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The link between the commercial real estate market and the economy

Warsaw / December 4th, 2019

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Why is the commercial property market important?

- Commercial property is a necessary input in the modern economy.
 - Office space is need for firms that hire workers in the services sector, a sector which adds significantly to economic growth.
 - Shopping malls provide a variety of consumption goods and services to the customers.
 - Warehouses are needed to store products and can be used for the final production or assembly of various goods.
- We analyse transaction prices of commercial real estate (CRE), because commercial property prices have shown strong cycles in highly developed countries in the past. The investment in commercial property is usually leveraged and bank credit plays a significant role. Investment in new space can lead to oversupply, which can result in a crisis, when prices start to fall. Moreover, there is a higher depreciation rate than the one for residential property – new objects can make older ones obsolete.
- The analysis of the CRE market in Europe started to be important after the Global Financial Crisis. The ECB, BIS, OECD and IMF organized a conference on Commercial Property Price Indexes in 2012, since then there is a lot of work going on, among others:
 - Recommendation of the European Systemic Risk Board of 21 March 2019 amending Recommendation ESRB/2016/14 on closing real estate data gaps (ESRB/2019/3)
 - Report on vulnerabilities in the EU commercial real estate sector, ESRB, 2018

Motivation I

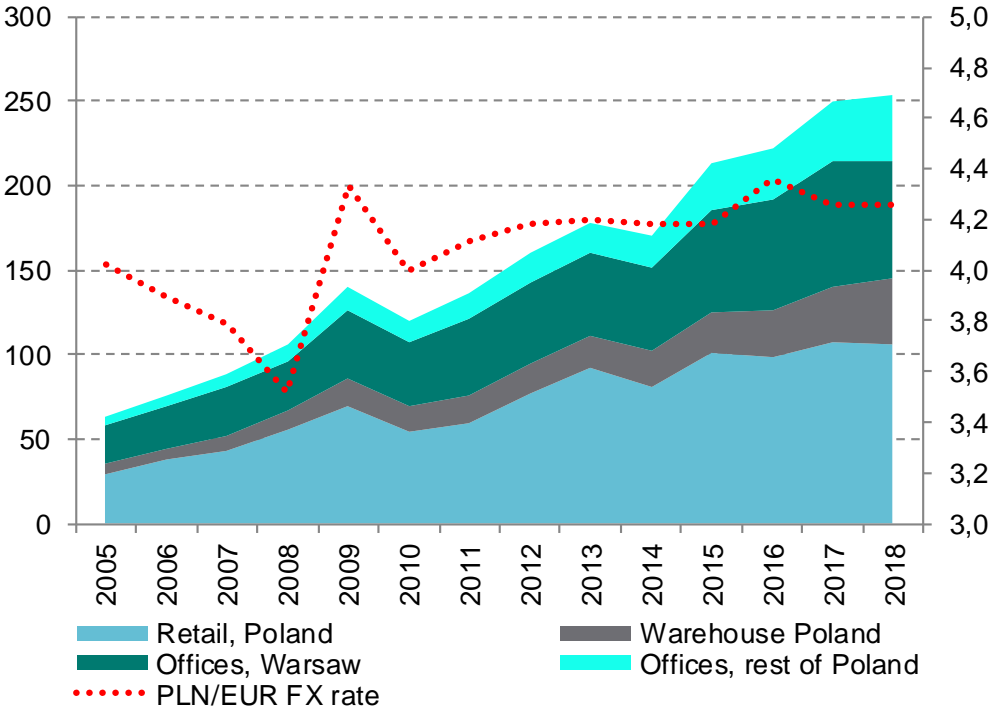
- The aim of this research is to point out the relationship between the economy and the commercial real estate market in Poland.
- Focus on office space.
- The office sector is involved in the first and last part of the production process, where the majority of value added is generated. The retail sector is the place where trade takes place. One can expect that there is a close tie between the residential and commercial property market – when people get better jobs, they also want better homes.
- Post-socialist economies moved from the agricultural production and large factories to a services oriented economy, and the urbanization process emerged (Tsenkova, 2006).
- The development of the residential and commercial real estate sector can be divided into three main phases: vacuum, adaptation and adjustment phase (Tosics, 2006).
- Parsa, McGreal and Keivani (2000) showed for Warsaw, Prague and Budapest that the globalization process had a very strong effect on the development of commercial real estate.

Motivation II

- Kucharska-Stasiak and Matysiak (2004) analysed the development of the real estate market in Poland and attribute it to the globalization and Poland's preparations for accession to the European Union.
- Łaszek, Leszczyński and Olszewski (2017) show for Poland that housing construction follows the real business cycle with a lag of two years, while the cycle in the commercial real estate sector is directly connected to the business cycle.
- The construction of housing in Poland is financed by domestic mortgages and savings, while the construction of office and retail buildings is to a large degree financed by large international investors.
- Residential property provides housing services to its owners or tenants, while commercial property provides space in which tenants perform their business.

