

PROBE: MACROECONOMIC DEVELOPMENT AND REAL ESTATE PRICES IN THE CZECH REPUBLIC AND AROUND THE WORLD

According to the International Monetary Fund's January estimate, the global economic output increased by 3.8% in 2018, which is only 0.1 percentage point more than in 2017. In 2019 and 2020 global growth is expected to decline to 3.5% due to weaker economic activity in developed countries. From the perspective of domestic economy, GDP growth forecasts in the euro area are of significant importance, predicting the continuation of the moderate slowdown of growth that started last year.

According to the March estimate of the Czech Statistical Office, GDP in the Czech Republic increased by x.x% (data will be available on March 1). The January forecast of the Czech National Bank (CNB) expects that the growth of the Czech economy will slightly increase to 2.9% and 3% in the next two years.

Labor market tensions will keep wage dynamics at a high level. The average monthly wage should increase by almost 7% this year, but then its growth will slow down, and in 2020 it should be slightly above 5%.

The dynamics of bank loans to the private sector in the Czech Republic remained strong throughout last year, and they were among the highest in the EU. Monthly volumes of truly new loans to households and mortgage loans were at a high level and reached historic records throughout 2018. Over the next two years, the growth of the overall status of these loans will decline, and the volumes of truly new loans will probably not exceed last year's level due to a number of factors, including the macroprudential measures of the CNB.

Realized housing prices continued to grow in 2018, and they continued to be rated by the CNB as overvalued. If the expectations of the current forecast of domestic macroeconomic developments are fulfilled, housing prices should continue to grow this year too, but their growth rate should gradually slow down.

EXTERNAL ENVIRONMENT AND WORLD ECONOMIC ACTIVITY

The economic growth of the world economy began to slow in 2018. The slowing of dynamics concerned both developed and developing economies. At the beginning of this year, there was a noticeable downward reevaluation of the outlook for this year and next year. Table 1 shows the averages from the January forecast of world analysts (Consensus Forecast) for this year and 2020.¹

The causes of the current and expected weakening of economic growth are many. It is partly due to the worsening of market

sentiment, specifically concerns about protectionist sentiments or the messy departure of the UK from the EU. In the case of a number of European countries as well as China, it is also due to effects linked to the persistent or growing high indebtedness of governments and the private sector. In the case of higher interest rates, this would be reflected in a significant increase in debt service, an increased amount of delinquent debtors and a weakening of household consumption. The slowdown in the German economy, which is associated with declining industrial activity, including the automotive industry, is a specific problem for the domestic economy. In summary, however, prospects for future economic development are associated with a high level of uncertainty.

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

Source: ConsensusForecast, leden January 2019

| | CZ | EA | SK | DE | UK | PL | CEE | RU | US | LA | AP | CN |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 2018 | 2,9 | 1,9 | 4,2 | 1,5 | 1,4 | 4,6 | 3,1 | 1,7 | 2,9 | 1,5 | 4,8 | 6,6 |
| 2019 | 2,8 | 1,5 | 4,0 | 1,4 | 1,5 | 3,9 | 2,1 | 1,5 | 2,5 | 2,1 | 4,6 | 6,2 |
| 2020 | 2,6 | 1,4 | 3,3 | 1,6 | 1,6 | 3,3 | 2,6 | 1,8 | 1,8 | 2,7 | 4,4 | 6,1 |

Note: CZ – Czech Republic, EA – eurozone/euro area, 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 Asia-Pacific Region countries, including Japan, CN – China.

¹ ConsensusForecasts: a regular monthly publication by Consensus Economics summarizing the forecasts of hundreds of prominent economists and analytical teams concerning future developments.

Long-term interest rates in developed countries increased slightly over the past year. This is particularly true for countries that have continued to normalize monetary policy (USA, CR, Canada), or have begun to step back from negative or zero monetary policy rates (Norway, Great Britain). However, the increase in long-term yields was generally lower than that of money market rates, with the yield curves remaining very flat. At the end of last year and the beginning of this year, there was a further flattening of yield curves. Towards the end of January 2019, the yield of a one-year Czech government bond was identical to that of a five-year bond. A similar situation prevailed in the US government bond market. The inversion of the koruna and dollar interest rate swaps was even more noticeable by the end of 2018. These developments at international level particularly reflected the expected slowdown or halt of further increase in the US FED's monetary policy rates and the postponement of the ECB's normalization of monetary policy. These developments mean that interest rates on long-term loans, including mortgage loans, are likely to remain at very low levels in developed countries in the years to come.

The outlook for commodity price developments remains very conservative due to the slowdown of economic growth in the world's major economies. In the first half of January, the price

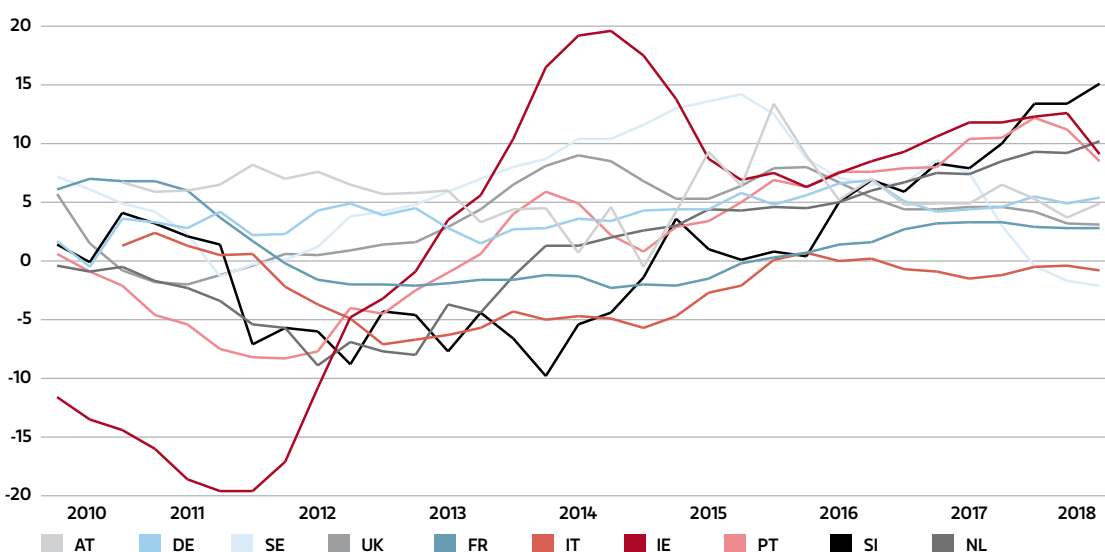
of Brent crude oil was above 60 USD/ barrel, and it should remain close to this level in the next two years according to the market curve of futures contracts. This should also contribute to the fact that inflationary pressures will remain subdued in most countries despite economic recovery.

