

# **MACROECONOMIC DEVELOPMENT AND REAL ESTATE PRICES IN THE CZECH REPUBLIC AND ABROAD**

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In 2017 and 2018, analysts expect a slight recovery in the dynamics of economic activity in developing economies, and a continuation of the current growth in developed countries. From the perspective of domestic economy, the forecasts of GDP growth in the eurozone are important, which suggest a growth of around 1.6% in this and the next year, similar to 2016.

According to the March estimate by the Czech Statistical Office (CZSO), the GDP increased by 2.3% in the Czech Republic in 2016. The January prediction by the Czech National Bank (CNB) expects the domestic GDP to increase by 2.8% in this year and the next.

The continued growth of domestic economy will continue to have a positive effect on the labor market. According to the January prediction by the CNB, the general unemployment rate should decrease to 3.7% this year. Wages in the business sector will increase by 5.3% this year, and by 5.1% in 2018. The development of wages in the non-business sector will be similar this year, and only slightly lower next year.

The dynamic of bank loans to the private sector in the Czech Republic remained strong throughout last year, and it was one of the highest in the EU. In addition to the continuing economic growth, loose monetary and credit conditions supported the demand for credit. The dynamic of new loans to households was especially high, which mostly reflected the growth of housing loans.

Housing prices accelerated further in 2016. If the current forecasts of the domestic macroeconomic development are fulfilled, housing prices should continue to grow quite rapidly this year as well, followed by a gradual decline.

## THE EXTERNAL ENVIRONMENT AND GLOBAL ECONOMIC ACTIVITY

The development of global economy in 2016 was characterized by a partial recovery of economic growth in the eurozone, a slight slowdown in the US economy, and weak growth in many developing countries. However, in the second half of last year, the US economy started to gain a strong dynamics, and it is approaching full employment.

In parts of developing economies, the decline in prices of raw materials and commodities continued to manifest itself in a negative way, which, however, began to significantly weaken in the second half of last year. The considerably different development in different parts of the world and types of economies, combined with the persisting high debt in many countries, maintains global imbalances and makes the global economy more vulnerable.

The prospects for economic growth in major economies slightly improved in early 2017. The forecasts of analysts for both this year and the next expect to maintain a rather weak but stable economic growth in Germany and the eurozone as a whole (Table 1). Despite some tightening of monetary policy by the Fed and the strengthening dollar, the US economy should return to a growth rate exceeding 2% in the next two years, also thanks to the expected fiscal stimulus of the new president's administration.

For developing economies, the forecasts are mostly moderately favorable. Thanks to government interventions, it is expected that the rapid growth of China's economy will be sustained. After declines last year, the

output of Russian economy should start growing again, which is also true for Latin America. However, it is also true that the forecasts for a number of other major economies (e.g. Turkey, India, Brazil and Mexico) were reevaluated with a downward trend at the beginning of this year. Table 1 shows the averages from the February representative overview of forecasts by world analysts in Consensus Forecast, for this year and 2018.<sup>1</sup>

At the beginning of 2017, forecasts of price development in major economies were mostly upward in response to the rising inflationary pressures associated with the end of the decline or slight recovery of commodity prices. The outlook of oil prices in the one-year and two-year horizon has an approximate value of 57 USD/barrel.

The prices of industrial metals should decrease slightly in the one-year horizon, while an increase in the prices of food commodities can be expected. In many developed countries, inflation, and especially its core component, should remain below 2% in 2017. This is implied by the continuation of the loose monetary policies of central banks.

In some developed countries, especially in the US and the UK, long-term interest rates have increased significantly. This was reflected in capital outflows and the tightening of financial conditions in many developing economies. However, further strong growth in global long-term interest rates is unlikely. In developed countries, lending interest rates will therefore likely remain near historic lows in the next two years.

<sup>1</sup> Consensus Forecast: a regular monthly publication by Consensus Economics, summarizing the forecasts by hundreds of prominent economists and analytical teams regarding future development.

