MACROECONOMIC DEVELOPMENT

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

According to the January estimate of the International Monetary Fund, the global economic outputs increased by 3.7 % in 2017, which is 0.5 % more than in 2016. In 2018 and 2019, a continuation of the current growth in developed countries and a further slight acceleration in developing economies are expected. From the perspective of domestic economy, the forecasts of GDP growth in the eurozone are important, which suggest a growth of around 2 % in this and the next year.

According to the March estimate by the Czech Statistical Office, the GDP increased by approximately 4.5 % in the Czech Republic in 2017. The January forecast of the Czech National Bank (CNB) expects that the growth of the Czech economy will be slower compared to last year, but it will still exceed 3 % in this and the next year.

The tension in the labour market will keep the wage dynamics at a high level. The average monthly wage should increase by approximately 7 % in this and the next year. Then the increase will slow down to approximately 5 % a year.

The dynamic of bank loans to the private sector in the Czech Republic remained quite strong throughout last year, and it was one of the highest in the EU. Monthly volumes of newly provided loans for housing to households are high, and they will probably stay high in this year due to the positive economic development.

The prices of apartments accelerated during 2017, and CNB evaluates them as overvalued. If the current forecasts of the domestic macroeconomic development are fulfilled, housing prices should continue to grow quite rapidly this year as well, but the rate of growth should gradually slow down due to the policies introduced by the CNB.

The external environment and global economic activity

The development of the global economy in 2017 was characterized by a surprisingly fast recovery of economic growth in the eurozone, reaching full employment in the economy of the USA, which is reflected in the tightening of monetary policy and the recovery in many countries. All of this was highlighted by the improvement of the prospects of growth in many developing economies.

The United States should reach its local peak with a GDP growth of 2.8 %, a slight slowdown is expected for 2019. A decent growth in dynamics is also expected in the case of the Eurozone, including its largest economy – Germany, which still has 0.5 % slower growth than the United States. Table 1 shows the averages from the February representative overview of forecasts by world analysts in Consensus Forecast, for this year and 2019.[1]

The main risk for the eurozone stays the same – the persisting high debt of both governments and the private sector in some eurozone countries. In the case of interest rate increase, this would be reflected in a significant increase of debt service.

The prospects for economic growth in developing economies slightly improved in early 2018. The growth of Russian economy should remain slightly below 2 %. It is expected that the Chinese economy should slowly lose its dynamics to 6.3 % in 2019. Latin American countries should return to a growth of 3 %, but quite high debts are also a risk in developing countries, mainly in companies (very often in foreign currencies), and also the overvaluation of certain assets including real estate.

The long-term interest rates have usually slightly increased in the developed countries. This is mostly true for countries that tightened

TABLE 1 Development and prospects of world economic activity

Source: Consensus Forecast, February 2018

	CZ	EA	SK	DE	UK	PL	CEE	RU	US	LA	AP	CN
2017	2.3	2.5	3.4	2.2	1.8	4.6	3.7	1.5	2.3	1.8	5.0	6.9
2018	2.5	2.3	3.8	2.4	1.5	3.9	3.1	1.9	2.8	2.6	4.9	6.5
2019	2.6	1.9	3.8	1.9	1.5	3.3	2.9	1.9	2.4	2.9	4.7	6.3

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.

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[1] Consensus Forecasts: a regular monthly publication by Consensus Economics summarizing the forecasts by hundreds of prominent economists and analytical teams regarding future development.

their monetary policy (the USA, Great Britain, the Czech Republic). The increase in long-term yields was mostly lower than for the rates of money markets, and the yield curves therefore stayed flat. It can be expected that the factors that act against the growth of the long--term interest rates will persist in Europe due to the monetary policy of the European Central Bank (ECB).

The prospects of price development of major world economies stay moderate despite the positive economic development. The price of Brent oil therefore reached 70 USD/barrel in the first half of January, but it significantly decreased afterwards. The average Brent oil price should be 62 this year, and in the next year it should be 58 USD/barrel. This should also contribute to the inflation pressures to stay moderate in most countries despite the economic recovery.

DEVELOPMENT IN FOREIGN REAL ESTATE MARKETS

The persisting loose monetary conditions and the improving economic development in 2017 were reflected in the continuing increase in real estate prices across states (graphs 1 and 2). The Czech Republic was one of the countries with the fastest real estate prices increase according to the internationally comparable housing price index pu-

blished by Eurostat. The Czech Republic stayed on the top of this list even in the third quarter of the year when the housing prices increase with a year-on-year pace of 13 %.