DEVELOPMENT IN FOREIGN REAL ESTATE MARKETS

Loose monetary conditions contributed to the continuing growth in real estate prices in most EU countries in 2018 (graphs 1 and 2). However, year-on-year dynamics did not accelerate further in 2017 and they stayed around 5%. In the euro area, real estate prices grew fastest in Slovenia, the Netherlands, Portugal and Ireland, i.e. countries that have undergone a major price correction after the financial crisis. On the contrary, real estate prices in Italy continued to decline. In countries outside the euro area, real estate prices particularly declined in Sweden, reflecting the impact of regulatory measures and increased construction.

In Central and Eastern Europe, residential real estate prices grew at a slightly faster rate than in the most developed EU countries. Dynamics across the region were relatively homogeneous in 2018. In comparison with previous years, the year-on-

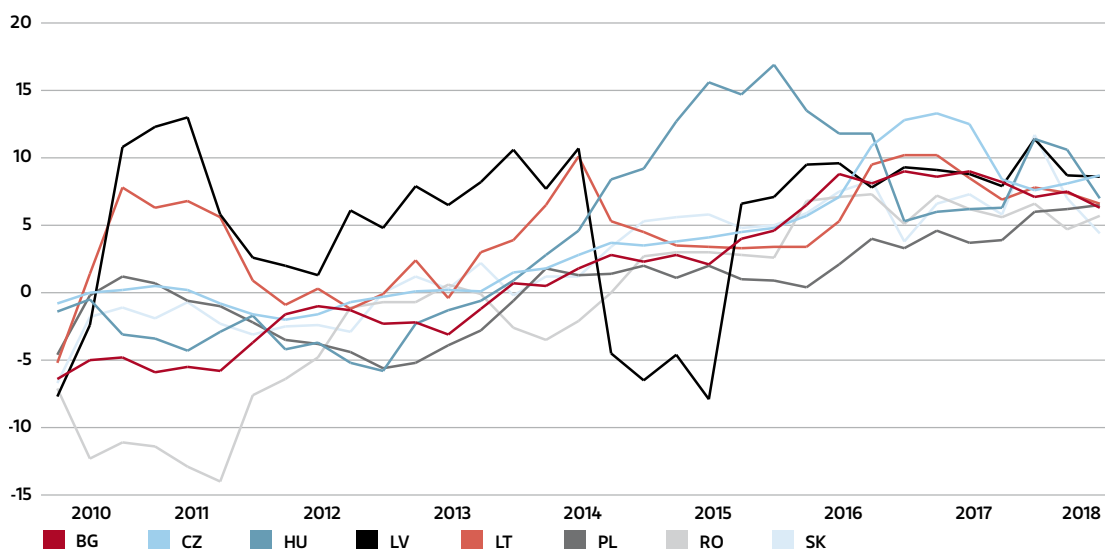
GRAPH 1 Real estate prices in selected developed EU countries



Source: Eurostat

Note: Real estate prices are measured using the HPI index (House Price Index), which has a unified methodology across EU countries. It includes the prices of flats, family houses and adjoining plots.

GRAPH 2 Real estate prices in Central and Eastern Europe



Source: Eurostat

Note: Real estate prices are measured using the HPI index (House Price Index), which has a unified methodology across EU countries. It includes the prices of flats, family houses and adjoining plots.

-year price increase in Poland has accelerated and it is coming close to the development in other countries in the region. In the Czech Republic, the dynamics of real estate prices have weakened markedly year-on-year, and they ceased to be the highest among EU countries. Despite this, the Czech Republic continues to rank among countries with the fastest growing real estate prices.

THE DOMESTIC MACROECONOMIC ENVIRONMENT AND ITS OUTLOOK

In addition to domestic economic policies, further development in the external environment, especially in the euro area, will continue to be a decisive factor for the development of the Czech economy. The euro area economy slowed down in the third quarter of 2018, mostly due to Germany and Italy where GDP declined by 0.2% and 0.1% quarter on quarter. In Germany, industrial production was negatively affected by one-off factors linked to the transition to new emission standards in the automotive industry, as well as lower exports to China. The PMI index in the manufacturing industry across the euro area continued to decline since the beginning of 2018, and in January it was just slightly above stagnation level. The outlooks on which CNB forecasts are based predict a relatively moderate slowdown in the growth rate of the effective GDP indicator in the euro area to 1.5% from last year's 2%.²

The growth of the Czech economy slowed down in 2018. The CNB's January forecast predicts that the growth of domestic economy will be close to three percent this year and next year (table 2). The increase in domestic economic activity will be primarily driven by the growth in household consumption, which will continue to reflect the rapid dynamics of its income. In market sectors, wage dynamics will be just below 7% in 2019. Wage growth will then gradually slow down to the projected long-term 5% threshold, also due to the efforts of enterprises to maintain price competitiveness. Growing demand and a still clear shortage of available workforce motivate domestic firms to invest. Government investments will continue to grow, mainly due to the increased use of European funds.

