

DEVELOPMENT OF THE CAPITAL VALUE INDEX OF COMMERCIAL REAL ESTATE ON THE CZECH MARKET

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Abstract

The global financial crisis has shown that property prices can significantly affect the financial sector and the real economy. More multinational investors are active in the commercial real estate market compared to the residential sector, which, according to the European Central Bank, increases the risk of spill-over of financial instability from abroad. Although the evolution of commercial property prices may increase the probability of default of firms operating in this sector, more attention is not given to a detailed analysis, which focuses mainly on residential property. This article analyses the development of the commercial real estate capital value index in the Czech Republic. The analysis revealed that, unlike the global economic crisis, the COVID-19 pandemic had a different impact on individual commercial real estate markets.

Keywords

Commercial real estate; CRECVI index; Office space; Storage facilities; Retail space.

Introduction

Compared to analyses of residential real estate, the number of studies dealing with the effects on commercial real estate prices is significantly lower. [8]

An exception is a comprehensive publication by Eurostat [5], which also confirms that there is a lack of regular analysis or data collection on price developments in the commercial property market compared to residential property price indices. The reason given is the limited information on price changes in commercial buildings, the relatively small number of transactions and the greater variety of building types.

The situation and possible overvaluation of the commercial property market are also regularly assessed by the ECB in its Financial Stability Review [4]. The methodology for determining the overvaluation of commercial property prices is based on a relatively simple comparison of commercial property market indicators, mainly capital values, with their long-term averages.

Gyourko [6] examines the relationship between residential and commercial property prices for which common demand determinants can be assumed. Using data from 32 U.S. metropolitan areas, the article finds that cycles in both markets do indeed exhibit common elements.

In the Czech Republic, Hlaváček is researching commercial property prices, focusing mainly on office prices. Also Jones Lang LaSalle and SAVILLS periodically publish descriptive

analyses for the Czech market. [7], [8], [9], [12], [13], [14], [15]

Describing and modelling the evolution on the commercial real estate market is key to understanding the dynamics of this market for companies, investors, as well as for the government sectors themselves. [2], [10]

1 Commercial Real Estate Market

1.1 Research Methods

The commercial real estate market is very specific because the use of each type of property is very diverse. Therefore, it is necessary to examine each type of commercial property separately, as different factors may influence them. For the purpose of this article, a market survey of each type of commercial property will first be conducted. Subsequently, the time series evolution of capital value indices for each market is analyzed. The last part of the article compares price developments using year-on-year growth rates.

1.2 Research Subject

According to Mařík [11] commercial real estate refers to real estate that is used exclusively for business purposes. Once completed, these properties are usually rented out and thus generate income for the owner.

The main segments of the commercial real estate market include office buildings, industrial and logistics halls, hotels and retail space.

In the valuation and analysis of commercial property prices, we encounter the terms prime yield or prime property.

Yield can be defined as a percentage of gross annual rental income, which is calculated as the ratio of NOI (net annual rental income) to the gross value of the property before deducting taxes, transaction costs and other deductions. [1]

1.2.1 Yield from Prime Office Space

This designation represents the gross yield for which a modern class “A” office building can be sold under normal market conditions in Prague. The class “A” office building represents a new or recently completed building, with a high level of BREEAM/LEED certification, located in a sought-after city center location, which is fully let for 5 years or more to reputable tenants. [1]

1.2.2 Yield from Premium Shopping Centers

The yield on prime shopping centers is the gross yield for which a prime shopping center can be sold in Prague. This can be defined as a modern center with a wide catchment area, consistently high turnover and footfall, together with a range of internationally recognized retail brands. [1]

1.2.3 Yield from Prime Industrial Real Estate

This yield is the gross yield at which a grade “A” industrial property would sell. These properties are defined as high-quality, newly or recently constructed sheds with variable layouts, located in a highly accessible location on a major highway route. Properties so designated are also fully leased and contracted for more than 5 years, while meeting at least the minimum ESG requirements. [1]