Other countries of Central and Eastern European countries kept a relatively higher growth rate from the second half of 2016 (over 6 %), which was addressed in last year's report. Poland is an exception; the growth rate is still lower there (around 4 %). In relation to the increased level of construction and regulatory changes for housing loans, there was a price correction of real estate in Norway and Sweden. From the eurozone countries there was the fastest price increase in Ireland, Portugal and the Netherlands (year-on-year increase between 10 and 12 %). Residential real estate prices in the eurozone are only declining in Italy.

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. At the end of 2017, the production of companies grew rapidly; this is confirmed by the PMI

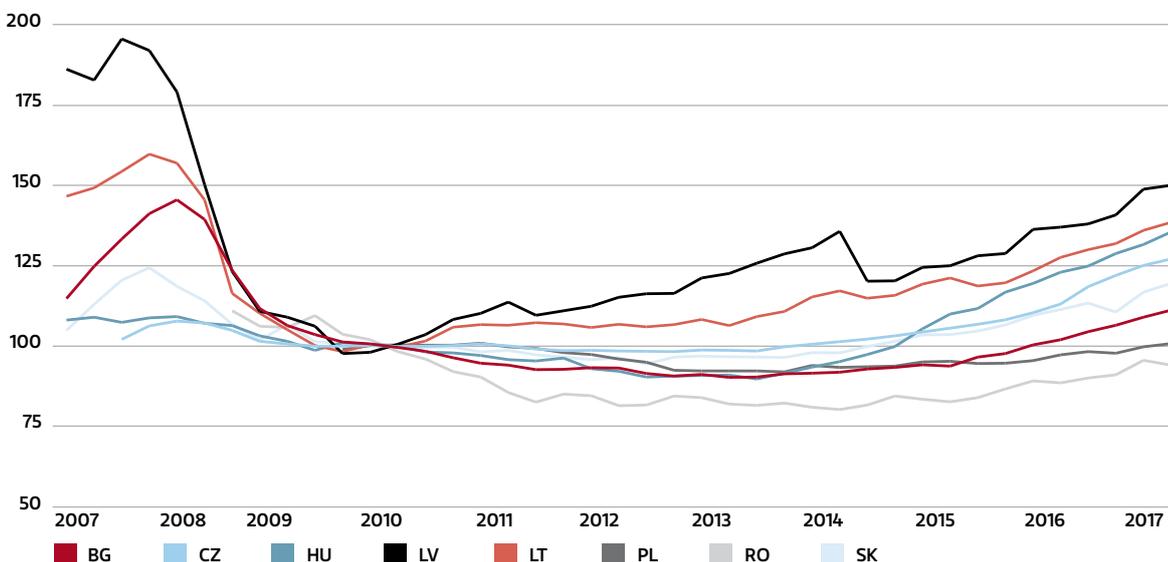**GRAPH 1 Real estate prices in developed EU countries (2010 = 100)**
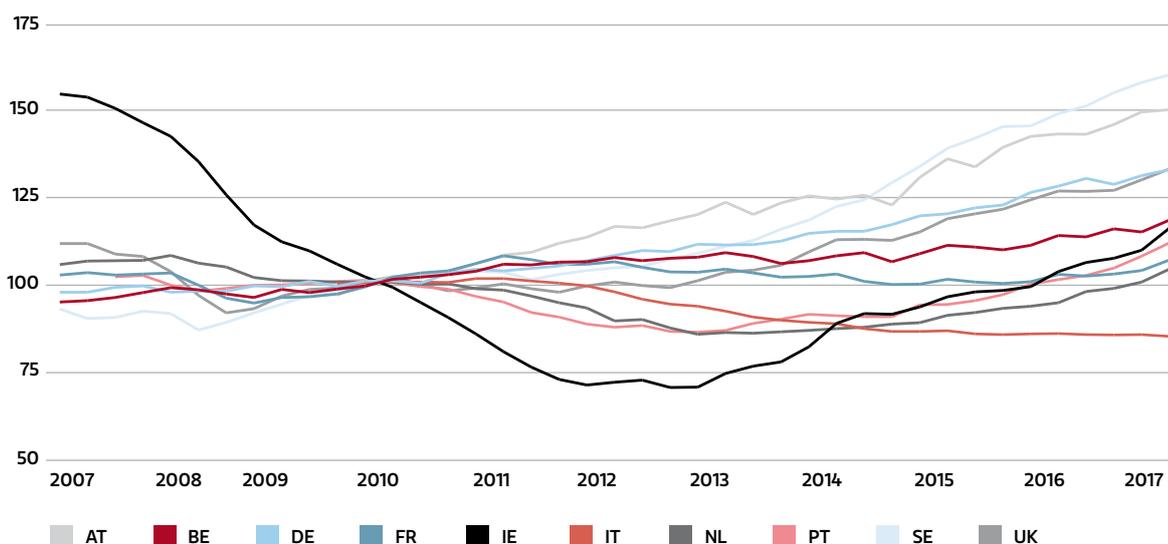
Source: Eurostat

Note: It is the House Price Index, which is calculated according to a consistent methodology, and it is published by Eurostat. It includes the prices of apartments, detached houses and related land.