Inflation, which reached 2.1% in 2018, declined slightly in the fourth quarter of 2018 due to a downturn in food prices and a decline in fuel dynamics. The CNB's January forecast predicts that after a temporary increase at the beginning of 2019, it will return to the 2% inflation target, where it will remain for the next two years. Overall inflationary pressures will be relatively strong, in particular due to the tense labor market situation. However, inflationary pressures from the domestic economy will be partly offset this year by the intensifying anti-inflationary effect of import prices. This will stem from the slowing growth of foreign prices and the renewed appreciation of the koruna's exchange rate. Along with slowing wage growth, this

TABLE 2 CNB's January forecast (in %)

Source: Inflation Report I/2018, CNB.

| | HDP | Inflation | 3M PRIBOR | Exchange rate | Wages | Unemployment | Current account |
|------|-----|-----------|-----------|---------------|-------|--------------|-----------------|
| 2018 | 2.8 | 2.1 | 1.3 | 25.6 | 8.4 | 2.3 | 0.5 |
| 2019 | 2.9 | 2.2 | 2.1 | 25 | 6.9 | 1.9 | 0.4 |
| 2020 | 3.0 | 2.0 | 2.1 | 24.2 | 5.4 | 1.8 | 0.3 |

Note: GDP – real gross domestic product (year-on-year growth in %); Inflation – consumer price growth (in %, %); 3M Pribor – 3-month money market rate (%); Exchange rate – CZK/EUR exchange rate; Wages – average nominal wage (year-on-year growth in %); Unemployment – general unemployment rate (in %); Current account – ratio of the current account balance to GDP (%).

will lead to a gradual slowdown in overall inflationary pressures and a stabilization of inflation at the target rate.

According to the forecast, the koruna's exchange rate will continue to strengthen. One reason for this will be the gradual waning of negative sentiment in foreign exchange markets towards emerging economies, which will be supported by the extended interest rate differential vis-à-vis the euro area.

The koruna's exchange rate prediction for 2019 expects it to strengthen to an average of 25 CZK/EUR. This will particularly be reflected in the increase in the interest rate differential vis-à-vis the euro area and the impact of the ECB's continued purchases of assets until September 2018. The real convergence of the Czech economy with eurozone countries associated with increasing labor productivity will take effect in the same direction. In 2020 the exchange rate should continue to strengthen. At its February meeting, the CNB Bank Board stated that the potential slower appreciation of the koruna exchange rate compared to the forecast is an inflationary risk.

At the February currency meeting, the CNB Bank Board kept the 2T repo rate at 1.75%. This decision is reflected in the fact that the approximate stability of interest rates is consistent with the new forecast. The pressure on higher rates is mainly generated by the currently weakened koruna exchange rate, which dampens the anti-inflationary effect of import prices. The so far significant domestic inflationary pressures and the gradual leakage of the increased dynamics of regulated prices into other components of inflation also take effect in the same direction. The renewed appreciation of the koruna exchange rate with remaining negative rates in the euro area until the end of 2020 will have the opposite effect on rates. The stable outlook for short-term interest rates and a moderate decline in long-term rates should also be reflected in the interest rate stability of loans granted to non-financial corporations and households, as well as in credit demand.

CREDIT DYNAMICS IN THE CZECH REPUBLIC

Bank loans to the private non-financial sector maintained ro-

² Foreign real development is approximated by the euro area's effective indicators (also the "effective euro area") for the CNB's forecast. In its calculation, the weightings of individual euro area countries correspond to their share in the total exports of the Czech Republic to the euro area. Outlooks of the GDP of the Czech Republic's major trading partners (especially Germany and Slovakia) have a greater weight than their share in the euro area as such.

bust dynamics in 2018 and increased year-on-year by 6.8% in December. From a long-term and medium-term perspective, the year-on-year growth rate of loans to households (7.6%) and non-financial corporations (5.7%) is above average. The continued growth of economic activity, the improvement in the income situation of the population and continuing favorable conditions for drawing loans were reflected in this development. Due to the low materialization of credit risks, credit risk margins remained at relatively low levels and helped mitigate the effects of rising monetary policy rates on client interest rates.

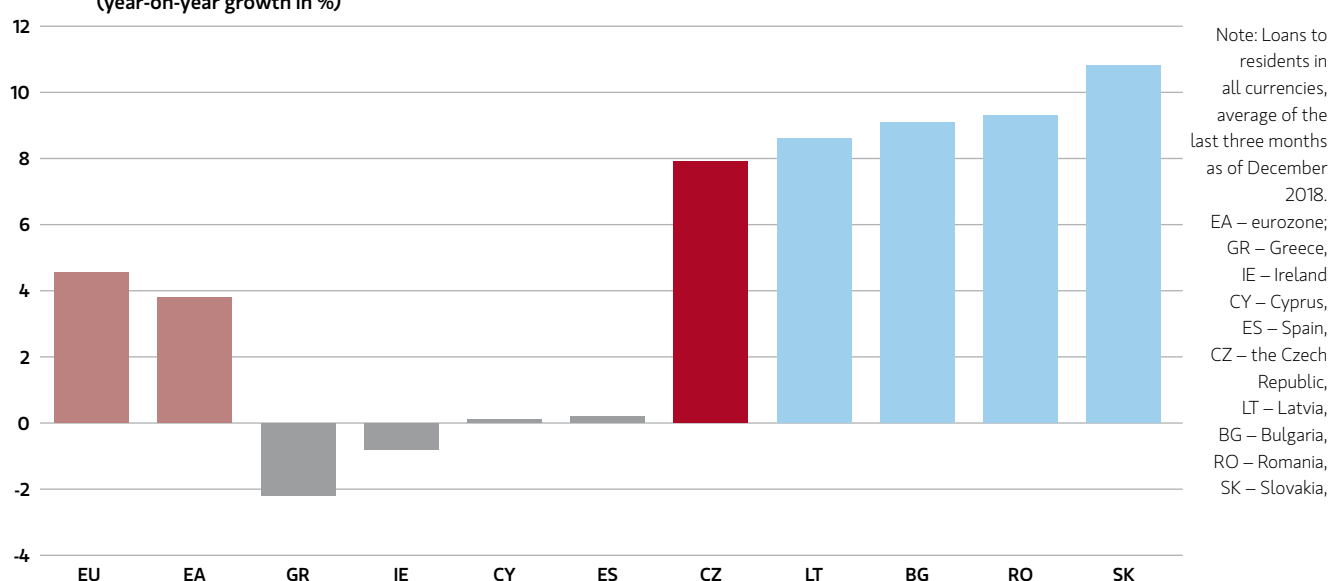
In non-financial corporations, credit dynamics have seen mixed cross-sectoral developments. The drawing of loans significantly accelerated in construction, real estate and ICT sectors. Long-term robust credit dynamics are reported by enterprises in the manufacturing sector. On the other hand, the rate of credit growth in the mining and quarrying sector and the energy sector continued to decline. In terms of the monetary structure, we can see relatively fast drawing of loans in foreign currencies (15.5% year-on-year in December 2018). However, the year-on-year growth after the temporary drop in mid-2018 has reached only about half the level reported at the beginning of 2017. The ratio of foreign currency loans to total loans to the sector has risen steadily, and it has almost doubled in the last ten years (31.1% in December 2018).