**TABLE 1** Development and prospects of world economic activity. (year-on-year real GDP growth rate in %)

Source: Consensus Forecast, February 2017

	CZ	EA	SK	DE	UK	PL	CEE	RU	US	LA	AP	CN
2016	2.3	1.7	3.3	1.9	2.0	2.8	1.4	-0.6	1.6	-0.5	4.7	6.7
2017	2.5	1.6	3.1	1.4	1.5	3.1	2.2	1.1	2.3	1.7	4.7	6.5
2018	2.6	1.5	3.4	1.6	1.3	3.1	2.6	1.5	2.4	1.7	4.6	6.1

Note: CZ – Czech Republic, EA – eurozone, SK – Slovakia, DE – Germany, PL – Poland, CEE – 27 countries of Central and Eastern Europe, including EU member states, RU – Russia, US – USA, LA – 18 countries of Latin America, AP – 16 countries of the Asian and Pacific region, including Japan, CN – China

### DEVELOPMENT IN FOREIGN REAL ESTATE MARKETS

Globally loose monetary conditions are reflected in the robust growth in real estate prices (Graphs 1 and 2). In the third quarter of 2016, housing prices in countries of Central and Eastern Europe grew the fastest in the EU. Year-on-year, prices in Hungary and Latvia have increased by more than 10%, and prices in Bulgaria, Slovakia, Estonia, Romania and the Czech Republic also grew at a rate of around 7% and higher (6.9 %<sup>2</sup>). In this region, prices increased the least in Poland, by about 2%. Moreover, in some of these countries, including the Czech Republic, the growth in housing prices is accelerating.

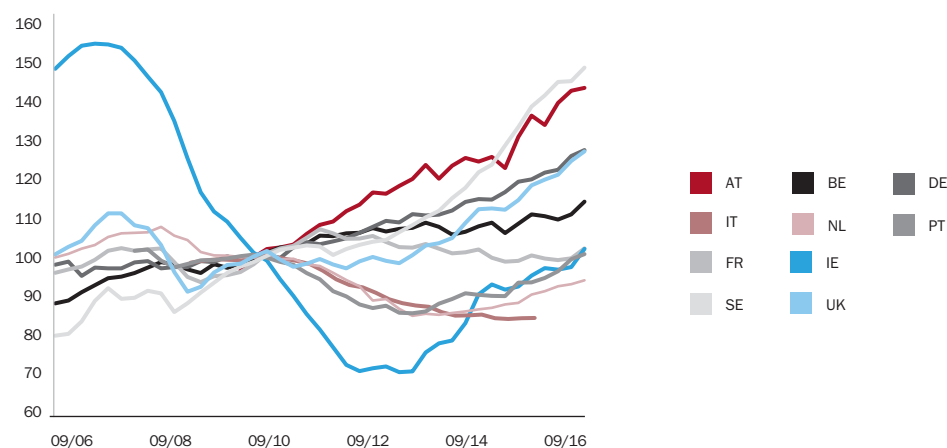
In developed EU economies, these prices grew fastest in Portugal, Great Britain, Ireland and Sweden (7% to 9 % year-on-year). In these and other developed economies, however, the price increase started earlier and the rate

of their growth is beginning to decline. Residential real estate prices in the EU are only declining in Italy and Cyprus; this is a lingering correction of their previous excessive growth and weak economic recovery. The growth of real estate prices is very moderate only in a few other countries (France, Croatia or Finland).

In response to the growth in real estate prices and increasing lending activity, in 2016 the European Systemic Risk Board (hereinafter ESRB) evaluated the risks associated with exposures secured by residential real estate and the measures taken. This happened in countries in which the selected indicators suggested increased or rapidly growing risks associated with these exposures. In November last year, the ESRB published a warning for countries in which a detailed analysis confirmed these risks, and where existing measures were assessed as insufficient.

**GRAPH 1** Real property prices in advanced countries. (2010 = 100)

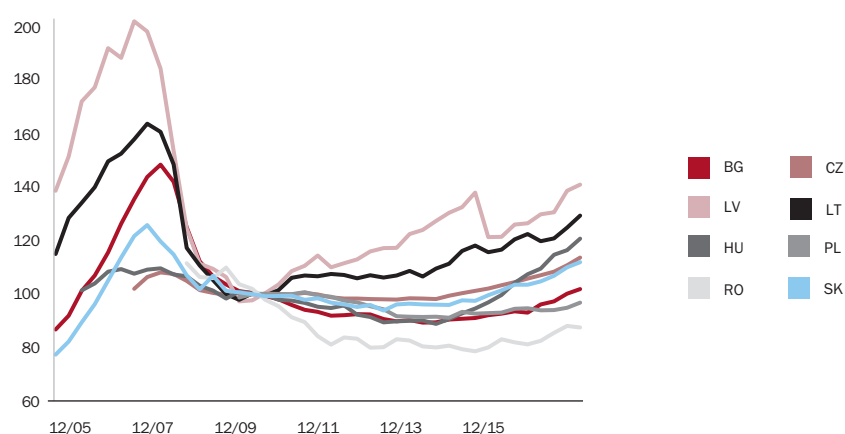
Source: Eurostat



Note: House price index according Eurostat methodology. Includes prices of apartments, family houses and corresponding building plots.