Legend: AT | BE | DE | FR | IE | IT | NL | PT | SE | UK

GRAPH 2 Real estate prices in central and Eastern Europe

Source: Eurostat

Note: It is the House Price Index, which is calculated according to a consistent methodology, and it is published by Eurostat. It includes the prices of apartments, detached houses and related land.

Legend: BG | CZ | HU | LV | LT | PL | RO | SK

index of the processing industry in the Eurozone, which reached the highest value from the beginning of its measurements in 1997. The development in the labour market is still positive. The unemployment rate in the eurozone decreased to 8.6 %, the lowest value since 2008. On the other hand, available data do not suggest a significant acceleration in wage growth, which reached only 1.7 % in the fourth quarter of 2017.

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 2 %. At the beginning of this year, the growth rate will be higher mostly due to the high performance of the German economy, but this rate will gradually slow down and the economic activity in the effective eurozone will increase by 2.3 % for this whole year.

Last year the growth of the Czech economy further accelerated. The January CNB forecast assumes that the growth of the domestic economy will slow down, but it will still be over 3 % in 2018–2019 (table 2). The growth of domestic economic activity will be mainly driven by the giant growth of household consumption. The economy will remain over its potential. This will be obvious from the shortage of free labour force.

The tension in the labour market will keep the wage dynamics in market sectors at a high level, to which the increase in the minimum wage from January 1, 2018 will contribute. The wage dynamics in the market sector will be only slightly less than 8 % at the beginning of 2018. The increase in wages will then gradually slow down to approximately 5 % a year in the long term due to the tightening of monetary conditions and the efforts of companies to maintain their price competitiveness.

The inflation culminated in October 2017 slightly below 3 % (still in the target tolerance band of the CNB), but it slowed down to 2.4 % in December. In February it decreased below 2 %, and it was lower than it was expected in the January forecast. According to these predictions, the inflation will be above the target of 2 % in 2018, and it will return to it at the beginning of the monetary policy horizon.

The total inflation pressure will be quite strong, while it will mainly reflect the accelerating wage dynamics during the giant growth of the domestic economy. Domestic cost pressure will mitigate due to the stabilization thanks to the monetary policy, but it will still prevail over the anti-inflation influence of import prices, which will be mainly reflected in the strengthening of the crown this year.

on of the real convergence of the Czech economy towards eurozone states will be in the same direction related to the increasing work productivity. Next year, the exchange rate will be strengthened only slightly to values around 24.5 CZK/EUR. The expected shift of the ECB's monetary policy to normal in 2019 will also be reflected in this.

The CNB Bank Board unanimously increased the 2W repo rate by 25 basis points to 0.75 % at its February monetary policy meeting. The forecasts expect that the interest rates of the CNB will increase further, but in 2018 the increase of rates will be slowed down by the continuation of the very loose CNB monetary policy, which will contribute to the pressure on the strengthening of the crown exchange rate. During 2019 the domestic interest rates will gradually get close to the expected long-term neutral level (i.e. to 3 % for 3M PRIBOR rate), also as a consequence of the return of foreign rates to positive figures. This should be reflected in interest rates on loans provided to non-financial corporations and households.

CREDIT DYNAMICS IN THE CZECH REPUBLIC

In 2017, a strong dynamics of bank loans to the private non-financial sector the growth of which slowed down from 6 to 4.6 % compared to the previous year continued. The deceleration of the loan growth started approximately in the half of the year when the year-on-year loan growth reached its 8-year maximum (8.3 % in May 2017). The loose credit terms and the overall good economic situation, as well as the low level of the realized credit risk (the non-performing loans ratio was the lowest in 8.5 year), were all reflected in the increase in loans in the private sector.