In households, the growth of housing loans remained at high levels. Year-on-year dynamics ranged between 8% and 9% throughout 2018. The slight increase in growth rates over the last quarter may be related to the effect of redemption in the form of increased drawing of new mortgage loans prior to the validity of recommended limits for the DTI (debt-to-income ratio) and DSTI (debt service to income ratio) indicator. In the coming months, it is therefore possible to assume that the dynamics of mortgage loans will decrease slightly again and compensate for this effect. However, the slowdown in the growth rate of housing loans in 2019 will not be significant according to the CNB. In an environment of economic growth and optimistic consumer sentiment, consumer credit growth accelerated significantly (6.4% year-on-year in December 2018). It has been continuously strengthening since the beginning of 2016.

According to the Credit Conditions Survey, credit standards for loans to non-financial corporations remained virtually unchanged during 2018. Banks reported increased demand, particularly for loans to finance fixed business investments. In the fourth quarter of 2018, housing loans experienced a tightening of credit standards in line with the implementation of the CNB's macroprudential measures with respect to DTI and DSTI limits. In relation to this, standards for consumer credit also tightened.

GRAPH 3 The growth of loans to households in EU countries with the highest and lowest rate of their growth (year-on-year growth in %)

Source: ECB



Banks expect that tightening standards will lead to a decline in demand for credit, especially for housing loans.

THE DEVELOPMENT OF HOUSING LOANS IN THE CZECH REPUBLIC

Household loans, including mortgage loans, have traditionally been a major contributor to the growth of loans to households. At the same time, the importance of unsecured housing loans strengthened, especially those provided by building societies. The year-on-year housing loan growth averaged 8.5% in 2018, declining slightly compared to the previous year. However, it is

necessary to realize that these are similar percentage increases in an ever-increasing base. The growth in housing loans was one of the fastest in the Czech Republic (Graph 3).³

The CNB has long pointed out that the indicator that best describes the extent of the debt financing of real estate by banks is the volume of new loans. These include an increase in previously provided loans and new loans that entered the economy for the first time in the given period. The volume of new loans does not include refinanced loans that have been previously provided by another institution and have only been transferred from one bank to another. The total volume of housing

³ "Households" is an aggregate term used in CNB statistics meaning "population".

financing through “new mortgage loans” and other new loans granted to households for housing purposes increased year-on-year by 15 billion CZK in 2018 to a historic maximum. In 2018 banks granted 187 billion CZK in new mortgage loans, while in 2017 their total volume was 174 billion CZK. After adding other housing loans (especially unsecured building savings loans), the volume of new housing loans was 232 billion CZK, as compared to 217 billion CZK in 2017. The only loan category with a year-on-year decline are refinanced mortgage loans, whose volume declined by less than 4 billion CZK year-on-year to 35 billion CZK. However, this is not related to the CNB’s regulation of mortgages, because it does not apply to refinancing loans.

The figures above indicate that the pessimistic forecasts of a significant downturn in the mortgage market did not materialize in the last quarter of last year. These predictions were based on the assumption that in providing new loans, banks should respect the upper limit of the DTI indicator at 9 times the applicant’s net annual earnings, and (DSTI) at 45% of the applicant’s net annual earnings from October 2018 onwards. Following the CNB’s announcement of these measures in June 2018, banks communicated that these measures could “eliminate” a significant percentage of loan applicants from the market. In October and November last year, that is, after the introduction of DTI and DSTI limits, the monthly volumes of new mortgage loans were actually higher than in the previous year. However, in December the volume of newly granted mortgage loans started to decline year-on-year. The CNB acknowledges that due to its macroprudential measures there will be a certain year-on-year decrease in the volume of new mortgage loans this year, but to a relatively small extent. The downward trend is likely to affect the high level of interest rates as well. However, these are still very low in view of the rapid growth of disposable incomes of households.

In December 2018, the CNB published data from the “Secured Residential Real Estate Loan Survey” (hereinafter referred to as the Survey). This survey is conducted half-yearly and contains detailed information about individual loans. The data indicate how banks approach the implementation of the rules contained in the official announcement “Recommendation on

