.7	3.6	3.8	4.0	4.2	4.2	4.2	4.2	4.2	4.2
Corporate income tax	3.2	3.3	3.4	3.5	3.4	3.5	3.5	3.5	3.5	3.5	3.5
VAT	7.4	7.4	7.3	7.4	7.7	7.9	7.9	8.0	8.0	8.1	8.2
Excise	3.7	2.9	3.3	3.3	3.7	3.5	3.4	3.3	3.3	3.2	3.1
Other taxes	1.9	1.8	1.9	1.8	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Social contributions	14.8	14.6	14.4	14.7	15.0	15.7	15.9	15.9	15.9	15.9	15.9
Capital and other current transfers and subsidies	2.1	2.2	3.0	1.5	1.4	1.7	1.7	1.8	1.8	1.8	1.8
Other revenue	4.6	4.4	4.2	4.1	3.8	3.7	3.6	3.6	3.6	3.6	3.6
Property income	0.9	0.8	0.8	0.8	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Sales of goods and services	3.7	3.5	3.4	3.3	3.2	3.1	3.0	3.0	3.0	3.0	3.0
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	**42.6**	**42.4**	**41.7**	**39.4**	**38.8**	**39.8**	**40.4**	**40.6**	**40.5**	**40.5**	**40.5**
Expense	**38.9**	**38.1**	**36.6**	**36.2**	**35.5**	**36.1**	**36.7**	**36.9**	**36.8**	**36.8**	**36.8**
Compensation of employees	8.9	8.8	8.7	8.8	9.1	9.4	9.8	9.9	10.0	10.0	10.0
Use of goods and services	6.6	6.4	6.2	6.1	5.8	5.8	5.8	5.8	5.8	5.8	5.8
Interest	1.3	1.3	1.1	0.9	0.7	0.8	0.7	0.7	0.7	0.7	0.6
Subsidies	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Grants	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Social benefits	16.5	16.1	15.4	15.3	14.9	15.2	15.5	15.6	15.4	15.5	15.5
Other expenses	2.6	2.8	2.6	2.6	2.4	2.5	2.3	2.3	2.3	2.3	2.3
Net acquisition of nonfinancial assets	**3.7**	**4.1**	**5.1**	**3.3**	**3.3**	**3.7**	**3.7**	**3.7**	**3.7**	**3.7**	**3.7**
Gross Operating Balance	**2.5**	**2.2**	**4.5**	**0.7**	**4.9**	**5.3**	**4.9**	**4.6**	**4.7**	**4.7**	**4.7**
Net lending/borrowing (overall balance)	**-1.2**	**-2.1**	**-0.6**	**0.7**	**1.6**	**1.6**	**1.2**	**0.9**	**1.0**	**1.0**	**1.0**
Net financial transactions	**-1.1**	**-2.1**	**-0.6**	**-0.5**	**1.6**	**1.6**	**1.2**	**0.9**	**1.0**	**1.0**	**1.0**
Net acquisition of financial assets	**-0.5**	**-2.4**	**0.3**	**-1.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Net incurrence of liabilities	**0.6**	**-0.4**	**0.9**	**-0.7**	**-1.6**	**-1.6**	**-1.2**	**-0.9**	**-1.0**	**-1.0**	**-1.0**
Adjustment and statistical discrepancies 1/	*-0.2*	*-0.1*	*0.0*	*1.2*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Memorandum item:											
General government debt	44.9	42.2	40.0	36.8	34.6	32.8	31.3	30.4	28.0	25.9	23.9
Primary balance	-0.2	-1.0	0.3	1.5	2.2	2.3	1.8	1.5	1.6	1.5	1.5
Structural balance 2/	0.2	-0.9	-0.5	0.9	1.2	1.0	0.6	0.6	0.8	0.9	1.0
Cyclically adjusted primary balance	1.3	-0.1	0.3	1.6	1.9	1.8	1.3	1.2	1.4	1.4	1.5
Change in cyclically adjusted primary balance	3.4	-1.4	0.4	1.3	0.3	-0.1	-0.5	-0.1	0.2	0.1	0.0
Output gap	-4.3	-3.0	-0.1	-0.2	1.2	1.5	1.6	1.2	0.7	0.4	0.2
Nominal GDP (billions of Koruny)	4,098	4,314	4,596	4,773	5,055	5,288	5,563	5,809	6,064	6,319	6,581

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, 2013–23

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
						Staff projections					
Real sector											
	(Annual growth rates, percent, unless otherwise noted)										
Real GDP	-0.5	2.7	5.3	2.6	4.4	3.7	3.2	2.5	2.5	2.5	2.5
Private consumption	0.5	1.8	3.7	3.6	4.0	4.0	3.7	3.0	3.0	3.0	3.0
Public consumption	2.5	1.1	1.9	2.0	1.5	2.0	2.5	2.0	2.0	2.0	2.0
Investment	-5.1	8.6	13.0	-2.3	4.7	5.5	4.5	4.0	4.0	4.0	4.0
Fixed investment	-2.5	3.9	10.2	-2.3	5.4	5.5	4.5	4.0	4.0	4.0	4.0
Exports, goods and services	0.2	8.7	6.0	4.5	6.5	5.5	4.5	4.0	4.0	4.0	4.0
Imports, goods and services	0.1	10.1	6.8	3.4	5.8	6.2	5.2	4.8	4.8	4.8	4.8
contribution of net exports (percent)	0.1	-0.4	-0.2	1.1	0.9	-0.2	-0.3	-0.4	-0.4	-0.5	-0.5
Inflation (CPI, percent)	1.4	0.3	0.3	0.7	2.4	2.3	2.3	2.0	2.0	2.0	2.0
Unemployment (percent of labor force)	6.9	6.1	5.0	3.9	2.9	2.5	3.0	3.2	3.5	3.5	3.5
Output gap 1/	-4.3	-3.0	-0.1	-0.2	1.2	1.5	1.6	1.2	0.7	0.4	0.2
Gross domestic savings (in percent of GDP)	24.1	26.1	28.2	27.9	27.5	26.7	26.3	26.2	26.0	25.8	25.5
Public	13.1	12.4	13.1	13.8	14.6	15.1	15.7	15.8	16.2	16.5	16.8
Private	11.1	13.6	15.1	14.1	12.8	11.5	10.6	10.4	9.8	9.3	8.7
Gross capital formation (in percent of GDP)	24.7	25.9	28.0	26.3	26.4	26.9	26.8	26.9	27.0	27.2	27.4
Balance of payments											
Current account balance	-0.5	0.2	0.2	1.6	1.1	-0.2	-0.5	-0.7	-1.0	-1.4	-1.9
Trade balance	4.1	5.1	4.1	5.1	4.8	3.4	3.1	2.8	2.6	2.2	1.7
Services balance	1.7	1.3	1.7	2.3	2.4	2.2	2.1	2.0	2.0	1.9	1.8
Net factor income	-6.1	-6.0	-5.5	-5.3	-5.2	-5.1	-5.1	-5.0	-5.0	-4.9	-4.9
Current transfers	-0.2	-0.2	0.0	-0.6	-0.9	-0.7	-0.7	-0.6	-0.6	-0.6	-0.5
Capital account balance	2.0	0.7	2.2	1.2	1.2	1.2	0.9	0.9	0.9	1.0	1.1
Errors and omissions, net	0.2	0.5	1.4	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial account balance (change in stocks, + = increase)	1.7	1.5	3.8	2.4	2.3	1.0	0.4	0.1	-0.2	-0.4	-0.8
Direct investment, net	0.2	-1.9	1.1	-3.9	-2.7	-1.7	-1.7	-1.7	-1.6	-1.6	-1.6
Portfolio investment, net	-2.3	2.1	-3.6	-3.6	-5.3	0.9	1.3	1.3	1.3	1.3	1.4
Other investment and derivatives, net	-0.8	-0.5	-1.3	-2.1	-14.1	2.7	2.3	1.9	1.5	1.1	0.8
Reserve assets	4.6	1.7	7.6	11.8	24.7	-0.9	-1.5	-1.4	-1.3	-1.3	-1.3