There was an increase in bank loans to both non-financial corporations, for which there was a year-on-year increase in loans of 4.8 % in 2017, and especially to households, with a year-on-year growth exceeding 8 %. In households the year-on-year growth of consumer loans was above 4 %, but the dynamics were still driven mainly by housing loans (growth of 9 %), especially by mortgage loans (the details are provided in the next part and in the chapter "Financing residential real estate"). From the middle of the year, the reasons for a slight deceleration in loan dynamics were a gradual growth of basic monetary-policy interest rates, the appreciation of the rate when the exchange rate commitment of CNB ended, and the tightening of the macro-prudential CNB policy.

The growth of loans to domestic non-financial corporations was di-

=== TABLE 2 CNB's January forecast (in %)

Source: Inflation Report I/2018, CNB.

	GDP	Inflation	3M PRIBOR	Rate	Wages	Unemployment	Current account
2017	4.5	2.5	0.4	26.3	6.9	3.0	0.9
2018	3.6	2.3	0.9	24.9	7.4	2.3	0.9
2019	3.2	2.9	1.7	24.5	4.9	2.2	0.8

Note: GDP – real gross domestic product (year-on-year growth in %); Inflation – consumer price growth (in %), 3M Pribor – 3-month money market rates (in %); Rate – the exchange rate CZK/EUR; wages – average nominal wages (yoy growth in %); unemployment – general unemployment rate (in %); current account – the share of current account deficit of GDP (in %).

The exchange rate of the crown will further strengthen according to the above-mentioned forecast. The prediction of the rate for the first quarter of 2018 expects its further slight strengthening to an average value of 25.4 CZK/EUR. The estimated rate strengthening in the course of this year will be mainly reflected in the increase of interest differential towards the eurozone and the influence of the ongoing asset purchases by ECB to September 2018. The continuati-

fferentiated according to the sector. For example, the loans in the processing industry and retail increased, but they decreased in the mining, quarrying and energy sectors, and quite surprisingly also in the field of real estate activities. The increase in loans in foreign currencies further continues. Their percentage of the loans to non-financial corporation has increased to almost 30 %. These loans usually play a role in the so-called natural hedges of exporting cor-

porations; a high percentage of loans in foreign currencies are also reported by enterprises with activities in the field of real estate.

According to Credit Conditions Survey published this January, the demand for loans in all segments of the credit market grew at the end of 2017, and banks expect that it will also grew at the beginning of 2018. For enterprises, the demand growth for loans was mostly driven by the financing of fixed investments and fusions and acquisitions; the higher demand for consumer loans was supported by the improved consumer confidence of households and lower level of client interest rates.

The demand for housing loans has increased again after its decline in the middle of the year; it was positively affected by the expectations of the continuing growth of prices of residential real estate and consumer confidence, which prevailed over the influence of the slowly increasing interest rates and the tightening of credit standards.

Credit standards of banks according to Credit Conditions Survey almost didn't change for loans to non-financial corporations during the year, and there were also no significant changes to credit standards for consumer loans. Banks indicated further tightening of credit standards for housing loans, mainly in relation to the finishing of the implementation of CNB macro-prudential measures and the growth of bank financing costs. The perceived risk arising from the expected development of the real estate market also contributed to the tightening of credit standards.

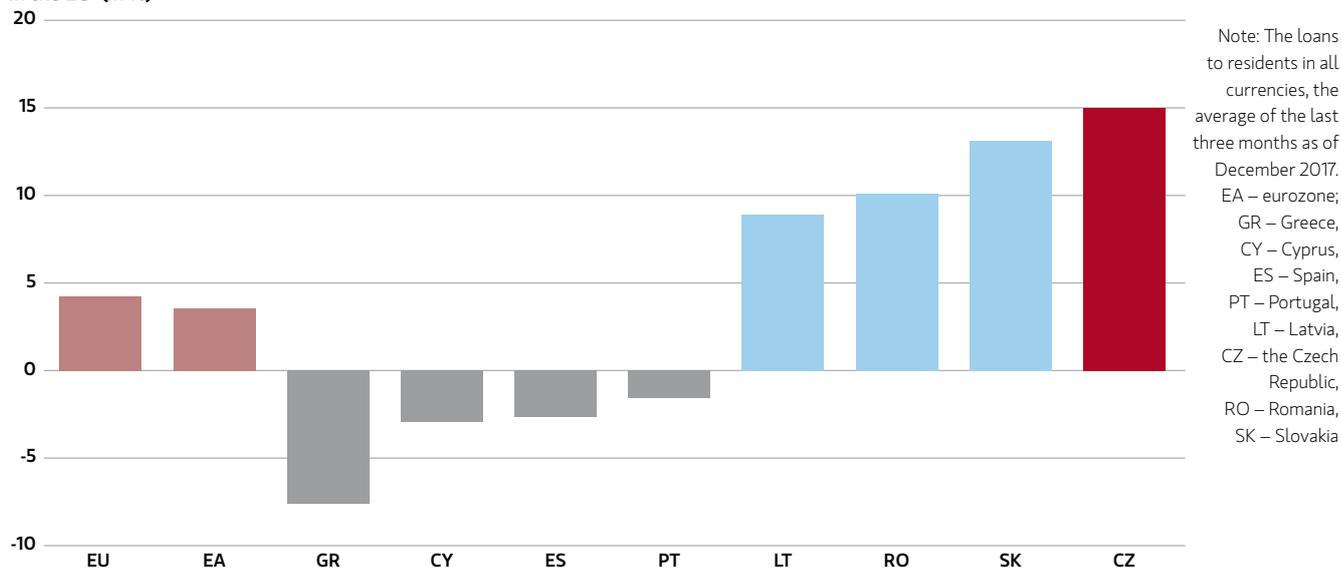gage loans was the same or slightly larger than in the previous year, i.e. 175 billion CZK.