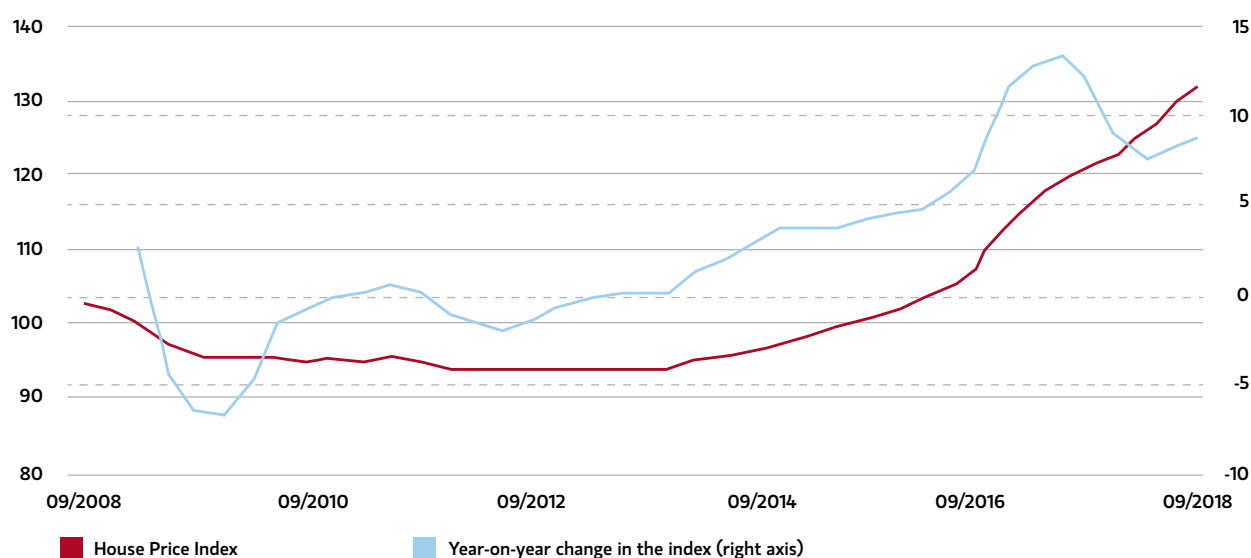
Risk Management Associated with the Provision of Secured Residential Real Estate Loans” (hereinafter referred to as the “Recommendation”). Data from the survey of the first half of 2018 confirmed that banks are predominantly progressing with LTV limits in line with the current valid Recommendation. Loans with 80-90% LTV dropped in June 2018 to less than 11% of new loan production, thus adhering to the recommended 15% limit at an aggregate level. The amount of loans with LTV above 90% was below 3% in the first half of 2018, and it declined to 2.5% in June. With regard to the deceleration in housing price dynamics, the rapid growth of household incomes and the halted increasing overvaluation of housing prices, the CNB has identified the current LTV limits as sufficient, albeit beyond the boundary. Data point to the natural tendency of providers to value accepted collateral at current market prices during good times, regardless of the fact that the prices may be overvalued in the growing phase of the cycle.

The CNB does not yet have data on the DTI and DSTI indicators broken down according to individual loans, and it therefore evaluates risks based on the LTI and LSTI indicators. The breakdown of loans according to the LTI and LSTI indicators remained stable. The amount of new loans with LTI between 8 and 9 remained the same in comparison with the previous half year, and for loans with LTIs above 9 it decreased from 7.9% to 6.5%. The amount of loans with LSTI between 40–50% and 50-60% increased slightly (from 8.5% to 9.2% and from 1.9% to 2.3% respectively). On the contrary, the amount of loans with LSTI above 60% slightly decreased. The Survey also shows that mortgage loans with LTI above 9 in the first half of 2018 accounted for only 6.5% of loans (8% in the second half of 2017), and loans with LSTI above 45% accounted for only 5.8% of loans (6.2% in the second half of 2017). Given that loans in both categories partially overlap, in the first half of 2018 the volume of just under 9% of loans granted (10% in the second half of 2017) would not “pass through” LTI above 9 or LSTI above 45%. The shares of new loans granted with LTI and LSTI in higher categories do not appear to be high at first glance. However, a number of applicants still have other financial obligations according to the statements of providers.



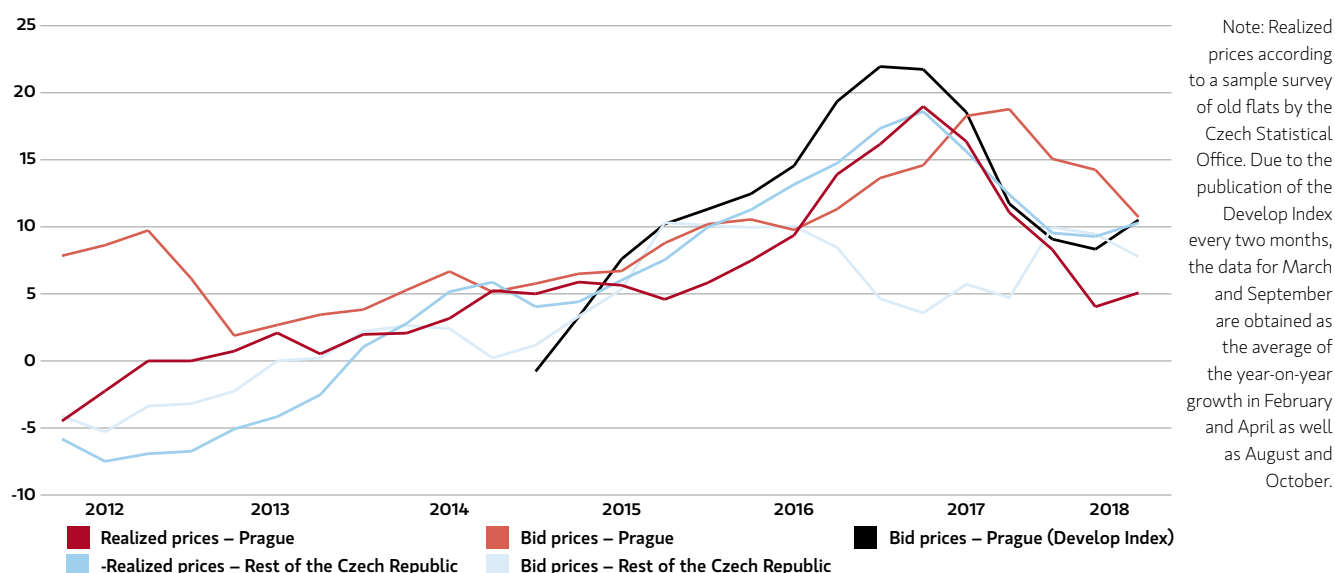
GRAPH 4 Realized residential real estate prices in the Czech Republic (2015 = 100; right axis: in %)

Source: Czech Statistical Office



GRAPH 5 The growth of realized prices and bid prices of flats (year-on-year growth in %)

Source: Czech Statistical Office, Price map/Deloitte



As a result of the increase in interest rates on new mortgage loans, people from the banking sector are starting to say that higher interest rates will contribute to a decline in demand for mortgage loans, and that the DSTI indicator will become the main constraint in granting loans to applicants with “borderline” income. At the interest rates prevailing at the beginning of this year and the maximum permissible loan maturity of 30 years, both indicators lead to an almost identical maximum loan amount. We can agree that with the rise in interest rates, the DSTI indicator would become a source of limitation of the maximum receivable loan at the current 4.5%. The CNB is aware of the DSTI indicator’s preventative importance, especially in the period of exceptionally low interest rates, and their increase to usual levels would make the indicator somewhat purposeless. Earlier this year, some CNB representatives have said in the media that if mortgage loan rates were to continue to grow, it would be possible to consider loosening the DSTI indicator.