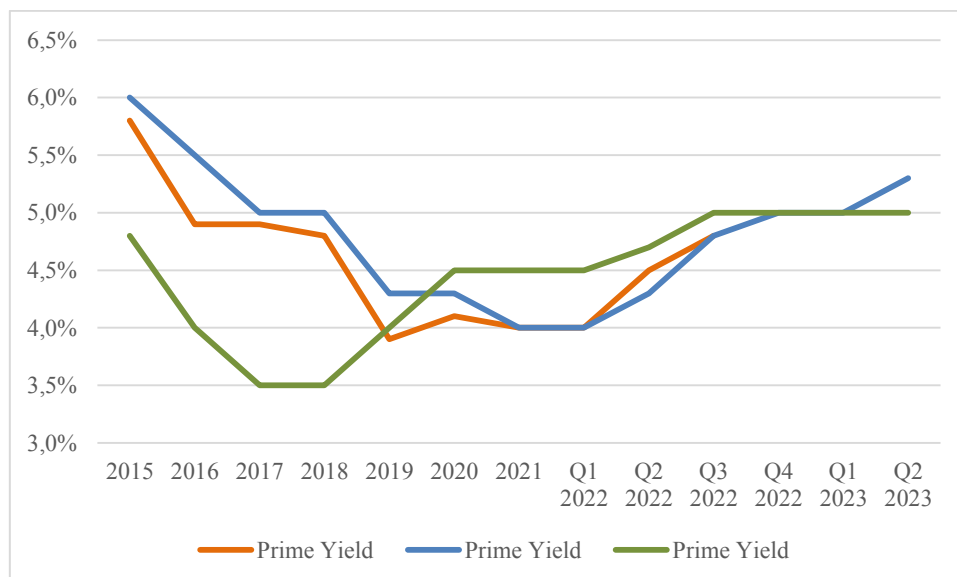
2 Development on the Commercial Real Estate Market

The following chapter is devoted to the analysis of the commercial real estate market. The analysis and data collected focuses only on prime properties with prime yields. For the Czech Republic, this standard is met mainly by commercial properties in Prague. Data on the development of yields for commercial properties in other parts of the country are not as well available. The advantage, however, is comparability with foreign markets.

2.1 Retail Space

The retail sector has been significantly affected by the global COVID-19 pandemic. After the pandemic ended, the market recovered and retail footfall and sales gradually increased, with consumer spending proving more resilient than analyses had predicted. However, according to Savills research [16], retail sales will decline slightly in the second half of 2023 due to the economic slowdown. However, limited new construction and positive demand are supporting retail occupancy and rents in good quality space are maintaining stable levels. Retailers' demand for quality space in premium locations within Prague's tourist districts and shopping centres is thus strengthening. Yields in Class A shopping centers remained at 6.5% in Q2 2023, up from the same period last year.

The development of prime yields of commercial real estate in Prague is shown in Figure 1.



Source: Own processing of data [16] in Excel

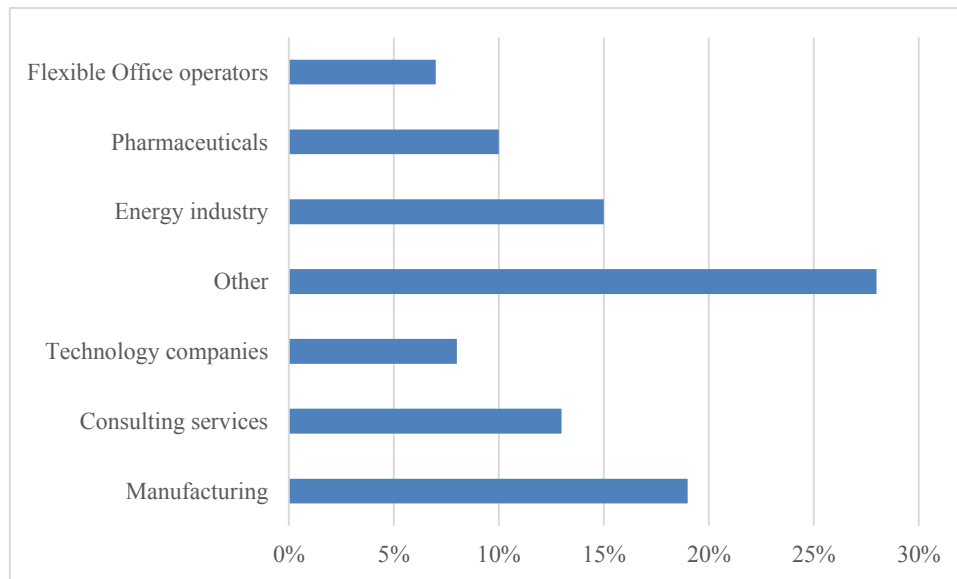
Fig. 1: Prime yields of commercial real estate in Prague