With regard to the tightening of loan to value (LTV) limits since April 1, 2017, which was announced in June 2016, the relatively higher year-on-year growth was recorded in the first quarter of 2017. Since then, the year-on-year growth was mostly negative, but the volumes of new housing loans for households that include unsecured loans provided by building savings banks started to increase again in December 2017.

In response to increasing lending activity, overvaluation of real estate prices and the 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 secured by a residential property. The Recommendation established the quantitative limits of the LTV indicator and qualitative criteria; compliance with these criteria should ensure that credit standards correspond with criteria of rigour and prudence.

Given the increasing overvaluation of residential real estate, the CNB issued the next Recommendation in June 2016, in which it reduced the maximum LTV level. The recommended maximum LTV limit of 100% was therefore reduced to 95% in October 1, 2016, and to 90% from April 1, 2017. The recommended limit of 10% of the volume of new loans with LTV in the range of 90%-100% changed on October

GRAPH 3 The growth of housing loans in the countries with the highest or the lowest rate of their growth in the EU (in %)

Source: ECB

Note: The loans to residents in all currencies, the average of the last three months as of December 2017. EA – eurozone; GR – Greece, CY – Cyprus, ES – Spain, PT – Portugal, LT – Latvia, CZ – the Czech Republic, RO – Romania, SK – Slovakia

HOUSING LOANS DEVELOPMENT IN THE CZECH REPUBLIC

Housing loans, and mortgage loans within them, crucially contributed to the growth of household loans. In 2017, the year-on-year growth of mortgage loans amounted to an average of 9 %, exceeding the growth in 2016 (8.5 %). Real new mortgage loans contributed to the growth the most, their share in the total new mortgage loans last year also increased slightly. The growth in housing loans volume in the Czech economy was one of the fastest in the EU (Graph 3).

The year-on-year growth of new mortgage loans decreased in 2017 from 24 % in 2016 to 7%. However, information about these loans is distorted by the volume of the base from which this year-on-year growth percentage is calculated. The absolute volume of new mort-

1, 2016 to 10% of the volume of new loans with LTV in the range of 85%–95%, and on April 1, 2017 to 15% of the volume of new loans with LTV in the range of 80–90 % (the aggregate limit). 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 2016 and the first half of 2017 shows that the original limits for LTV values were largely respected. The tightened limits valid from the fourth quarter of 2016 and from the first quarter of 2017 were respected in a much lesser extent. The decrease in the volume of loans above the recommended LTV limits was only recorded with the beginning of their validity in both stages of the tightening, even though they were announced in advance.

For loans above the recommended LTV limits, a similar share of loans with risky values of indicators of the client's ability to pay the loan from his/her own resources was recorded as for the total volume of loans. Such indicators include the LTI indicator (loan-to-income, ratio of the loan amount to the annual net income) or DSTI (debt service-to-income, ratio of monthly loan instalment to net monthly income).

The values of these indicators, which are considered to be the threshold above which there is a significant increase of non-performance risks, are 8 % for LTI and 40 % for DSTI. 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 also recorded the growth of the ratio of loans provided through intermediaries, which were provided with higher LTV values more often. This development indicates that providers are exposed to the risk of excessive dependence on intermediaries, which can therefore create pressure on the excessive loosening of credit standards. Moreover, intermediaries advertise the possibility of financing the rest of the needed money with other institutions. The combination of secured and unsecured loans may be in violation of the Recommendation of the CNB as well as with the provisions of the Consumer Loan Act if it leads to the excessive debt of the borrower.