THE REAL ESTATE MARKET IN THE CZECH REPUBLIC⁵

Household prices increased noticeably slower in 2018 (Graph 4), but prices grew at a slightly faster pace than would correspond with the growth in household loan capacity, which is based on income dynamics and client interest rates, indicating the amount of achievable credit that the average household can safely repay. Realized prices of flats in Prague and the rest of the Czech Republic also developed in accordance with the development of the aggregate real estate index. Their dynamics also dropped significantly compared to 2017 (Graph 5). The situation with bid prices of flats in Prague and the rest of the Czech Republic differed, as the average growth rate in Prague decreased in 2018 and increased in other regions. The observed development led to a further increase in the overall level of residential real estate prices. Compared to the previous price peak in 2008, current real estate prices are nearly 30% higher. In large cities, high prices are affected by an insufficient

supply of flats, which is a consequence of current legislation and practice in the area of building management.

In its earlier documents, the CNB said that it considered the continuation of spiraling between real estate prices and loans to finance them as the most significant source of systemic risk (see Financial Stability Report 2016/2017). The relationship between the two variables is reinforced on one hand by the optimism of households regarding the ease of future repayment of received debts and, on the other hand, it is driven by the expectations of high appreciation of purchased real estate due to the rapid growth of prices. Recent analyses indicate (see “Risks to financial stability and their indicators” – December 2018) that there is a certain downturn in the spinning of this spiral, but the conditions for financing the purchase of real estate remain attractive. High demand for owner-occupancy coupled with record volumes of new mortgage loans can help reinforce the loops between real estate prices and loans. Newly used indicators of long-term sustainable (“fundamental”) real estate prices indicate the extent of overvaluation of apartment prices ranging from 11% to 14% for the second half of 2018, and they show that the increased optimism rate is still present in the residential real estate market.

REAL ESTATE PRICES OUTLOOK

The situation in the residential real estate market will be affected by demand and supply factors in the coming years. In line with the CNB’s current macroeconomic forecast, moderating pressure on residential real estate price inflation may be expected on the demand side due to the slowdown in household income dynamics and the gradual leakage of rising monetary policy rates into client interest rates on housing loans. A certain slowdown in price dynamics can also be expected in the context of the adopted macroprudential measures in force since October 2018. These measures recommend restricting the granting

⁵ Also see chapters “The residential market” on page 30 and “Real estate financing” on page 80.

of high mortgage loans to clients with risky income characteristics. Given the insufficient supply of apartments in large cities (especially in Prague, where over 60% of all residential real estate transactions are realized), the decline in real estate price growth is unlikely to be dramatic. Due to the long-term nature of the constraints on the flat supply side, price developments are likely to show a high level of persistence, and realized prices will only approach fundamental values gradually.

The quantitative forecast of residential real estate price growth in the following years is subject to considerable uncertainties. If the economy develops in line with the scenario that corresponds to the forecast of Inflation Report I/2019, price dynamics should gradually slow down and approach 5% by the end of 2019. In the next two years, the year-on-year growth rate of real estate prices should be around 3–4%.

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PROBE: THE FUTURE OF HOUSING IN PRAGUE

Apartment prices in Prague increased by a record 38.4% compared to last year.
The price of floor space in Prague is around 100,000 CZK/m².

The city does not have a sufficient number of municipal apartments to effectively enforce rent control. More than 8,000 new apartments would need to be built every year to meet the demand that dramatically exceeds the supply and affects real estate prices. Realistically, however, not even half of this amount is built due to complicated approval processes. As a result, young Czechs who cannot afford to live in the metropolis are migrating to suburban satellite towns where new family houses are being built. This suburbanization is unsustainable in the long term, and it is economically unfavorable for the city and municipalities. New settlements lack civic amenities, and everyday transfer to Prague causes congestion in the suburban transport infrastructure. The construction of new apartments inside the city, revitalization and renovation of brownfields to thicken urban development is a solution to this. However, without a new building act that simplifies the process of authorizing new construction, shortens extreme waiting periods and makes the bureaucratic apparatus more effective, it will not be possible to circumvent this at present.

AWAY FROM THE CITY

According to sociological surveys and analyses prepared by the Prague Institute of Planning and Development (IPR), the ideal type of housing for more than 42% of the Prague population is a family house (32% prefer tenements, 25% prefer tower block apartments). People prefer living on the outskirts or the "hinterland" of the city as opposed to directly in the center and the area surrounding the center. The process of suburbanization, i.e. the relative growth of the city's boundaries against the city itself, has been taking place in Prague for a long time since the fall of the communist regime. Today, it is progressing the fastest of all Czech cities, and it is double the European average.

Since 2001, about 85,000 inhabitants arrived in the city's outskirts (the same amount as in the whole of Pardubice); however, over a longer period and in a broader limit, Prague suburbs have nearly 200,000 inhabitants (more than Plzeň). Suburbanization took place with the greatest intensity in the period 2006-2009, and since then there has been a slight decline in the value of the migration balance between Prague and the Central Bohemian Region. intensity has been decreasing for the last four years, with significantly rising real estate prices, the arrival of new CNB mortgage lending regulations and other factors. Nevertheless, the number of emigrants from Prague has long exceeded the number of immigrants.¹

Nupaky, with the highest relative increment, and Jesenice, with the highest absolute increase, are the municipalities in the Prague area that record the greatest influx of new inhabitants. Since 2001, the population of Nupaky has increased from just 74 to 1,674, while the population of Jesenice increased by 6,710

new inhabitants. Other destinations affected by suburbanization migration include Klecany and Bořanovice in the north, Hostivice, Rudná and Zbuzany in the west, Březany, Liběň and Psáry in the south, and Mukařov, Květnice and Horoušany in the east.

Although forecasts expect a gradual reversal of this trend and a return of immigrants to the city (the children of those who moved to the suburbs in the 1990s), this is only expected around 2030. In the key 5-10-year horizon, a significant reversal in the suburbanization process cannot be expected.