2.2 Office Space

The COVID-19 pandemic had a significant impact on the office market. However, the stabilization of the market came unexpectedly fast and soon the vacancy rate of office space started to decrease. At the end of 2022, the vacancy rate in Prague was reached 7.7%, which corresponds to 293,600 sqm. In the first quarter of 2023 reached the Prague's office vacancy rate a record low of 7.5%, which is the lowest vacancy rate since the end of 2020. [10], [13]

According to JLL's market analyses [9], base monthly rents as of Q1/2023 for class A offices in Prague city center are around 640 CZK/sqm. In the wider center of Prague, A-class offices are offered for around 440 CZK/sqm. Base rents in the outskirts of Prague or for class B office space in the center of Prague are approximately 373 CZK/sqm.

Demand for office space in Prague by sector is shown in Figure 2.



Source: Own processing of data [9] in Excel

Fig. 2: Demand by sector in Q1/2023

2.3 Industry

According to Savills analysis [14], the European logistics market faced significant macroeconomic challenges in the first half of 2023. Demand fell by 37% from the record level in Q1 2022, but this was due to a return to normal levels of demand, according to the analysis. The market research also shows that the logistics space in Q1 2023 still outperforms the data recorded in the same period in 2018 and 2019, i.e. before the COVID pandemic. The economic turbulence has had a greater impact on the investment market than the occupier market. In the first half of 2023, investment volumes in Europe reached only 10 billion EUR, significantly lower than the averages for the first half of the year, which were 25.3 billion EUR during the pandemic (2020-2022) and 16.7 billion EUR before the pandemic (2017-2019).

Despite this decline in volumes, investor interest is still higher than before the pandemic, with investment in logistics properties accounting for 17% of total real estate investment volumes, compared to an average of 13% in 2017-2019.

According to Savills' analysis [14], the total estimated volume of completed industrial rental space in the Czech Republic in 2022 was 1.33 million sqm, the highest ever. This is a year-on-year increase of 96%.

The vacancy rate for all Czech modern industrial space increased slightly to 1.93%, both on a quarterly (+25p) and annual basis (+9p). However, this is still very low given that never has so much new industrial space been built as in the past year.

At the end of Q1 2023, vacancy rates were below 1% or even zero in the Hradec Králové, Liberec, Pardubice, South Bohemia, Zlín, South Moravia and Prague regions. The vacancy rate in Prague is currently 0.8%, although if we exclude office space (located inside industrial halls), the rate would be close to 0%.

Base rents for modern industrial space in Prague have remained unchanged at 7.25-8.30 EUR/sqm for 5,000 sqm leased for 5 years (given the low vacancy rates, these opportunities reflect mostly brand new space). Outside Prague, the range has widened to 5.50-7.80 EUR/sqm.