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, 2010–17
(In percent, unless indicated otherwise)

	2010	2011	2012	2013	2014	2015	2016	2017
Capital								
Regulatory capital to risk-weighted assets	15.3	15.0	15.6	16.5	17.0	17.6	17.7	18.1
Regulatory Tier 1 capital to risk-weighted assets	13.9	13.9	15.2	16.2	16.5	17.1	17.1	17.5
Capital to assets	6.5	6.5	6.9	7.2	7.3	7.5	7.3	6.5
Profitability								
Return on assets	1.3	1.2	1.4	1.2	1.2	1.2	1.2	1.1
Return on equity	19.7	18.3	20.4	16.2	16.5	16.1	16.4	17.2
Interest margin to gross income	63.1	64.5	60.7	59.9	61.8	60.8	59.0	59.2
Noninterest expenses to gross income	46.8	47.2	46.9	46.8	47.2	47.5	46.9	47.1
Trading income to total income	4.6	4.1	8.9	8.7	6.3	9.9	11.3	12.7
Personnel expenses to noninterest expenses	39.7	41.0	41.2	41.4	40.1	40.9	42.5	43.4
Liquidity								
Liquid assets to total assets	29.4	29.9	32.6	33.8	30.5	31.5	29.1	20.4
Liquid assets to short-term liabilities	71.1	72.2	71.4	67.4	64.9	61.7	53.8	39.8
Customer deposits to total (noninterbank) loans	129.6	126.0	133.1	128.3	123.2	120.9	121.9	128.3
Foreign-currency-denominated loans to total loans	21.6	22.2	20.9	29.1	…	…	…	…
Foreign-currency-denominated liabilities to total liabilities	14.3	15.0	14.1	21.5	…	…	…	…
Sensitivity to market risk								
Net open position in foreign exchange to capital	0.4	-3.2	5.1	1.2	1.2	-0.3	0.4	0.7
Gross asset position in financial derivatives to capital	43.2	57.5	46.5	29.5	37.5	27.2	25.3	19.4
Gross liability position in financial derivatives to capital	41.2	53.5	40.5	29.7	34.3	24.7	22.6	19.6
Net open position in equities to capital	8.1	9.3	7.8	6.2	…	…	…	…
Memo item								
Nonperforming loans to total gross loans	5.4	5.2	5.2	5.2	5.6	5.5	4.6	3.7

Source: IMF, FSI database.

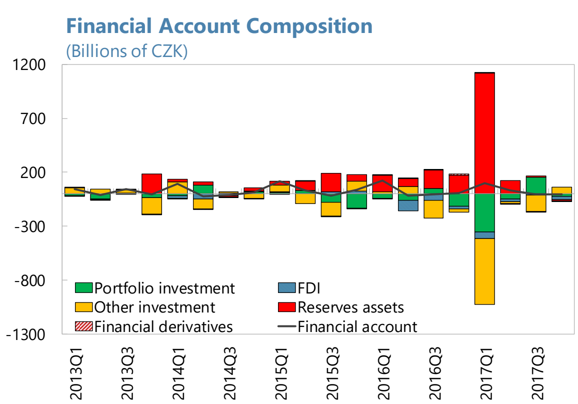
Annex I. External Sector Assessment

The external position in 2017 was stronger than the level consistent with medium-term fundamentals and desirable policies. Staff evaluates the real exchange rate to have been undervalued and likely to appreciate over the medium term. Continued but gradual monetary policy tightening consistent with equilibrium real exchange rate appreciation is appropriate.

1. **The exchange rate is appreciating in line with fundamentals, but the economy remains competitive** (Figure 3). As expected, the CPI-based REER appreciated by 7 percent and the ULC-based measure by 7.5 percent in 2017. The appreciation was slightly above that of competitors; nevertheless, Czech products did not lose market share and the share of Czech exports in world imports remained stable.

2. **The current account posted a small surplus, and both goods and services trade surpluses remained strong** (Table 2). The goods trade balance slightly declined but was compensated by the higher surplus in services trade. The primary income deficit, driven by FDI returns, was -5.2 percent of GDP.

3. **Inflows in the run up to the removal of the koruna floor have mostly remained.** The inflows were channeled into government bonds and commercial bank deposits, and were associated with a large increase in central bank reserve assets. Since the exit, some non-resident investors have left the government bond market, but other investment (which includes non-resident bank deposits in commercial banks) has recorded additional small inflows.