With regard to the frequent provision of loans with higher levels of LTV to clients with the riskiest characteristics, the CNB considered it necessary to adapt the Recommendation in relation to the evaluation of the clients' ability to repay loans from their own resources to loan providers. Therefore, in June 2017 it issued another Recommendation in the form of an official communication. In this Recommendation, it stated that the providers should observe DTI (debt-to-income, ratio of debt and net income) and DSTI indicators, set out their internal limits for these indicators and cautiously evaluate loan applications on their basis.

The CNB did not establish the upper limit of DTI or DSTI indicators with regard to the evaluation of the intensity of systemic risks, but it recommended that providers be particularly cautious when eva-

luating loan applications for applicants whose DTI exceeds 8 % and DSTI exceeds 40 %. This is mainly true for loans with high LTV levels that are subject to the aggregate 15 % limit valid from April 1, 2017.

The CNB also extended the scope of the Recommendation to other loans provided to clients who have negotiated loans secured by a residential property. With regard to the possibility of extending the risks towards non-bank financing providers, the CNB extended the scope of the Recommendation to all providers. The CNB also recommended that providers not create such incentive schemes for intermediaries, the consequence of which are the conditions for the emergence of systemic risks.

The CNB also described its expectations to banks in the form of Supervision Notice no. 1/2017 on household loans provision. Its supervision is ready to address the discovered deficiencies in loan provision in the form of corrective actions and also with a sufficient capital requirement if need be.

The Bank Board decided not to change the existing Recommendation on its December meeting about the issues of financial stability and to focus on a thorough inspection of its compliance. In the first half of 2018, the CNB will focus more on the investigation of the practice of banks with regard to observing DTI and DSTI indicators. The CNB will again seek legislative adjustment with a view to the legal right to establish upper limits of selected indicators (LTV, DTI or DSTI) of mortgage loans in the case of the identification of risks.
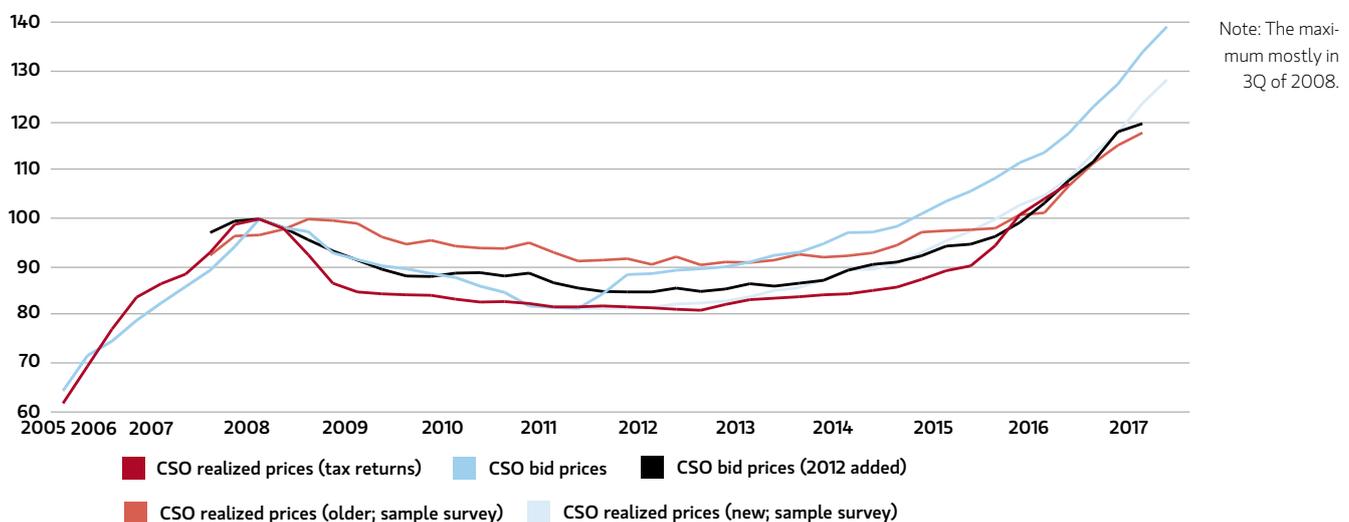
REAL ESTATE MARKET IN THE CZECH REPUBLIC[2]

In 2017 there was a further acceleration in the growth of apartment prices (graph 4 and 5), which was mainly supported by a solid GDP growth related to the improvement in the labour market and the growth of housing loans. The limited supply of new apartments also contributed to the price growth, particularly in Prague. All observed price indices grew across the board for different types of price indices (bid prices compared to realized prices), and different regions (Prague compared to the rest of the Czech Republic).