(NON)BENEFICIAL MIGRATION

The main causes of migration to Prague's hinterland are high prices of real estate, namely apartments in the metropolis. In association with the CNB's mortgage regulations in recent years, middle-class young people aged 26-36 are virtually excluded from active participation in the real estate market. Taking the average gross wage in the capital city, according to last year's analysis of KPMG and Central Group, the average Prague citizen needs more than twelve times their annual salary to buy a 65 m² apartment.² As soon as he reaches this quota, a Prague citizen will most likely prefer a family house with a garden to a 2+1 apartment in an urban area.

In addition to real estate prices themselves, disproportionately high rents that the city can't do anything about contribute to suburbanization. To regulate rent, the city needs to control at least 15% of the housing stock, but municipal housing is being gradually privatized since 1991. According to KPMG's analysis, in September 2016 approximately 35,000 dwellings remained from the original stock, which amounted to approximate-

¹ The difference between the number of immigrants and emigrants in the monitored territory.

² This is taking into account the gross wage, which amounted to 39,688 CZK in the second quarter of 2018, and costs of acquiring an apartment amounting to 5.7 million CZK. Source: Czech Statistical Office and cenovamapa.org.

ly 194,000 housing units in 1991. That is 18% of the original number and only 5% of the total housing stock, which is about 610,000 apartments in Prague. Therefore, over the course of 25 years, the city has effectively dropped its rent control capability, contributing to the current difficult situation.

Municipalities themselves are also involved in the emigration trend, for which new construction means an inflow of funds. New buildings are often built on arable land and cause capacity problems. The suburbs are not prepared for the onslaught of new immigrants in terms of amenities, which have not been built in the past due to their long-term low population.

Most inhabitants of the area surrounding Prague continue to work in the capital, creating a constant strain on the traffic network, which is consequently collapsing. The often several-kilometer-long columns forming every morning on the main roads towards the city are sufficient proof of this.

The development of Prague suburbs represents a considerable traffic, economic and ecological burden for which the region is not effectively prepared at the moment. While improving the quality of the transport network and renovating it would help, the forecasts do not sound too favorable in this case either, also because Prague and the Central Bohemian Region are not mutually coordinated as self-governing units in their actions.

INSIDE SOLUTION

The revitalization of Prague's brownfields³ is an option with the potential to relieve the current housing crisis. These unused areas occupy up to 940 hectares of Prague's territory close to the center, and up to 1,400 hectares in the surrounding area, as shown by the IPR analysis presented in September 2018. The largest of these areas is located in the Vysočany-Hloubětín area and includes the premises of the former ČKD, the Tesla Hloubětín site, Nová Harfa and Barvy Tebas. We can find more at Bohdalec, Bubny, Smíchov, Letňany or Rohanský ostrov. The analysis identifies a total of 11 areas that could provide a home for up to 152,000 people in the event of successful revitalization.

Brownfields offer a much better opportunity for development than further construction on the outskirts of the metropolis, which pushes Prague's housing estates further into suburban landscapes, leading to undesirable effects. There is a settlement mess around Prague: loose building of satellite towns and storage halls, which transforms the original free landscape into something that is neither a real city, nor a meadow or a field. Because of the need to build a transportation, technical and civic infrastructure, this approach is inefficient in terms of investment and sustainability. On the contrary, building within the city boundaries in transformation areas is more ecological and economical. There is still room for thickening the area. Compared to nearby metropolises such as Munich or Vienna, the population density in Prague is almost half of that in these cities⁴.

The problem lies in the fragmentation of the ownership structure of most of the areas in question. The above-mentioned 220-hectare Vysočany-Hloubětín area, which can provide accommodation for more than 33,000 citizens, is currently owned by 31 entities. In the past, the state sold these areas regardless of the city's needs, which, of course, currently places Prague in a difficult negotiating position.

This is why Prague councillors commissioned the IPR in January 2019 to draw up an overview of selected brownfields that will show which of these areas, or parts thereof, can actually be used for construction in the near future. In addition, an up-to-date list of exclusively owned land plots in Prague will be created, which is suitable for new housing construction.

The development of brownfields and negotiations with owners should be greatly aided by the Metropolitan Plan drafted by the IPR, which should come into force in 2023. However, besides the new zoning plan, it is also necessary to prepare the land for flexible decision-making at all levels of local government, including state level, which necessitates a revision of the Building Act.

INCREDIBLY LONG WAITING PERIODS

According to an IPR calculation based on Deloitte data, people can wait up to 1,103 days between a zoning decision and a building permit in the capital. This is over three years and two months. This places Prague in 127th place in worldwide ranking just behind Papua New Guinea in terms of obtaining permits. The median in the Czech Republic is 630 days, and 60 days in Europe.

However, due to two-stage proceedings, building permits in the Czech Republic can take from three to seven years for more complex projects. Furthermore, the present method of proceedings provides considerable space for repeated objections and appeals, the submission of which is relatively easy, inexpensive, and allows for the layering of obstructions even by subjects untouched by construction. In practice, for example, Spolek peskařů (Dog Owners Association) from Dačice can appeal against the construction of flats in Prague 5, and this obstruction has the same effect as if it had been submitted by local residents.

Of course, long and complicated processes increase the price of real estate through several channels. Due to the longer project preparation, investors have to deal with the financing of the land for a longer period of time; greater complexity requires more documentation with the involvement of a large number of specialists, and uncertainty about building permits leads to greater investment risk, which is naturally reflected in the resulting property price.

With higher market uncertainty, housing prices are rising and construction is more extensive. Generally speaking, greater regulation in land-use planning increases property prices while

³ Brownfield land are unused, often neglected locations with remnants of previous industrial or agricultural activity, territories, warehouses, production halls and more, that no longer serve their purpose.

⁴ The population density in Prague is about 2,581.7 inhabitants/km². Vienna has 4,326 inhabitants/km², and Munich has 4,700 inhabitants/km².

reducing land prices. This real estate overvalued by redundant regulations leads to low immigration of workers to productive cities, thereby reducing the country's economic potential.