**GRAPH 2** Property prices in selected EU countries. (2010 = 100)

Source: Eurostat



Note: House price index according Eurostat methodology. Includes prices of apartments, family houses and corresponding building plots.

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<sup>2</sup> This can be compared with data in the chapters "Residential market" or "Funding of real estate". Differences stem from slightly different methodology and data sources.

These warnings were given to Austria, Belgium, Denmark, Finland, Luxembourg, the Netherlands, Sweden and the UK. To a greater or lesser extent, each warning concerned the risks associated with the overvaluation of real estate prices, household indebtedness or bank capital. On the contrary, although the ESRB confirmed these risks in Slovakia and Estonia as well, thanks to the preventive measures of local authorities they did not issue a warning. Due to the growth rate of real estate and housing loan prices, the Czech Republic fell just below the line of these evaluated countries. It has therefore not received a warning yet.

#### THE DOMESTIC MACROECONOMIC ENVIRONMENT AND ITS OUTLOOK

In addition to domestic economic policies, further development in the external environment, particularly the eurozone, will be crucial for the development of the Czech economy. The outlooks on which CNB forecasts are based, estimate that the growth rate of the effective GDP indicator in the eurozone will slow down to 1.5%, which is 0.6 percentage points less than it was in 2016. Next year, the growth rate should return to the level of 2%. In addition to persistent difficulties in certain national banking sectors, the weakened demand in developing countries remains a risk to the economic activity in the eurozone.

Highly loose monetary conditions will likely persist in the external environment. Although the European Central Bank decided in December to reduce the amount of purchased assets in April 2017 from 80 billion EUR per month to 60 billion EUR, this program was extended till the end of this year. At the beginning of this year, the ECB held roughly 1.50 billion EUR assets within the program, 90% of which represented government bonds of eurozone countries, and the rest of which was mostly mortgage bonds. 3M EURIBOR market interest rates should continue to be negative in this year and the next.

After nearly 10 years, the US Fed started raising its monetary policy rates in December 2015. It continued to do so at its policy meeting in December 2016, when it decided to increase its key interest rate from the range of 0.25%–0.5% to 0.5%–0.75%. The last statements of Fed show its readiness to increase the key interest rate further this year. With regard to the subdued inflation pressures, however, it should be moderate and gradual. The Euro should continue to weaken against the US dollar. According to February analyst estimates, this year and next year the exchange rate of the euro against the US dollar should be around 1.06 US\$/EUR.

Last year the growth of the Czech economy slowed down. However, the CNB's January forecast sees this slowdown as temporary. This year and next year the GDP growth rate should increase to 2.8% (Table 2). The economy will be supported by a continued growth in foreign demand and a renewed increase in fixed invest-

ment, which will revive the dynamics of government investments co-financed from European funds.

The growth rate of nominal disposable income will gradually increase to 5.4% at the end of 2018, which is an important indicator of the development of consumption and investments. This will continue to be most significantly affected by the volume of wages and salaries, with an only slightly increasing employment rate. Entrepreneur revenue will also gradually begin to increase.

The inflation at the end of last year quickly accelerated and returned to the 2% target. According to the forecast, which is consistent with data on inflation development in January this year, the inflation will increase further to the upper half of the tolerance band, and at the monetary policy horizon it will begin to return to the target. Starting in mid-2017 – in the spirit of the January forecast – the conditions for the sustainable performance of the two percent inflation target will be fulfilled in the future, and it will therefore return to the standard monetary policy, as expected.

The January forecast predicts the stability of currently very low market interest rates until mid-2017. After that, the forecast is consistent with an increase in market interest rates in the second half of 2017, and a further slight increase in 2018. The forecast expects the exchange rate to be used as a monetary policy tool at 27 CZK/EUR until mid-2017. Roughly from mid-2017, the conditions for sustainable performance of the 2% inflation target in the future will be achieved, after a return to normal monetary policy.