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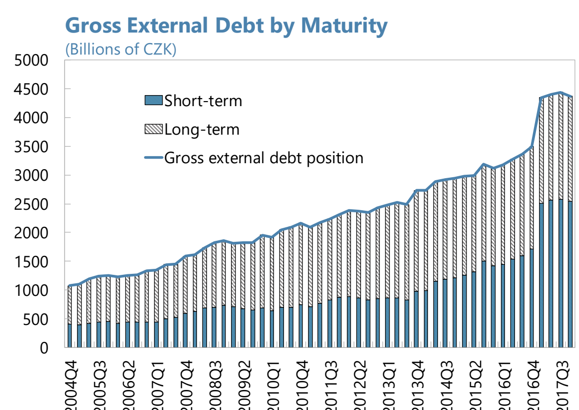
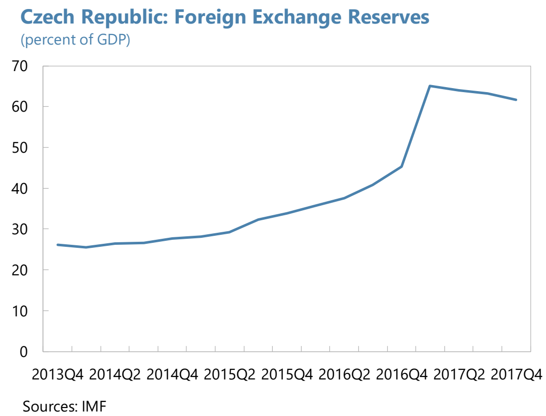
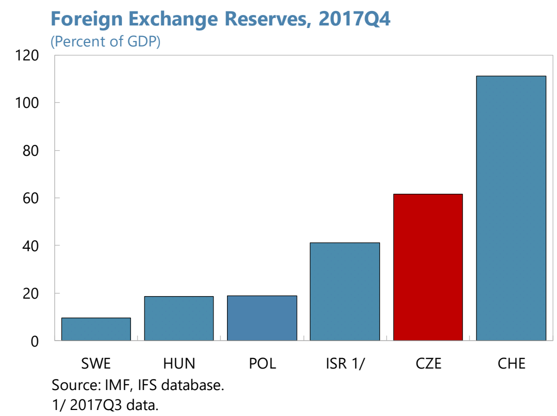


Source: Czech National Bank.

4. **The external position is stable.** The NIIP has slightly declined since the exit to -26 percent of GDP, of which 62 percentage points are official reserves. (The NIIP excluding FX reserves is -89 percent of GDP, of which -55 percent of GDP is from FDI and -19 percent of GDP is from other investment, a legacy of the FX floor.) The external debt of households, government, and non-financial corporations has declined as a percent of GDP (Figure 3). The external debt of the banking sector increased in the run-up to the FX exit in 2017: Q1, with a large inflow of non-residents deposits, and has remained stable since then.

5. Foreign exchange reserves are substantial. Foreign exchange interventions by the CNB during the three years of the koruna floor resulted in a cumulative increase in reserves, with a significant jump in the months before the end of the FX floor commitment in April 2017. As a share of GDP, the level of reserves is elevated, but has been declining since the FX floor exit. The CNB does not regard balance sheet losses from revaluations of FX reserves as a threat to its independence.





6. EBA model evaluations diverge:

- The EBA Current Account (CA) model—on which staff puts the most weight for the Czech Republic—indicates a 7 percent undervaluation—the actual CA exceeds the norm by 3.2 percent of GDP. Although the overall result points to the external position being stronger than justified by macroeconomic variables, a policy gap of 0.6 percent suggests that macroeconomic policies are broadly appropriate.

- The External Sustainability analysis shows the REER to be close to equilibrium, with the gap estimated at 1 percent of the equilibrium exchange rate and -0.4 percent of GDP for the CA.

- The REER model indicates 11 and 12.4 percent overvaluation for the REER index and level based methods correspondingly. However, staff finds the latter result problematic, in part because it is at odds with the other two modules, has large residuals, and does not appear to be supported by other indicators, such as recent strong export performance.

EBA Assessment Results

EBA model	Total gap	Assessment
CA	CA gap: +3.2 percent of GDP Corresponding REER gap: -7 percent	Stronger than warranted by fundamentals Undervalued.
REER level	+12.4 percent	Overvalued
REER index	+ 11 percent	Overvalued
External sustainability analysis	CA gap: -0.4 percent of GDP Corresponding REER gap: +1 percent.	At equilibrium

7. **Overall, staff assesses the external position in 2017 to have been stronger than warranted by medium-term fundamentals and desirable policies.** For the reasons noted above, staff places the most weight on the CA model. Consistent with this, staff estimates the CA gap in 2017 to have been 3 percent of GDP and the REER to have been undervalued by 7 percent. The current policy mix, which relies more on monetary tightening rather than fiscal tightening, is consistent with unwinding this undervaluation.

8. **Some REER appreciation is likely 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. Models with tradeables/non-tradeables sectors and/or rich preference specifications predict that 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.
- Demand side considerations also suggest appreciation: nonservices are luxuries; higher incomes generate relatively more demand for (non-tradeable) services than (tradeable) goods, driving up the real exchange rate.

[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).

Annex II. Risk Assessment Matrix[1/]

Source	Likelihood of Risk	Time Horizon	Expected Impact	Policy Response
External Risks				
Retreat from cross-border integration. Fraying consensus about the benefits of globalization leads to protectionism and economic isolationism, resulting in reduced global and regional policy and regulatory collaboration with negative consequences for trade, capital and labor flows, sentiment, and growth.	**Medium**	**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.** Two-sided risks to U.S. growth with uncertainties about the positive short-term impact of the tax bill on growth and the extent of potential medium-term adjustment to offset its fiscal costs; uncertainty associated with negotiating post-Brexit arrangements and NAFTA and associated market fragmentation risks; and evolving political processes, including elections in several large economies, weigh on the whole on global growth.	**Medium**	**Short to medium term**	**Medium** Border closures and restrictions on the free movement of goods, services, and labor weigh on trade.	Maintaining accommodative monetary conditions, while loosening fiscal stance
Weaker-than-expected global growth: - **Structurally weak growth in key advanced economies**: Low productivity growth (U.S., euro area and Japan), high debt, and failure to fully address crisis legacies by undertaking structural reforms amidst persistently low inflation (euro area and Japan) undermine medium-term growth. - **Significant China slowdown and its spillovers**: While ongoing efforts by the Chinese authorities to "de-risk" the financial system are welcome, too fast an adjustment and improper sequencing of actions may adversely affect near-term growth (low likelihood). Over the medium term, overly ambitious growth targets, including by over reliance on credit stimulus and investment, lead to unsustainable policies, reducing fiscal space, further increasing financial imbalances. A sharp adjustment would weaken domestic demand, with adverse international spillovers, including a pullback in capital flows to EMs (medium likelihood).	**High** **Low to medium**	**Medium term** **Short to medium 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. **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.
Financial conditions: - **Tighter global financial conditions**. Against the backdrop of continued monetary policy normalization and increasingly stretched valuations across asset classes, an abrupt change in global risk appetite (e.g., due to higher-than-expected inflation in the U.S) could lead to sudden, sharp increases in interest rates and associated tightening of financial conditions. Higher debt service and refinancing risks could stress leveraged firms, households, and vulnerable sovereigns, including through capital account pressures in some cases. - **Further pressure on traditional bank business models**: Legacy problems, and potential competition from non-banks curtail banks' profitability globally. Loss of confidence if such profitability challenges are not addressed could increase the risk of distress at one or more major banks with possible knock-on effects on the broader financial sector and for sovereign yields in vulnerable economies. Migration of activities outside of the traditional banking sector, including provision of financial services by fintech intermediaries, raises competitive pressures on traditional banks, making risk monitoring and mitigation more difficult.	**High** **Medium**	**Short to medium term** **Medium term**	**Low/Medium** The banking system is well capitalized, with stable funding. Recent stress tests by the CNB indicate that the banking sector is resilient overall, but risks to the banking system would increase if the share of real estate loans in total loans were to increase further and risk weights were to fall. **Low** Czech banks are funded mainly from deposits. Net interest margins, though slightly lower than previously, remain high, and returns are relatively high.	Maintaining accommodative monetary conditions would buffer shocks.
Lower energy prices, driven by weakening OPEC/Russia cartel cohesion and/or recovery of oil production in the African continent.	**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.