Year-on-year growths of prices reached 18–19 % during the year, which are the highest values since 2007. In 2017, the apartment pri-

GRAPH 4 Apartment prices in Prague (maximum = 100)
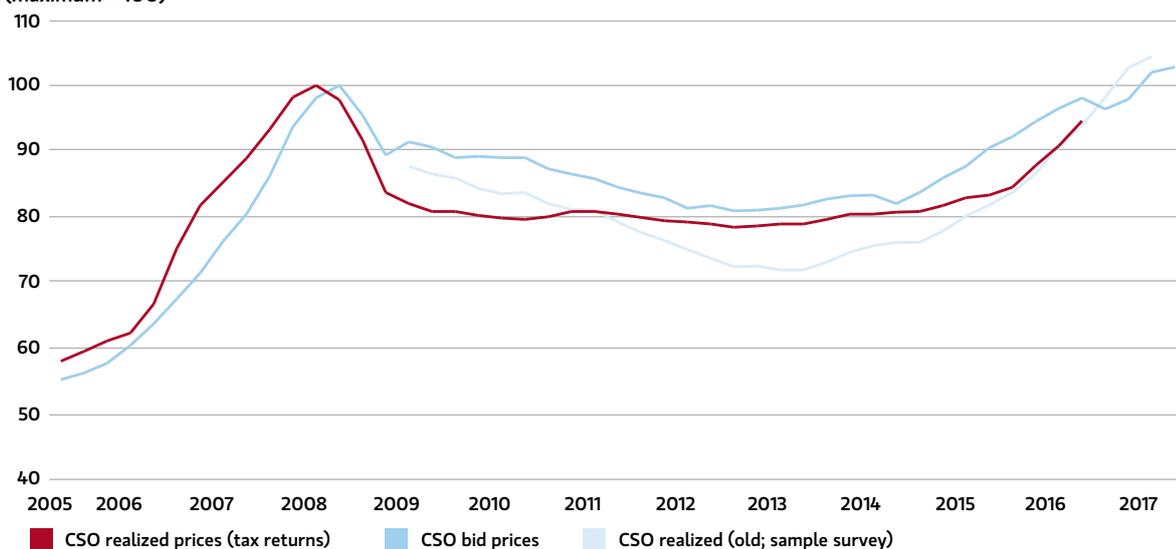
Source: CSO – Czech Statistical Office

Note: The maximum mostly in 3Q of 2008.

CSO realized prices (tax returns)   CSO bid prices   CSO bid prices (2012 added)

CSO realized prices (older; sample survey)   CSO realized prices (new; sample survey)

[2] See more in chapters „Residential market" on page 34 and "Funding real estate" on page 100.

**GRAPH 5 Apartment prices in the rest of the Czech Republic
(maximum = 100)**

Source: CSO – Czech Statistical Office

Note: For the
realized prices of
sample surveys,
data are available
only from 3Q
of 2012, it is tied
with the average
of other prices.

■ CSO realized prices (tax returns)   ■ CSO bid prices   ■ CSO realized (old; sample survey)

ce level is above the level of its previous cyclical highs from 2008 for all types of prices both for Prague and for the rest of the Czech Republic.[3] Various types of price indices show surprisingly similar apartment price levels, which are approximately 20% above the level of previous cyclical highs in Prague and approximately 3–4% above the rest of the Czech Republic.