In the January forecast, the strengthening of the exchange rate after the return to normal monetary policy is dampened, among other things, by the fact that in the period since the introduction of the exchange rate commitment, there is a leakage of the weaker koruna exchange rate into the price level of other nominal variables. The forecast also does not take into account the fact that the potential appreciation of the koruna exchange rate may be significantly dampened by exchange rate hedging by exporters before leaving the exchange rate commitment, as well as the closing of financial investors' koruna positions. This "overbuying" in the market may lead to a depreciation of the exchange rate.

Czech government bond yields were at historically low levels last year as well. They not only reached negative values in shorter maturities, but in approx. 5-year maturities as well. This was also reflected in interest rates on new loans, which dropped to a level slightly over 2% for loans to non-financial corporations, and to 2.2% for household and housing loans at the end of the year. Given the current and expected development in the global monetary environment, we can assume that government bond yields and lending interest rates will remain at very low levels in the next two years, despite the expected growth.

TABLE 2 CNB's January forecast. (v %)

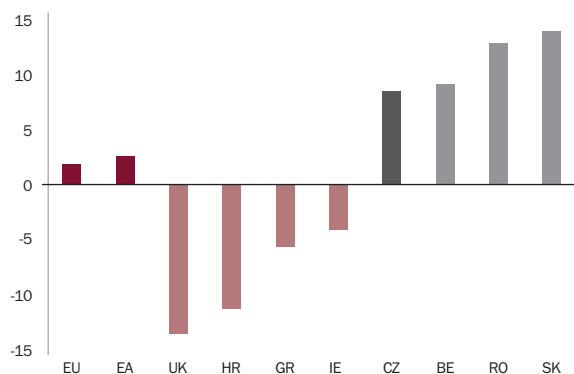
Source: Inflation Report I/2017, CNB

	GDP	INFLATION	3M PRIBOR	RGDI	WAGES	UNEMPLOYMENT	CURRENT ACCOUNT
2016	2.4	0.7	0.3	2.6	4.4	4.1	2.0
2017	2.8	2.4	0.5	2.1	5.2	3.7	1.3
2018	2.8	2.2	1.1	2.6	4.9	3.6	1.5

Note.: GDP – real gross domestic product (yoy growth in %); Inflation – consumer price growth (in %); 3M Pribor – 3-month money market rates (in %); RGDI – real gross disposable income of households (yoy growth in %, adjusted for inflation); wages – average nominal wages (yoy growth in %); unemployment – general unemployment rate (in %); current account – the share of current account deficit of GDP (in %).

**GRAPH 3** Growth of loans for house purchase in countries with the highest and the lowest rate of their growth in EU.  
(year-on-year growth in %)

Source: ECB, CNB



Note: Loans to residents in all currencies. Three month average as of December 2016.

### CREDIT DYNAMICS IN THE CZECH REPUBLIC

Loose credit conditions and the robust state of the domestic economy resulted in relatively significant bank loan dynamics. There was an increase in bank loans to both non-financial corporations, for which there was a year-on-year increase in loans of 6% in 2016, which is one of the highest growth rates on a European scale, and especially households, with a year-on-year growth exceeding 7%. In the household sector there was a revival of consumer loans with a year-on-year growth of 4.5%; however, their accelerating dynamics are driven primarily by housing loans (8.4% increase), and especially mortgage loans (see more details in next section).<sup>3</sup>

The increase in loans to domestic non-financial corporations was mainly driven by loans with longer maturities, which reflected the growth of investment loans. The loans increased in most sectors, and especially the "real estate" sector contributed to their accelerated drawdown. The year-on-year growth rate of foreign currency loans increased significantly, which reflects the increase in the production of exporting companies and renewed exporter hedging against exchange rate risk through a "natural hedge". In addition to exporters, "real estate" companies also significantly contributed to the increased foreign currency loan dynamics.

According to the Bank Lending Survey, the demand for loans grew in the fourth quarter of 2016 in all segments of the credit market. In loans to non-financial companies, primarily the demand for long-term investment loans grew, which reflected the favorable economy news. In household demand, the prospect of further price growth in the real estate market and increasing consumer confidence played a significant role, in an environment of very low interest rates. Overall, the availability of external funding for the domestic corporate sector is very good.