Source	Likelihood of Risk	Time Horizon	Expected Impact	Policy Response
Domestic Risks				
Financial stability risks arising from rapid growth in lending, especially to real estate	**Medium**	**Short to medium term**	**Medium** Some households appear overextended and vulnerable to house price, interest rate, or income shocks.	Powers of direction for borrower-based macroprudential measures are needed to strengthen the demand-side tools to implement macroprudential policy Access to more granular data on real estate, individual loans, and household debt would help back supervision. Structural and fiscal policies should help reduce distortions.
Inflationary pressures different than expected	**Medium**	**Short term**	**Medium** The inflation outlook is particularly uncertain, as the outcome will depend on which of domestic inflationary and imported disinflationary pressures dominate.	Altered monetary stance
Uncertainty about near-term and potential growth	**Medium**	**Short and long term**	**Medium** Declining working age population means that sustaining robust GDP growth requires acceleration in productivity growth. Firms might substitute more than anticipated toward capital to address labor shortages.	Fiscal and structural policies could reduce distortions and boost the capacity of the economy.
Political uncertainty	**Medium**	**Short term**	**Low** The domestic political situation remains in flux, potentially delaying structural reforms.	Maintain sound macroeconomic policies during transition.

[1/] 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 III. Macroprudential Policy Measures

Type of Measure	Target and Nature of Measure
Capital Requirements	**Countercyclical capital buffer:** Set at 0.5 percent of total risk exposures (Jan 2017). Increased to 1 percent (May 2017) with effect from July 2018. In December 2017 the CNB again increased the countercyclical capital buffer rate to 1.25 percent, effective from 1 January 2019. **Conservation buffer:** A capital conservation buffer of 2.5 percent was implemented in 2014. **Systemic risk buffer:** Buffer on 5 banks in the range of 1–3 percent implemented in 2017.
Mortgage Lending Ratios	**Loan-to-value (LTV) recommendations (Individual):** Limit LTVs on new mortgages up to 100 percent (2015: Q3 announcement and entry into effect). Tightening of LTV cap in two phases to 95 percent (effective 2016: Q4) and 90 percent (effective 2017: Q2) announced in June 2016. **LTV recommendations (Portfolio)**: Cap share of new loans with LTV between 90 and 100 percent at 10 percent (2015: Q3 announcement and entry into effect). Tightening of high-LTV range (share) in two phases to 85–95 percent (max 10 percent of loans) effective 2016: Q4; and 80–90 percent (max 15 percent of loans) effective 2017: Q2 (announced in June 2016).
Maturity	**Maximum maturity recommendations:** Term of mortgage loans should not exceed 30 years; term of unsecured consumer credit should not exceed 8 years
Other	**Servicing capacity:** Assess capacity of prospective clients to service loans, under current and adverse economic conditions **Reporting requirements:** Institutions should identify owner-occupied and buy-to-let portfolios.

Annex IV. Debt Sustainability Analysis

Public debt declined to 34.6 percent of GDP in 2017, due to an improvement in the headline balance driven by a strong cyclical position, favorable financing conditions, and improvements in revenue collection and capital underspending (notwithstanding accelerated absorption of EU funds in the fourth quarter). Public debt is projected to decline to 23.9 percent of GDP over the medium term, assuming the fiscal targets outlined in the convergence program are met and the economic recovery continues. Public debt and gross financing needs are relatively immune to interest and exchange rate shocks; a negative shock to real GDP growth is the main risk to the projections.

Baseline and Realism of Projections

1. The baseline scenario assumes small surpluses and steady growth. The fiscal stance relaxes slightly from a structural surplus of 1.2 percent in 2017 to 1.0 percent in 2018 and further to 0.6 percent in 2019. A headline surplus of 1.0 percent on of GDP on average is projected over the medium term. The short-term relaxation is mostly driven by increased government consumption, higher compensation of employees, and faster absorption of EU funds. Healthy domestic demand is projected to drive sustained growth, with real GDP well above potential at 3.5 percent of GDP in 2018. The inflation rate is projected to increase to 2.6 percent in 2018 and then settle at the 2 percent target by 2020.

2. The outlook for debt and funding needs is benign in this scenario. Staff projects a steady decline in the debt-to-GDP ratio from 34.6 percent in 2017 to 23.9 percent in 2023. The ratio is projected to decline in 2018 despite the slightly relaxed fiscal stance, as the contributions 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 5.3 percent of GDP at the end of the projection period.

Shock and Stress Tests

3. 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 (3.4 percentage point decline) hits in 2019 and 2020, with its attendant impact on the primary balance, inflation, and the real interest rate, and causes public debt to rise 2.4 percentage points to 35.2 percent of GDP and gross financing needs to increase to 8.5 percent of GDP by 2020.[1] Afterward, public debt would decline to 31.6 percent of GDP and gross financing needs would fall to 7.1 percent of GDP by 2023.

4. Other shocks are not as important. For instance, an interest rate shock in which the nominal rate increases by 280 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), slows the fall in debt to 25.5 percent of GDP by 2023. Debt remains below 30.2 percent of GDP throughout the projection period in this scenario.

[1] The shock is calibrated using historical real GDP growth data from 2008–17. 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.