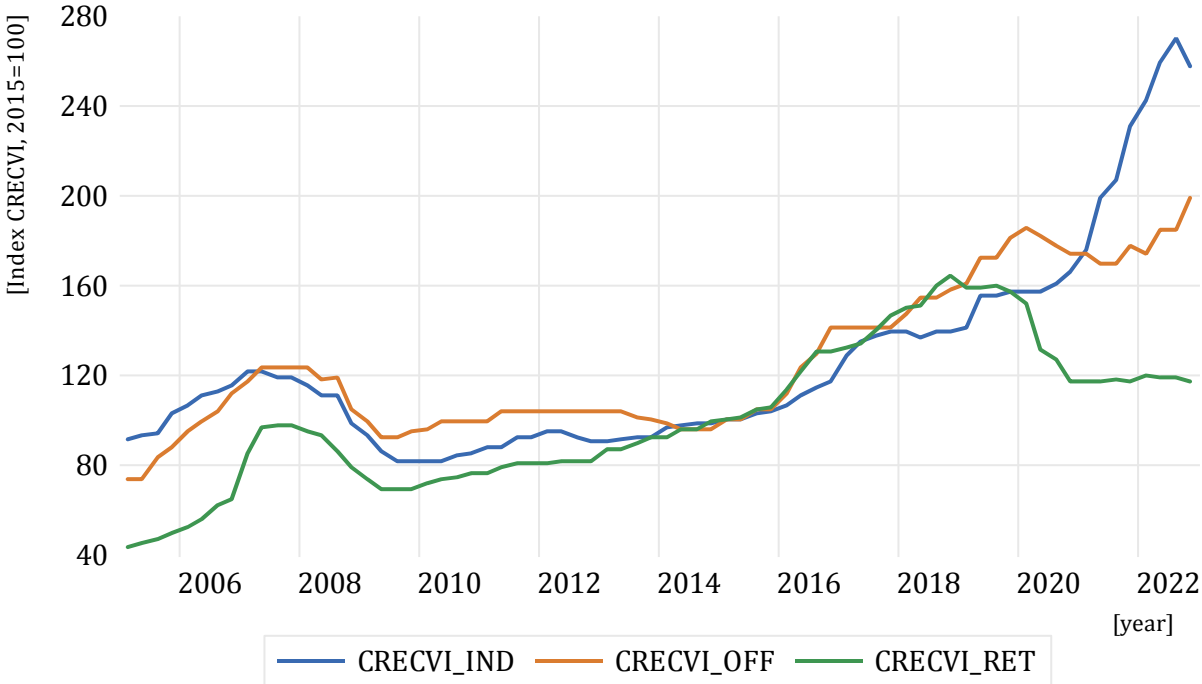
Rents for small commercial units (up to 1,000 sqm) in Prague ranged from 8.50-9.50 EUR/sqm per month.

Office and sanitary space within industrial halls continued to be offered at 9.50-12.50 EUR/sqm per month. Monthly service charges remained in the range of 0.75-1.00 EUR/sqm. [12]

2.4 Commercial Real Estate Capital Value Index

The C&W CRECVI (Commercial Real Estate Capital Value Index) is compiled by the consultancy Cushman & Wakefield, which provided it for the purposes of this research. The CRECVI represents development of the capital value of commercial real estate portfolio in the Czech Republic. The index includes prime rents and prime yields for Prague warehouses and production halls, offices and shopping centers. [3], [10]

The graph in Figure 3 shows the development of the CRECVI index from 1Q/2005 to 4Q/2022. The blue line “CRECVI_IND” shows the development on logistics parks. The time series “CRECVI_OFF” represents the index for office space. The green line “CRECVI_RET” describes index changes for retail space.



Source: Own processing of data [3] in EViews 13

Fig. 3: Development of the CRECVI index

According to the development in the time series, we see that the series follow the same trend time, up to 2020. The global economic crisis has had an impact on commercial real estate with falling prices, but with the same trend for all three types of commercial real estate. This was followed by a sharp increase in prices until the end of 2019. At the beginning of 2020, the effects of the COVID-19 pandemic became apparent. After that, however, there was a significant change in the development of each time series.

Prices for warehouses and production halls have seen a steep increase, and conversely, commercial retail space has seen a significant drop. The reason for this is certainly the government regulations during the lockdown, when stores were closed. On the other hand, e-commerce stores have experienced a boom, which we see in the increase in warehouse prices. Office space has also seen a decline, however, there has been a relatively quick recovery in

this market and prices have started to rise again since 2022. This is also confirmed by the growth factors for the 2022 and 2020 quarters in Table 1.

Tab. 1: *Growth Rate of Commercial Real Estate Capital Value Index*

Period	k_i – Industry	k_i – Retail	k_i – Office
1Q 2022 / 1Q 2020	1.54	0.79	0.94
2Q 2022 / 2Q 2020	1.65	0.90	1.02
3Q 2022 / 3Q 2020	1.68	0.94	1.04
4Q 2022 / 4Q 2020	1.55	1.00	1.14

Source: Own processing of data [3] in Excel

Based on the annual growth rate for Q1 2022 compared to Q1 2020, the 54% price increase for the industry. This trend will continue until the end of 2022.

On the other hand, the index for retail sees a 21% decline over this period. However, at the end of the period under review, this market recovered and prices stopped falling.