According to the Bank Lending Survey published in January this year, banks continued to loosen credit standards for loans to non-financial corporations. For housing loans they indicated a further tightening of credit standards. This was in response to the CNB's recommendations regarding the granting of mortgage loans and the entry into force of the new Consumer Credit Act. Housing loans were also affected by increased bank

financing costs and the perceived risk of the development of the real estate market.

### DEVELOPMENT OF MORTGAGE LOANS IN THE CZECH REPUBLIC

Housing loans, and mortgage loans within them, crucially contributed to the growth of household loans. In 2016, the year-on-year growth of mortgage loans amounted to an average of 8.5%, exceeding the growth in 2015 (7.6%). Real new mortgage loans contributed to the growth the most, whose share in the total new mortgage loans last year also increased slightly.<sup>4</sup> The growth in housing loans in the Czech economy remains one of the fastest in the EU (Graph 3).

The year-on-year growth of new mortgage loans decreased in 2016 from the average of 32% in 2015 to 24%. However, information about these loans is distorted by the volume of the base from which this year-on-year growth percentage is calculated. In 2016, new mortgage loans in the amount of 30 billion CZK more than in the previous year were granted, specifically 170 billion CZK. The relatively highest year-on-year growth was recorded in the first and fourth quarter of 2016, and the lowest growth was recorded in the summer months.

In response to increasing lending activity, overvaluation of real estate prices and loosening of credit standards, the CNB issued a Recommendation on the Management of Risks Associated with the Provision of Retail Loans Secured by Residential Real Estate (hereinafter "Recommendation") as early as June 2015, which was aimed against the potential risks of new loans. The Recommendation established the quantitative limits of the LTV indicator (ratio of loan amount to collateral value) and qualitative criteria; the compliance with these criteria should ensure that credit standards correspond with criteria of rigor and prudence.

In order to evaluate the development of the volume and risk of new loans, the CNB conducts surveys of credit characteristics of new loans secured by residential real estate. The evaluation of the survey for the second half of 2015 and the first half of 2016 shows that the limits for LTV values were largely respected. However, indicators of clients' potential ability to repay the loan from their own resources in a deteriorated economic situation documented substantial loosening of credit standards.

<sup>3</sup> A higher year-on-year growth rate of loans to non-financial corporations in the EU can only be seen in Luxembourg and Lithuania.

<sup>4</sup> Real new mortgage loans include new credit agreements. New mortgage loans also include an increase in refinancing existing loans.

A number of new loans are granted with relatively high values of the LTI indicator (ratio of the loan amount to the annual net income) or DSTI (ratio of monthly loan installment to net monthly income). At the same time, these loans often have high LTV values or they are given to applicants with lower incomes. In the event of shocks in the form of an increase in interest rates or a decline in income, a considerable number of debtors could have problems with the repayment of the loan, despite the fact that the predominant representation of fixation in new housing loans contributes to the lower sensitivity of households to the development of interest rates.

The CNB considers the fact that the highest share of loans with high values of LTI and DSTI was recorded in the second half of 2015 in the LTV loan category of 80%–90% to be a risk factor. The significantly highest share of loans granted to customers with low incomes was also found in this category of LTV values. The category of LTV 80%–90 % was also the most represented category among newly granted loans, in which the average value of loan collateral increased the most.

Given the increasing overvaluation of residential real estate, the CNB considered it necessary to modify the Recommendation, especially in reducing the maximum LTV level. Therefore, in June 2016 it issued another Recommendation in the form of an official communication.

The recommended maximum LTV limit of 100% was therefore reduced to 95% in October 1, 2016, and from April 1, 2017 it will be further reduced to 90%. The transitional period allows banks to adjust internal pro-