Figure 1. Czech Republic: Sector Debt Sustainability Analysis (DSA)-Baseline Scenario

(in percent of GDP unless otherwise indicated)

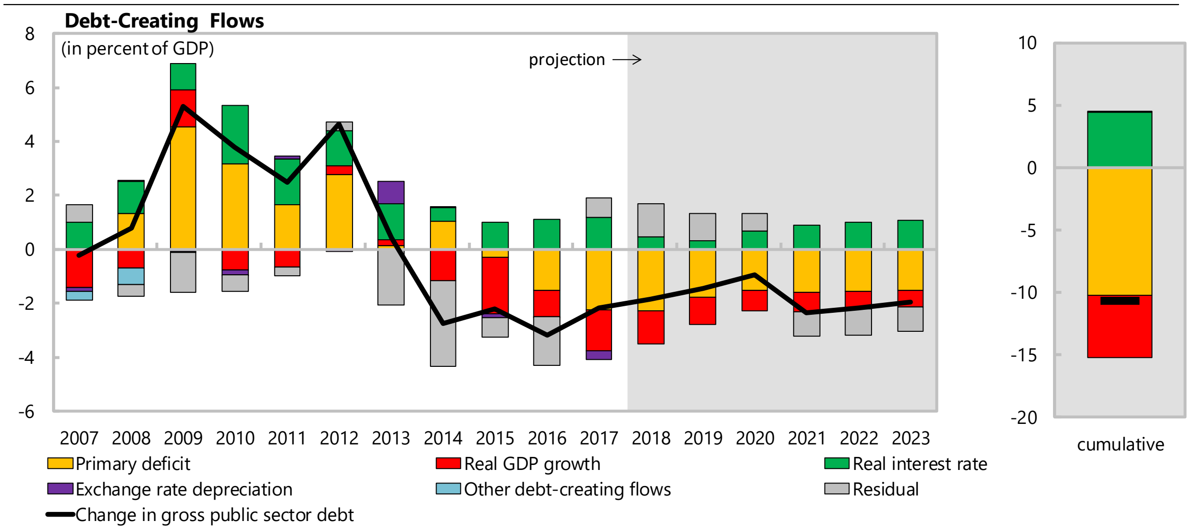
Debt, Economic and Market Indicators [1/]

	Actual			Projections					
	2007-2015 [2/]	2016	2017	2018	2019	2020	2021	2022	2023
Nominal gross public debt	37.6	36.8	34.6	32.8	31.3	30.4	28.0	25.9	23.9
Public gross financing needs	7.6	4.3	5.6	6.5	6.3	4.9	4.9	5.4	5.3
Real GDP growth (in percent)	1.6	2.6	4.4	3.7	3.2	2.5	2.5	2.5	2.5
Inflation (GDP deflator, in percent)	1.5	1.2	1.4	0.9	1.9	1.9	1.8	1.7	1.6
Nominal GDP growth (in percent)	3.1	3.9	5.9	4.6	5.2	4.4	4.4	4.2	4.1
Effective interest rate (in percent) [4/]	3.6	2.4	2.2	2.3	3.0	4.2	4.9	5.5	6.1

As of April 30, 2018		
Sovereign Spreads		
EMBIG (bp) 3/		119
5Y CDS (bp)		37
Ratings	Foreign	Local
Moody's	A1	A1
S&Ps	AA-	AA
Fitch	A+	A+

Contribution to Changes in Public Debt

	Actual			Projections							
	2007-2015	2016	2017	2018	2019	2020	2021	2022	2023	cumulative	debt-stabilizing
Change in gross public sector debt	1.4	-3.2	-2.2	-1.8	-1.4	-1.0	-2.3	-2.2	-2.0	-10.7	primary
Identified debt-creating flows	2.2	-1.4	-2.9	-3.0	-2.5	-1.6	-1.4	-1.2	-1.0	-10.8	balance [9/]
Primary deficit	1.6	-1.5	-2.2	-2.3	-1.8	-1.5	-1.6	-1.5	-1.5	-10.2	0.5
Primary (noninterest) revenue and gra	39.7	40.0	40.3	41.3	41.4	41.4	41.4	41.4	41.4	248.3	
Primary (noninterest) expenditure	41.3	38.5	38.1	39.0	39.6	39.9	39.8	39.8	39.9	238.1	
Automatic debt dynamics [5/]	0.7	0.1	-0.6	-0.8	-0.7	-0.1	0.2	0.3	0.5	-0.5	
Interest rate/growth differential [6/]	0.7	0.1	-0.3	-0.8	-0.7	-0.1	0.2	0.3	0.5	-0.5	
Of which: real interest rate	1.2	1.1	1.2	0.5	0.3	0.7	0.9	1.0	1.1	4.5	
Of which: real GDP growth	-0.5	-1.0	-1.5	-1.2	-1.0	-0.8	-0.7	-0.7	-0.6	-5.0	
Exchange rate depreciation [7/]	0.0	0.0	-0.3	…	…	…	…	…	…	…	
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 privatizatio	-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/]	-0.9	-1.8	0.7	1.2	1.0	0.6	-0.9	-1.0	-0.9	0.1	



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 - π(1+g) - g + ae(1+r)]/(1+g+π+gπ)) 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 - π (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).

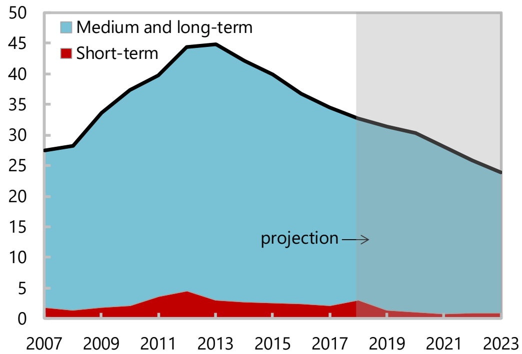
8/ Includes asset changes and interest revenues (if any). For projections, includes exchange rate changes during the projection period.

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.

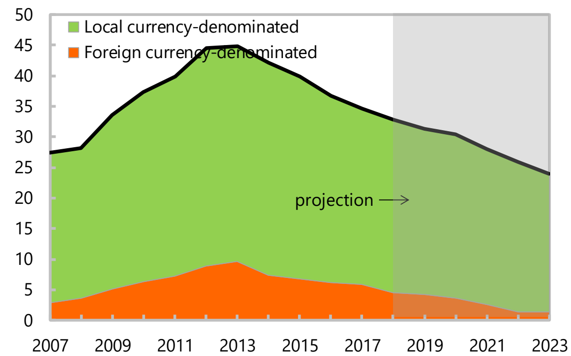
Figure 2. Czech Republic Public DSA—Composition of Public Debt and Alternative Scenarios

Composition of Public Debt

By Maturity
(in percent of GDP)



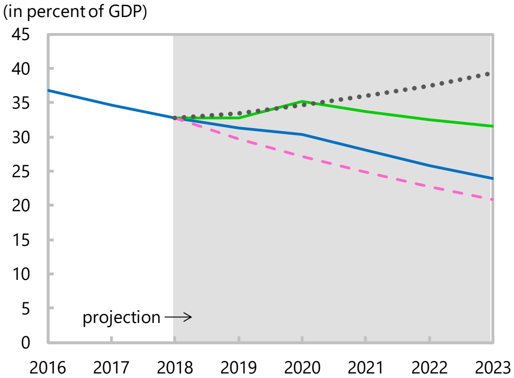
By Currency
(in percent of GDP)