Conclusion

The time series of the commercial real estate capital value index and detailed market analysis show that this market has experienced significant fluctuations in recent years. Transactions in the commercial real estate market are currently rather stagnant and investors are waiting for interest rates and commercial real estate prices to fall.

The central bank has kept interest rates for mortgage loans at a high level, hovering around 6%. According to economists' forecasts, interest rates should fall slowly over the next year and by the end of 2025 they should halve to around 2.6%. It is very difficult to make predictions in the current situation. However, dynamic developments can certainly be expected.

Given the significant impact of the COVID-19 pandemic and inflation on the commercial real estate market, the use of time-lagged econometric models, including consideration of structural breaks in the time series, is appropriate for more detailed analysis and forecasting.

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VÝVOJ INDEXU KAPITÁLOVÉ HODNOTY KOMERČNÍCH NEMOVITOSTÍ NA ČESKÉM TRHU

Světová finanční krize ukázala, že ceny nemovitostí mohou významně ovlivnit finanční sektor i reálnou ekonomiku. Na trhu komerčních nemovitostí působí více nadnárodních investorů než v sektoru rezidenčních nemovitostí, což podle Evropské centrální banky zvyšuje riziko přelévání finanční nestability ze zahraničí. Přestože vývoj cen komerčních nemovitostí může zvyšovat pravděpodobnost platební neschopnosti firem působících v tomto sektoru, podrobnější analýze, která se zaměřuje především na rezidenční nemovitosti, není věnována větší pozornost. Tento článek analyzuje vývoj indexu kapitálové hodnoty komerčních nemovitostí v České republice. Analýza odhalila, že na rozdíl od globální ekonomické krize, pandemie COVID-19 měla na jednotlivé trhy komerčních nemovitostí odlišný dopad.

ENTWICKLUNG DES KAPITALWERTINDEXES FÜR GEWERBLICHE IMMOBILIEN AUF DEM TSCHECHISCHEN MARKT

Die weltweite Finanzkrise hat gezeigt, dass die Immobilienpreise den Finanzsektor und die Realwirtschaft erheblich beeinflussen können. Auf dem Markt für Gewerbeimmobilien sind mehr multinationale Investoren tätig als auf dem Wohnungsmarkt, was nach Ansicht der Europäischen Zentralbank das Risiko eines Übergreifens finanzieller Instabilität aus dem Ausland erhöht. Obwohl die Entwicklung der Preise für Gewerbeimmobilien die Wahrscheinlichkeit eines Zahlungsausfalls von in diesem Sektor tätigen Unternehmen erhöhen kann, wird einer detaillierten Analyse nicht mehr Aufmerksamkeit geschenkt, die sich hauptsächlich auf Wohnimmobilien konzentriert. In diesem Artikel wird die Entwicklung des Kapitalwertindexes für Gewerbeimmobilien in der Tschechischen Republik analysiert. Die Analyse ergab, dass im Gegensatz zur globalen Wirtschaftskrise, die COVID-19-Pandemie unterschiedliche Auswirkungen auf die einzelnen Gewerbeimmobilienmärkte hatte.

ROZWÓJ INDEKSU WARTOŚCI KAPITAŁOWEJ NIERUCHOMOŚCI KOMERCYJNYCH NA RYNKU CZESKIM

Globalny kryzys finansowy pokazał, że ceny nieruchomości mogą znacząco wpływać na sektor finansowy i realną gospodarkę. Więcej międzynarodowych inwestorów jest aktywnych na rynku nieruchomości komercyjnych w porównaniu z sektorem mieszkaniowym, co według Europejskiego Banku Centralnego zwiększa ryzyko rozprzestrzeniania się niestabilności finansowej z zagranicy. Chociaż ewolucja cen nieruchomości komercyjnych może zwiększać prawdopodobieństwo niewypłacalności firm działających w tym sektorze, szczegółowej analizie nie poświęca się większej uwagi, która koncentruje się głównie na nieruchomościach mieszkalnych. Niniejszy artykuł analizuje rozwój wskaźnika wartości kapitałowej nieruchomości komercyjnych w Czechach. Analiza wykazała, że w przeciwieństwie do globalnego kryzysu gospodarczego, pandemia COVID-19 miała inny wpływ na poszczególne rynki nieruchomości komercyjnych.