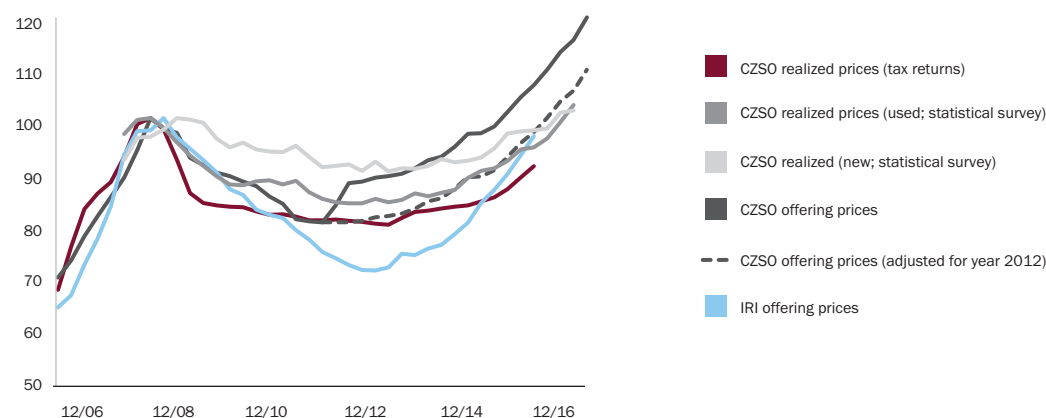
cesses in the area of business and risk management. The recommended limit of 10% of the volume of new loans with LTV in the range of 90%–100% changed on October 1, 2016 to 10% of the volume of new loans with LTV in the range of 85%–95%. In April 1, 2017, the new limit will be 15% of the volume of new loans with LTV in the range of 80%–90%. The CNB will also evaluate the practices of banks in determining the value of collateral in individual institutions, in terms of internal methodologies and practices.

Certain risk characteristics of residential loans for residential real estate intended for rental, along with the development of market prices, led the CNB to expand the Recommendation with a recommendation to improve risk management in this area, with regard to properly determining the purpose of the loan. Using all available information, institutions should identify whether the loan is used to finance home ownership or an investment. If there is an accumulation of characteristics with a higher level of risk in an investment loan, a maximum LTV of 60% should be enforced.

Given the significant share of new loans granted to clients with lower incomes, the CNB will prepare the introduction of quantitative recommendations for LTI and DSTI values no later than 2018. This plan is in line with the Consumer Credit Act, specifically with the part concerning the assessment of the creditworthiness of the loan applicant. The CNB also asserts the legal anchoring of the possibility to set an upper limit of LTV, DTI and DSTI indicators.

**GRAPH 4** Prague apartment prices. (maximum = 100)

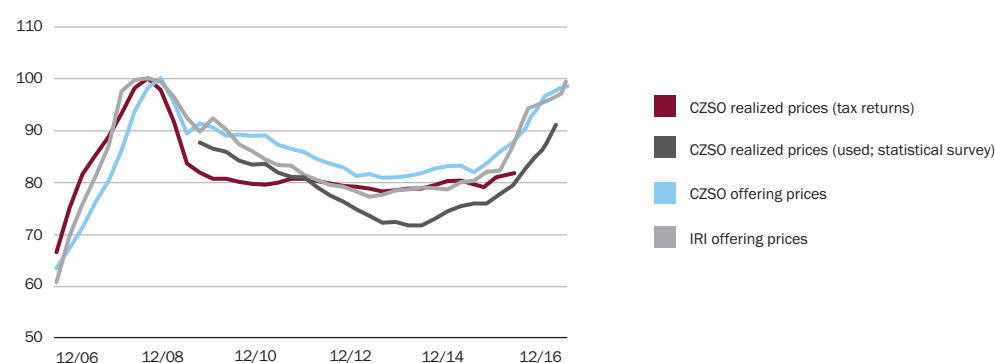
Source: CZSO, IRI



Note: Maximum mostly in 3Q 2008.

**GRAPH 5** Apartment prices in the rest of the country. (maximum = 100)

Source: CZSO, IRI

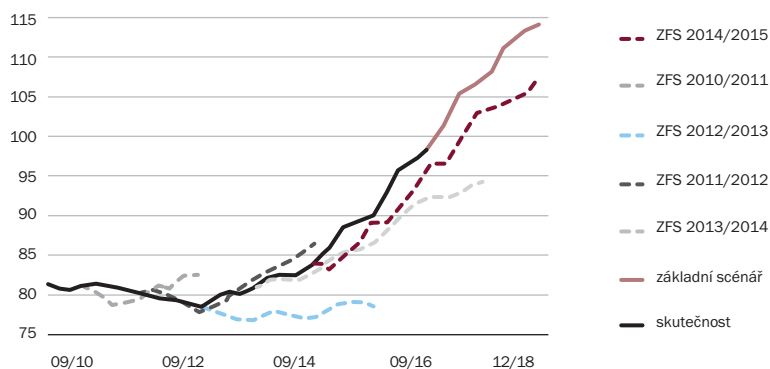


Note: Survey data for realized prices available only from 3Q 2012, axis is filled with the average of other prices.