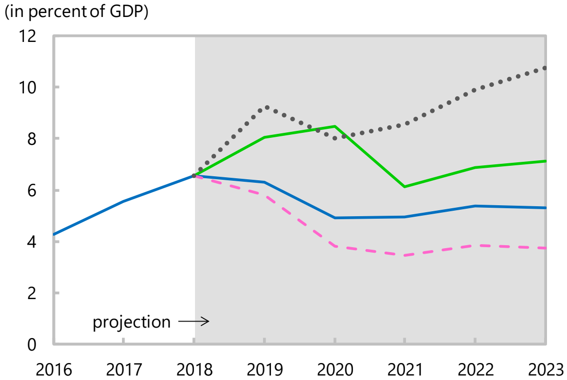
Alternative Scenarios

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	2018	2019	2020	2021	2022	2023
Real GDP growth	3.7	3.2	2.5	2.5	2.5	2.5
Inflation	0.9	1.9	1.9	1.8	1.7	1.6
Primary Balance	2.3	1.8	1.5	1.6	1.5	1.5
Effective interest rate	2.3	3.0	4.2	4.9	5.5	6.1
Constant Primary Balance Scenario						
Real GDP growth	3.7	3.2	2.5	2.5	2.5	2.5
Inflation	0.9	1.9	1.9	1.8	1.7	1.6
Primary Balance	2.3	2.3	2.3	2.3	2.3	2.3
Effective interest rate	2.3	3.0	4.1	4.9	5.4	6.1
Real GDP growth						
Real GDP growth	3.7	0.3	-0.4	2.5	2.5	2.5
Inflation	0.9	1.2	1.1	1.8	1.7	1.6
Primary Balance	2.3	0.3	-1.5	1.6	1.5	1.5
Effective interest rate	2.3	3.0	4.3	5.2	5.7	6.2

Historical Scenario	2018	2019	2020	2021	2022	2023
Real GDP growth	3.7	1.6	1.6	1.6	1.6	1.6
Inflation	0.9	1.9	1.9	1.8	1.7	1.6
Primary Balance	2.3	-1.1	-1.1	-1.1	-1.1	-1.1
Effective interest rate	2.3	3.0	4.0	4.7	5.1	5.5

Source: IMF staff.

Annex V. Proposed Changes to Taxes and Spending

The following proposals have recently been reported in the Czech press:

Income Tax	The proposed plan reduces effective tax rates of 20.1 percent and 23.4 percent (for incomes above four times the average) on the super gross wage (gross wage plus employer's health and social insurance contributions) to 19 percent and 23 percent (for incomes above four times the average) on the gross wage. The authorities estimate that this will cost 0.4 percent of GDP in 2019 per year.
VAT	VAT rate cuts on, *inter alia*, food and non-alcoholic beverages (from 15 percent to 10 percent), beer (from 21 percent to 10 percent), and water and sewage.
Parental Allowance	A hike of parental allowance to CZK 300,000 (a 36 percent jump) for a single child.
Minimum Wages	A commitment to introduce compulsory rules for minimum wage indexation.
Capital Expenditure	An increase in 2019 of CZK 21 billion in capital expenditure excluding EU funds, CZK 12 billion of which is for transport infrastructure.

Annex VI. Implementation of the 2017 Article IV Key Recommendations

	Key recommendations	Actions
Monetary	Make policy rate increases gradual and guided by the data; avoid FX interventions.	*Implemented*. The CNB has moved to gradually normalize monetary conditions. The repo rate has been raised to 0.75 percent. There have been no FX interventions since the currency floor was removed.
Macroprudential	Make LTV, DTI, and DSTI restrictions binding.	*Not implemented.* Legislation providing powers over the LTV, DTI and DSTI was voted down in the Parliament.
Fiscal	Increase public investment spending, establish a unified and transparent infrastructure plan.	*In progress*. Public investment increased in the last quarter of 2017 and is projected to accelerate this year, mainly due to increased absorption of EU funds. A National Investment Plan is expected to be finalized by the end of June.
	Improve the debt management framework	*In progress.* The debt management office has started to increase the maturities.
Structural	Boost potential growth by increasing labor market participation of certain population groups, and enhancing investment in human and physical capital.	*In progress.* Several measures were implemented, including an increase in tax deductions concerning children and child allowances, introduction of weekly paternity leave, and guaranteed placement in nursery schools for children aged 4 and above. Education funding has been changed to improve the quality of regional education, and vocational training reform aims to increase coordination with businesses and improving the skills matching. The new amendment to the Building Act simplifies the conditions for starting construction and accelerates building permit proceedings.

INTERNATIONAL MONETARY FUND

CZECH REPUBLIC

STAFF REPORT FOR THE 2018 ARTICLE IV CONSULTATION—INFORMATIONAL ANNEX

June 7, 2018

Prepared By	European Department

CONTENTS

FUND RELATIONS

(As of April 30, 2018; 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)	1,879.77	86.22
Reserve Tranche Position	300.43	13.78
Lending to the Fund		

SDR Department

	SDR Million	Percent of Quota
Net Cumulative Allocation	780.20	100.00
Holdings	457.00	58.57

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				
	2018	2019	2020	2021	2022
Principal					
Charges/Interest	2.09	2.86	2.86	2.86	2.86
Total	2.09	2.86	2.86	2.86	2.86

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. Effective April 6, 2017, the CNB removed its 3-year cap on the koruna, allowing it to appreciate beyond CZK 27.0 to the euro. Accordingly, the de facto exchange rate arrangement was reclassified to floating from stabilized, effective April 6, 2017.

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 21, 2017. The staff report and the press release were published on June 26, 2017.