LACK OF FLATS

According to a 2017 study by KPMG, Prague is lagging behind in the number of building permits issued compared to comparable cities in neighboring countries. In Munich, Hamburg and Budapest their number was about five times higher, and in Vienna and Warsaw it was even seven times higher.

At present, the wave of old projects approved ten years ago is fading, and it is failing to meet the metropolis's capacity needs. The annual construction of approximately 8,000 new apartments is the optimum situation since 2015, but this number is constantly increasing with each year. We are currently in a situation where only 2,699 housing units were built in Prague in the third quarter of 2018. In 2017 this number was 3,734 apartments, and a year earlier it was 2,758. However, the real, accumulated need for new apartments for 2018 is around 20,000.

According to a study by "Sdružení pro architekturu a rozvoj" (Association for Architecture and Development), Prague may easily be short of up to 50,000 apartments by 2030.

FRAGMENTED ADMINISTRATION AND REGULATORY TAX

As noted above, Prague's administration is fragmented and consequently uncoordinated. Authorities of individual city districts often defend their interests without seeking mutual coordination with the city. Unfortunately, there is the same situation in relations between Prague, the Central Bohemian Region and individual municipalities in the Central Bohemian Region. Fiscal and land-use planning is dealt with individually, as well as taking into account mutual impacts. The city is in fact unable to decide on its own as a whole, it is an amalgamation of various interest and self-governing groups. Many of them are protectors of legitimate interests (e.g. conservationists, environmentalists), but an impartial arbitrator with applicable law is missing - this role is currently replaced by courts. This is very unfortunate for the city, because form is often preferred over content in court proceedings. They don't care as much about what will ultimately be built, but rather whether the parties used the right letterhead when submitting their proposals. This must naturally change. Moreover, cooperation between Prague and Central Bohemia is complicated by unsynchronized election periods.

There are currently 57 individual city districts and 22 building authorities in Prague. To paint a picture, in neighboring Berlin, which has nearly three times as many residents, there are only 12 city districts, each with its own building authority. In Vienna, which exceeds Prague's population by about 40%, there are 23 city districts, but there is only one building authority for the whole city. There is no logical or procedural reason why the Vienna system could not be applied to Prague.

Another interesting indicator of the complexity of the whole process is the regulatory tax. This is an "inexplicable" part of the market price of real estate, and it consists of the remainder after deducting the land price, hard and soft construction costs and the developer's profit. The regulatory tax in Prague ranges between 73.9% in the case of Wenceslas Square to approximately 54.5% in the case of peripheral parts of Prague 10 km away from the center. By comparison, in Manhattan, New York, this tax is 56%, and it's the same in Auckland, New Zealand. Former industrial centers like Detroit or Birmingham, England, have no regulatory tax. It is this tax that contributes to the creation of the messy settlements on the city's outskirts. Complete elimination of this tax is not a necessary solution, but its reduction would be very favorable to real estate market prices.

A WAY OUT OF THE CRISIS – A NEW BUILDING ACT

A clear way out of the crisis is to change legislation.

Prague has its building regulations, and at the moment there is already a draft of a new land-use plan, i.e. the Metropolitan Plan. This plan is currently in the process of being negotiated, and it should take effect in 2023 after necessary adjustments.

The Czech Ministry for Regional Development and the Chamber of Commerce have already agreed that after many years, Czech construction law has reached a state in which a mere further amendment of a law that has been amended many times is not sufficient. Therefore, in October 2018 they signed a memorandum of cooperation on the preparation of a completely new building act, which could be approved at best in three years.

There should be many specific changes.

In general, the new building act should try to achieve maximum possible simplification, acceleration and streamlining of administrative processes in the area of building approval. The priority should be making sure that there is the least possible amount of proceedings and the least possible amount of administrative decisions in this decision-making. The ideal result would be one single decision to permit or disallow a building as a result of a single permitting process that integrates all the existing ones. However, this must really be a single proceeding where everything runs in parallel, not just the accumulation of partial proceedings where one is in fact linked to the other. This was the result of all previous amendments.

This is related to the strengthening of the independent decision-making power of the building authority and, on the contrary, the weakening of procedural powers of the authorities concerned, without weakening the protection of individual public interests.

In light of today's construction law practice, the new proposal should also seek to avoid clashes between building permit applicants and the public, environmental associations and neighboring property owners, and to prevent abuse of endless obstructions.

The new building act must also include land-use planning, which is to be understood as setting the rules for territorial development, including rules for building permits. If changes in individual permitting processes lead to some reduction in the powers of local governments and the reduction of public participation in decision-making (as opposed to today's situation), this should strengthen these voices at the level of land-use planning. This would particularly serve as a means for balancing public interests and social consensus on land development and allow for the views and interests of local and regional authorities, stakeholders and the general public.

If a particular intent or project would meet all the requirements of the land-use planning documentation, then it should have simplified conditions for individual building approval. A unified procedure would have to be carried out if the investor wanted to deviate from the land-use planning documentation and the obligations or limits that it sets. Therefore, if land-use planning documents set clear rules, it will be easier to make decisions on building permits. Conversely, if the land-use planning documentation is unclear, this will lead to complications not only for building permits, but for territorial development as such.

The new legislation should seek to limit clashes between the builder and the building authority with the public, environmental associations, owners of neighboring properties and other

entities. The new building act should preserve the rights of all these entities, but at the same time force them to apply these rights properly, on time and at the appropriate stage of the proceedings, i.e. optimally already in the land-use planning process.

These changes would bring modern public construction law to the level of standards common in Europe. It would not discourage investors, it would attract them to implement new construction projects in the Czech Republic and the capital.

AND WHAT CAN WE DO RIGHT NOW?

22 separate housing policies in one city is a lot. Given the position of the Czech metropolis within the meaning of the Act on the Capital City of Prague, it makes sense to move towards the unification and creation of a single Building Authority of the capital. In addition, Prague's leaders have declared an effort to solve this problem. Today's building law offices in individual city districts could become detached offices of the central Building Authority in the new legislation. This would significantly contribute to the concept of one public interest, one authority, and one proceeding, which the new law should promote. All that is needed for this change is the resolution of Prague's council.

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