**GRAPH 6** Price development scenarios. (index; maximum (3Q 2008) = 100)

Source: CNB calculations



### REAL ESTATE MARKET IN THE CZECH REPUBLIC<sup>5</sup>

As mentioned above, in 2016 the growth of apartment prices of recent years accelerated further (Graphs 4 and 5). The rapid rise in prices supported the ongoing recovery of economic activity, the improved situation in the labor market and the rapid growth in housing loans. The limited supply of new apartments also contributed to the price growth. All monitored price indices rose, and the vast majority of them recorded the highest growth rate since the beginning of 2009, that is, in the past eight years.

In 2016, apartment prices grew across the board with regard to different types of price indices (offering prices compared to realized prices), and different regions (Prague compared to the rest of the Czech Republic). In Prague, the level of apartment prices rose above the level of its previous cyclical highs from 2008, for all types of available indices. The offering prices are higher even after adjusting for the unrealistic price growth from 2012.<sup>6</sup>

According to the sample survey by the Czech Statistical Office (ČSÚ), the realized prices for new apartments from new development projects and older apartments are higher (by 1.3% and 2.3%). Given that the price growth in the rest of the country compared to Prague was delayed, the prices outside Prague remain on average 2%–10% below their peaks from the period before the outbreak of the financial crisis (Graph 5). The growth of apartment offering prices in Prague has long been significantly exceeded by the growth of realized prices, which indicates a growing difference between the two types of prices in the capital.

When assessing the equivalence of real estate prices, the CNB works with realized apartment prices from tax returns for the whole country. From the relevant indices, these were in the lowest range (at the end of 2015 a total of 14% below its peaks; after being extended by a number of other types of prices for 2016, only almost 3% less). In comparison with incomes, however, apart-

ment prices grew by 10% at the end of 2016 from their lows of early 2013.

### REAL ESTATE PRICE FORECAST

In addition to the initial situation described above, the residential real estate market in the coming years will mainly depend on the macroeconomic development and the situation in the mortgage market. The estimate for future real estate price growth is subject to many uncertainties. The presumptions of Baseline stress test scenarios conducted regularly by the CNB within the Financial Stability Report and the autumn Update of these tests may be a partial clue (Graph 6).

In the past three years, these scenarios anticipated the recovery of the real estate market, which really did take place. The speed of the recovery of the real estate market, however, was higher than expected. This is explained by the better than previously expected labor market development and a significant decline in interest rates on housing loans. This can also be reflected in the non-fundamental factors<sup>7</sup> of real estate price growth.

However, it is still possible to draw certain conclusions from the presumptions of the last stress tests from<sup>8</sup> December 2016. If the economy developed according to the Baseline scenario of these tests (Graph 6), real estate prices would maintain a dynamic growth of about 10% for the rest of 2017, while maintaining the historic links between indicators; in 2018, the growth would slow down to 7.5%. Legislative changes affecting the provision of housing loans, and the tightening of the CNB's recommendations regarding mortgage loans, should continue to moderate the rate of the growth of apartment prices.

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<sup>5</sup> See more in chapters "Residential market" and "Funding real estate".

<sup>6</sup> According to the Czech Statistical Office, offering prices in Prague in the first half of 2012 grew by almost 9%, but this was not in accordance with data on offering prices from alternative sources, according to which the prices dropped in this period.

<sup>7</sup> The fundamental value of real estate is the part of the price that can be explained by the movement of relevant variables (macroeconomic indicators, labor market indicators, demographic characteristics, financial market indicators...). The market prices of real estate are also influenced by non-fundamental factors, which often have a psychological and behavioral nature, such as mass psychosis, self-fulfilling expectations, etc. These factors often create real estate price bubbles.

<sup>8</sup> These stress tests are based on the CNB's macroeconomic forecast from November 2016. The latest CNB forecast from January 2017 was not projected in the scenarios. The differences between both macroeconomic forecasts, however, are not very significant (see last CNB Inflation Report).