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, 1991–2017

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	Monetary operations
	May 1995	Banking system reform
	May 1995	Economic research
	May 1996	Banking legislation
	April 1997	Monetary research—inflation targeting
	February–June 1999	Integrated financial sector supervision (with WB)
RES	June 1999	Inflation targeting (financed by MFD)
	September 1999	Inflation targeting (financed by MFD)
	June–August 2000	Inflation targeting (financed by MFD)
STA	February–March 2005	Money and banking statistics
	May 1993	Balance of payments
	February 1994	Government finance
	April 1994	Money and banking statistics
	November 1994	Money and banking statistics
	January–February 1999	Monetary and financial statistics
	May 2002	Implementing GFSM 2001
	February 2003	GFSM 2001 Pilot Project
	November 2006	GFSM 2001 Implementation

STATISTICAL ISSUES

I. Assessment of Data Adequacy for Surveillance
General: • Data provision is adequate for surveillance.
National Accounts: • The Czech Statistical Office (CSO) compiles and disseminates annual and quarterly national accounts on ESA2010 basis. The CSO compiles annual Supply-Use Tables (SUT) by 88 types of economic activities and 88 products, but there is room for improvements. For example, discrepancies between GDP estimates based on the production method and the expenditure method are subsumed under changes in inventories, which sometimes significantly changes the first estimates of inventories obtained directly from the surveys. In recent years, the share of non-observed economy in GDP varied from seven to eight percent.
Price Statistics: • The CSO compiles and disseminates a monthly consumer price index (CPI) using a weighting structure based on expenditure data collected during 2014. 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: • Fiscal data in the *GFSM 2014* framework is reported through the Eurostat convergence project with the IMF. 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 World Bank's 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 6, 2018)

	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. 2018	May 2018	D	M	M
Reserve/Base Money	Apr. 2018	May 2018	M	M	M
Broad Money	Apr. 2018	May 2018	M	M	M
Central Bank Balance Sheet	May 2018	May 2018	M	M	M
Consolidated Balance Sheet of the Banking System	Mar. 2018	Apr. 2018	M	M	M
Interest Rates[2/]	Current	Current	D	D	D
Consumer Price Index	Apr. 2018	May 2018	M	M	M
Revenue, Expenditure, Balance and Composition of Financing[3/] – General Government[4/]	2017 Q4	May 2018	Q	Q	Q
Revenue, Expenditure, Balance and Composition of Financing[3/]– Central Government	Mar 2018	Apr. 2018	M	M	M
Stocks of Central Government and Central Government-Guaranteed Debt[5/]	2017 Q4	May 2018	Q	Q	Q
External Current Account Balance	Mar. 2018	May 2018	M	M	M
Exports and Imports of Goods and Services	Mar. 2018	May 2018	M	M	M
GDP/GNP	2018 Q1	May 2018	Q	Q	Q
Gross External Debt	2017 Q4	Mar. 2018	Q	Q	Q
International Investment Position[6/]	2017 Q4	Mar. 2018	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 the Czech Republic and Ondra Stradal, Advisor
June 22, 2018

The Czech authorities thank staff for the constructive dialogue and their informative report and selected issues papers. The authorities broadly agree with the thrust of the staff appraisal and look forward to continuing the candid policy dialogue with the Fund.

The Czech economy is experiencing one of the best periods in its modern history, with uninterrupted growth since late 2013. Its pace peaked above annualized 5 percent in the fourth quarter of 2017 and is expected to gradually decelerate but remain well above 3 percent this year and next. The unemployment rate of 2.3 percent is the lowest in the EU, as well as among OECD countries. The inflation rate has been very close to the Czech National Bank's target of 2 percent. A budget surplus was achieved both in 2016 and 2017, and a similar outcome is expected again this year. Public debt below 35 percent of GDP is also among the lowest in the EU. The country now has the opportunity to resume sustained income convergence towards the advanced EU economies which was interrupted in the aftermath of the global financial crisis.

In November 2013, the Czech National Bank (CNB) introduced a floor for the Czech koruna exchange rate as its monetary policy instrument. The rationale was to prevent the risk of deflation in a zero-lower-bound environment where policy rates could not be lowered any further. The CNB discontinued this commitment in April 2017, and in hindsight, the timing of exit has been proven right as the accumulated domestic inflation pressures allowed lifting the interest rates off the zero lower bound, while keeping the inflation firmly within the tolerance band around the 2 percent target. The exchange rate steadily appreciated after the exit from the commitment at EUR/CZK 27.00 to approximately 25.30 in the first quarter of 2018 with low volatility. It then moderately corrected in April and May mainly due to external factors. The inflation targeting framework, which has been in place for 20 years, has consistently proven its robustness and longer-term inflation expectations are firmly anchored at the target level. In February 2018, the CNB resumed publishing the EUR/CZK exchange rate forecast consistent with its inflation forecast - an approach first introduced in 2009 and temporarily discontinued in November 2013 with the adoption of the FX commitment. This was the last step on the way back to a standard monetary policy framework and reconfirmed the CNB's position among the world's most transparent central banks.

After several months below the target, the annual inflation stood at 2.2 percent in May, slightly above the target, representing a small inflationary risk to the CNB's current forecast. The exchange rate development will be an important factor determining the future pace of monetary tightening, as the anti-inflationary effect of import prices, associated with the until recently appreciating koruna, has broadly balanced the domestic inflationary pressures generated by the buoyant economy so far. The recent weakness of the koruna exchange rate thus provides potential scope for speeding up the monetary policy normalization in comparison with the current CNB's forecast, which foresees further interest rate hikes from the turn of 2019.

The Czech authorities disagree with staff's assessment in the context of the External Sector Analysis that the Czech koruna is undervalued by 7 percent. First, Annex I to the Staff Report presents four analytical methods and only one of them (EBA CA) points to a koruna undervaluation, whereas two other, indicating a double-digit overvaluation, receive no weight in staff's interpretation. Given these outcomes, it would seem more appropriate to present an interval, rather than a point valuation, as the resulting assessment creates a false sense of precision, and has a bearing on the policy recommendations in the main text of the staff report, where nuances are not discussed. Second, the assessment is not consistent in time. Last year, the EBA CA method resulted in a 4 percent undervaluation. Since then, the real appreciation of the koruna in real effective terms amounted to 8 percent. Unless the staff assumes a double-digit annual pace of real equilibrium exchange rate appreciation, this shows that last year's assessment must have been revised significantly. The authorities would have expected that such a revision in the estimate and its main sources are properly explained to facilitate policy discussions. In particular, in line with staff guidance, the authorities would have preferred staff to analyze and explain the contributions of fundamentals (e.g., prospective growth, demographics) and policies (e.g., fiscal balance, social spending) to the external position, regardless of the methodologies used. Lastly, the outcome of the EBA CA estimates, implying that the Czech economy at its current stage of development should be running a 2 percent current account deficit which would be consistent with the desirable policies, is itself debatable. The CNB considers the koruna's exchange rate to be close to its equilibrium level, based on its own estimates using the behavioral equilibrium exchange rate (BEER) and fundamental equilibrium exchange rate (FEER) models.

In sum, the central bank would prefer to tighten the monetary conditions via the interest rate channel, rather than the exchange rate, if it had a choice, which is preferable also from the financial stability point of view. Having said that, the authorities expect trend appreciation to continue in the medium term, as the Czech Republic continues its convergence to its main EU trading partners.