In the Financial Stability Report 2016/2017, the CNB declared the largest domestic risk to be the continuation of twisting the spiral of apartment prices and loans for their purchases. At the end of 2018, the CNB published a new publication focused on the financial stability called Risks to financial stability and their indicators – January 2018 on its website. It states that data for the first half of the year show a continuation of twisting this spiral mainly with regard to the volume of new housing loans in relation to wages. It also states that the CNB's model-based approach indicates that housing prices were overvalued by around 10% in mid-2017.
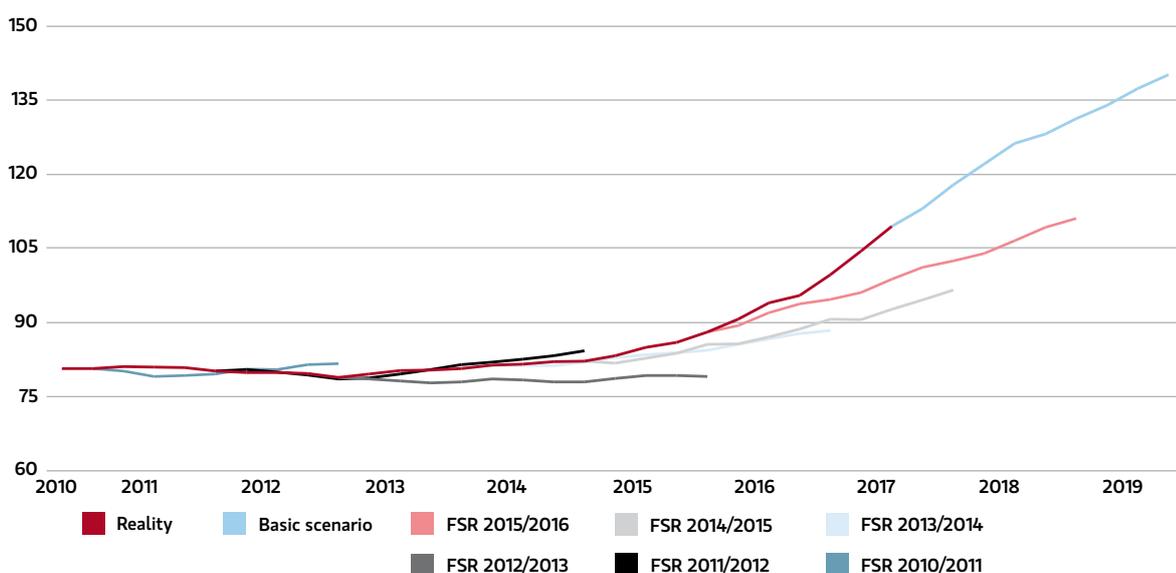
When assessing the equivalence of real estate prices, the CNB works with realized apartment prices from tax returns for the whole country, which are complemented by the development of the realized prices from sample surveys and bid prices for the missing period. The index calculated this way was 12.6% higher at the end of 2017 compared to the end of 2008.

REAL ESTATE PRICE FORECAST

In addition to the initial overvaluation of prices, the residential real estate market in the coming years will mainly depend on the future 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 published in June and the Update of these tests may be a partial clue published in December.[4]

GRAPH 6 Real estate price scenarios (maximum (3Q of 2018) = 100)

Source: CNB calculations

Note: FSR –
the basic
scenario from
the Financial
Stability Report.

■ Reality   ■ Basic scenario   ■ FSR 2015/2016   ■ FSR 2014/2015   ■ FSR 2013/2014

■ FSR 2012/2013   ■ FSR 2011/2012   ■ FSR 2010/2011

[3] Bid prices in Prague are higher even after the unrealistic price growth in the first half of 2012 when they grew by almost 9%. This growth was not in accordance with data on tender prices from alternative sources, according to which the prices dropped in this period.
[4] It is necessary to also be aware of the fact that the mentioned scenarios are not designed for the purpose of predicting prices as precisely as possible, but for the evaluation of possible negative impacts of real estate price development to the ability of households to pay their loans, and to the profitability of the sale of securities of these loans. The scenarios are therefore intentionally conservative to overestimate the potential negative impacts to banks' balance sheets.

In the past four 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 in these scenarios. Besides the fact that apartment prices were undervalued in the scenarios and these scenarios were intentionally designed as conservative, the faster apartment price growth compared to the scenarios can be explained mainly by a better development in the labour market than was expected, and a significant decrease in housing loans interest rates.

Despite the mentioned insecurities, it is still possible to draw certain conclusions from the presumptions of the last stress tests from[5] December 2017. If the economy developed according to the Baseline scenario of these tests (Graph 6), real estate prices would maintain a dynamic growth of about 13–15 % for the rest of 2018, while maintaining the historic links between indicators; in 2019, the growth should slow down to 9 %. The residential real estate prices would stay overvalued with such price development and with regard to the development of fundamental determinants.

The tightening of credit standards in response to the Recommendation of the CNB with regard to the provision of mortgage loans and gradual increase of interest rates from housing loans should slow down the rate of apartment price growth, and the level of the overvaluation should decrease. However, if the housing in large Czech cities should become more available, the ability of authorities and market participants to respond to the growth of demand and demographic changes by a more intense construction of new apartment houses and detached houses should increase.

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6 These stress tests are based on the CNB's macroeconomic forecast from November 2017. The latest CNB forecast from January 2018 was not projected in the scenarios. The differences between both macroeconomic forecasts, however, are not very significant (see last CNB Inflation Report).