Developments in the Czech financial sector have been favorable over the past year. Banks remain highly resilient to negative shocks, including a deep recession, as demonstrated by the stress tests presented in the latest Financial Stability Report published on June 12, 2018. The tier 1 capital ratio increased by 0.8 percentage point to 18.5 percent in 2017, and banks have remained profitable even in the long lasting low-interest-rate environment. The banking sector is also highly resilient to liquidity shocks due to its strong client deposit base. The CNB nevertheless decided to increase the countercyclical capital buffer (CCyB) rate to 1.50 percent, effective as of July 1, 2019. This measure is motivated by banks' increasing vulnerability to a potential deterioration in the economic situation and the need for them to create buffers for worse times. It is the fourth increase over the past two years and starting in July 2018 the effective CCyB will be the third highest in Europe.

The authorities do not perceive foreign currency loans as a serious risk. These loans are extended solely to the corporate sector. Exporters use them as a natural balance-sheet hedge against exchange rate risk. Related to the exit from the exchange rate commitment, the level of hedging naturally increased.

The CNB is fully aware of the financial stability risks stemming from the real estate market and has continued tightening its macroprudential measures in a preventive manner. Transaction housing prices grew at the fastest pace in the entire EU for most of 2017. The average year-on-year growth rate of apartment prices was almost 16 percent in the individual quarters of 2017, starting to slow slightly in Q4. Prices considerably outpaced wages, resulting in deteriorating affordability of housing. Prices of prime commercial real estate also increased in 2017, while the historically low yields observed last year declined further for some types of commercial property. The authorities agree with staff that these developments are a source of concern as some households borrow at perilously high multiples of income. At the same time, the overall household debt-to-gross disposable income ratio in the Czech Republic is slightly over 60 percent, well below the EU average.

In view of these risks, the CNB published a Recommendation on the management of risks associated with the provision of retail loans secured by residential property (the "Recommendation"). It sets quantitative loan-to-value (LTV) limits and qualitative criteria for prudential provision of such loans, primarily in the area of assessing clients' ability to service loans. The CNB assesses the risks associated with mortgage lending and banks' compliance with the Recommendation twice a year. On June 12, 2018, the CNB announced the introduction of a new upper limit on debt-to-income (DTI) at 9 and an upper limit on debt-service-to-income (DSTI) at 45 percent, both of them effective as of October 2018. It left in place the current recommended 90 percent individual limit on the LTV ratio, as well as a recommended aggregate cap of 15 percent on the volume of new loans with LTV between 80 and 90 percent in banks' balance sheets. The adjustment by lenders to the recommended limits has already led to a sharp increase in the proportion of loans with LTVs of 70–80 percent at the expense of loans with LTVs of 80–90 percent, to which the aggregate limit is applied. The rapid growth in new mortgages halted and loans with high LTVs became more expensive. Additionally, the CNB continues its efforts to convince legislators to introduce binding statutory powers to set upper LTV, DTI and DSTI limits in the legal framework**.** This is because of the greater enforceability of such powers compared to recommendations and the ability to apply them to all market participants, including non-bank and foreign mortgage providers.

Fiscal prudence has been a staple of the Czech macroeconomic policy mix. The October 2017 parliamentary elections produced a more fragmented Parliament than had been the case in the past, a phenomenon that is not unique to the Czech Republic. A minority government was formed, but it lost the vote of confidence in the Parliament in January 2018. It functions currently as an acting government, while coalition talks among political parties continue. The state administration has meanwhile continued to work without any disruptions. The regular budget proposed by the previous government was approved by the new Parliament in December 2017, and is being implemented.

The budget surplus of 1.6 percent of GDP in 2017 was the highest in the history of the Czech Republic and all subsectors contributed to it. The VAT revenues increased by 9.5 percent, exceeding the nominal household consumption dynamics by 3 percentage points, helped by the new VAT reporting and the electronic registration of sales introduced since 2016. The government continues to strive to introduce a comprehensive reverse charge mechanism which would further reduce VAT evasion. Direct tax revenues grew by almost 8 percent, mainly due to the high dynamics of personal income tax, whose collection was up by 11.4 percent. The budget outlook assumes surpluses in the next three years which would drive public debt below 30 percent of GDP by 2021.

The strong improvement in tax collection creates room for targeted expenditure increases. The government has approved increased funding for regional education which aims to eliminate relatively large salary differences between schools of the same type in different regions and to improve the quality of teaching. The government intends to continue raising the wages of doctors, nurses, and other public health care employees to stem the trend of departures of qualified professionals to neighboring EU countries with significantly higher public sector salaries. The authorities are cognizant of longer-term pressures on health care expenditures associated primarily with population ageing. They continue to implement measures to improve cost-effectiveness and management in the public health care sector, including a thorough computerization of the health care sector, new technologies assessment and stocktaking of hi-tech health care equipment purchases.

In terms of budgetary procedure, 2017 was the first year in which the new fiscal rule for determining the maximum expenditure of the central government budget was applied. In addition, the national Budget Council was set up. Its members were elected by Parliament in January 2018. The Council will be supported by the Budgetary Forecast Committee which is tasked with assessing whether the forecasts used in the budgetary procedure are realistic in the context of the economic conjuncture.

The current favorable macroeconomic position presents a unique opportunity to address remaining structural challenges. The Czech Republic has either already reached, or is on track to reach, its Europe 2020 targets in most areas. These include social inclusion, employment, renewable energy, greenhouse gas emissions and tertiary education. More action is needed to improve energy efficiency and reach the R&D spending target.

In view of the very tight labor market conditions and adverse demographic projections staff rightly point out that labor participation of young women and older workers has room to improve. However, the total labor participation rate of 76.7 percent, and that of women at 69.7 percent, is already relatively high—in some age cohorts at the EU maxima—and has been growing since 2008. The authorities will study staff's analysis of tax impediments to greater female labor force participation, but remain to be convinced that significant infrastructure barriers exist to increase the participation of some cohorts. There is a strong social preference in the Czech Republic for long maternity leave combined with a generous state social support system, including a parental allowance which can be drawn up to four years of child's age. The extremely low formal childcare for children under the age of three, highlighted by staff in Figure 12, is a mirror image of that. In contrast, 97 percent of five-year old children and 90.5percent of four-year old children are in formal childcare, the vast majority of which is public. Indeed, as staff demonstrates, maternal employment is at or above the EU average for mothers of children older than three years. Since September 2017, public childcare centers are obliged to accept any four-year old child living in the corresponding area. This obligation will be extended to all three-year old children starting in September 2018 and all two-year old children starting in September 2020. The large gender pay gap is in contrast a major issue for the Czech Republic and the authorities currently analyze its causes in conjunction with the social partners and intend to propose measures to reduce it.