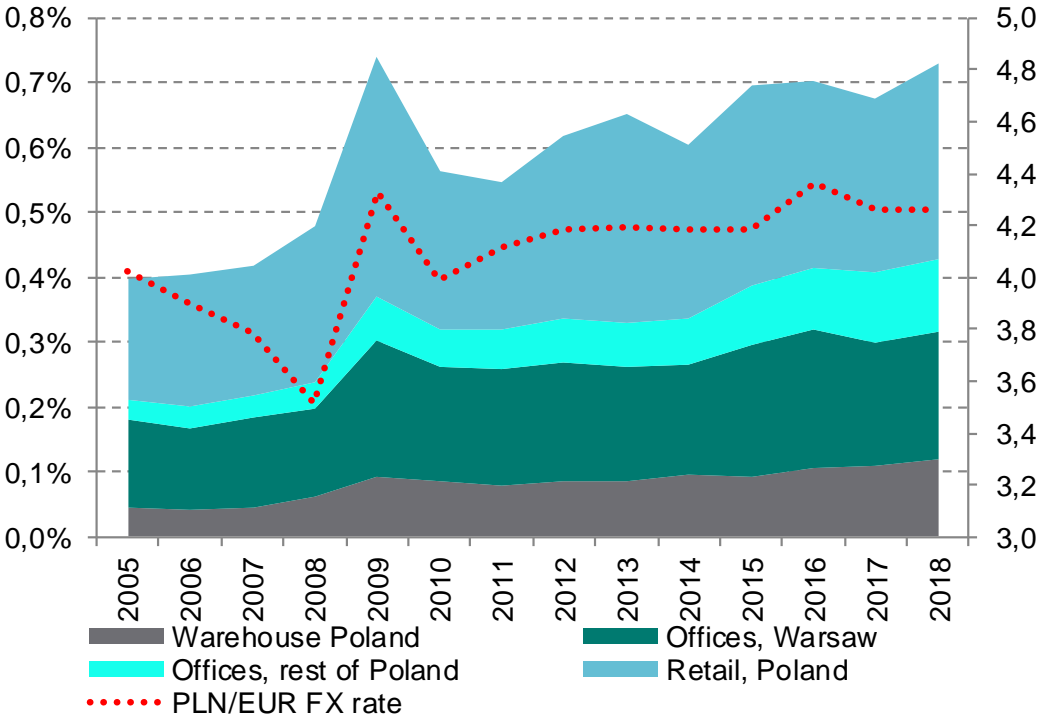
Value of the commercial property stock and rental income in relation to the GDP in Poland

Estimated value of the commercial stock in Poland in PLN billion (left-hand axis) and PLN/EUR exchange rate (right-hand axis)



Source: NBP.

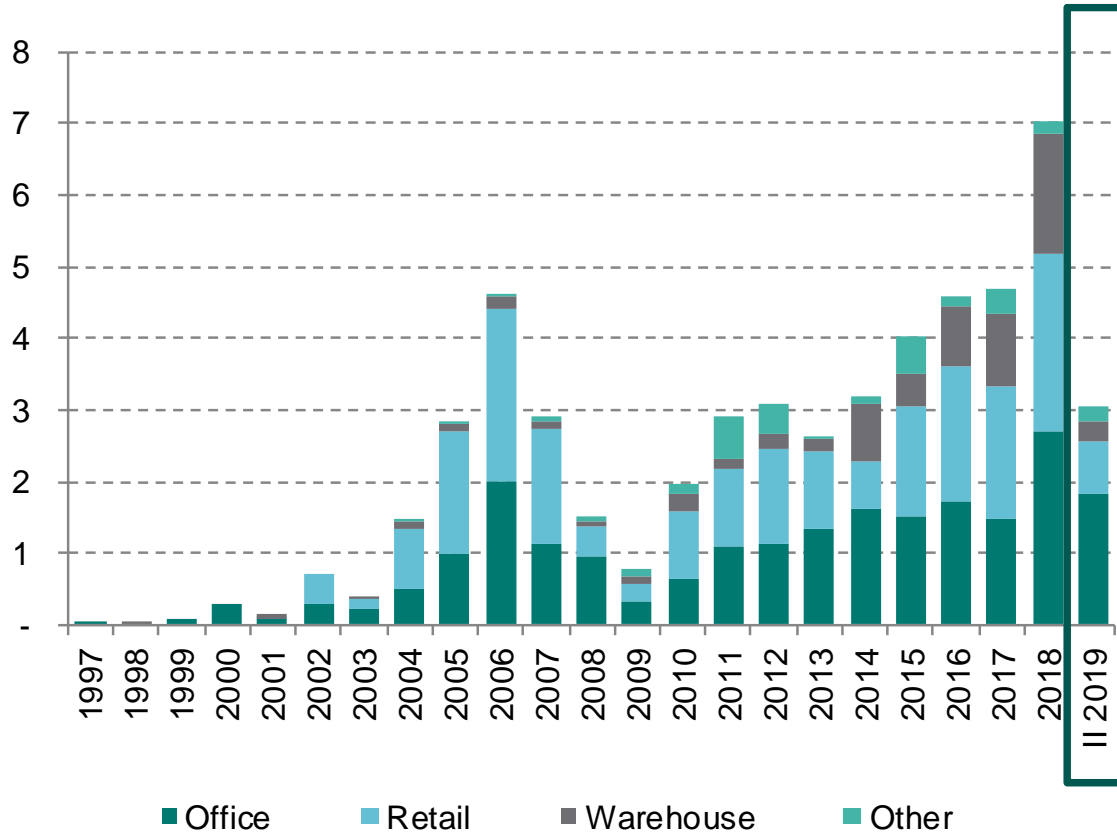
Estimated value of commercial property services (rents) in Poland in relation to GDP (left-hand axis, %) and PLN/EUR exchange rate (right-hand axis)



Source: NBP.

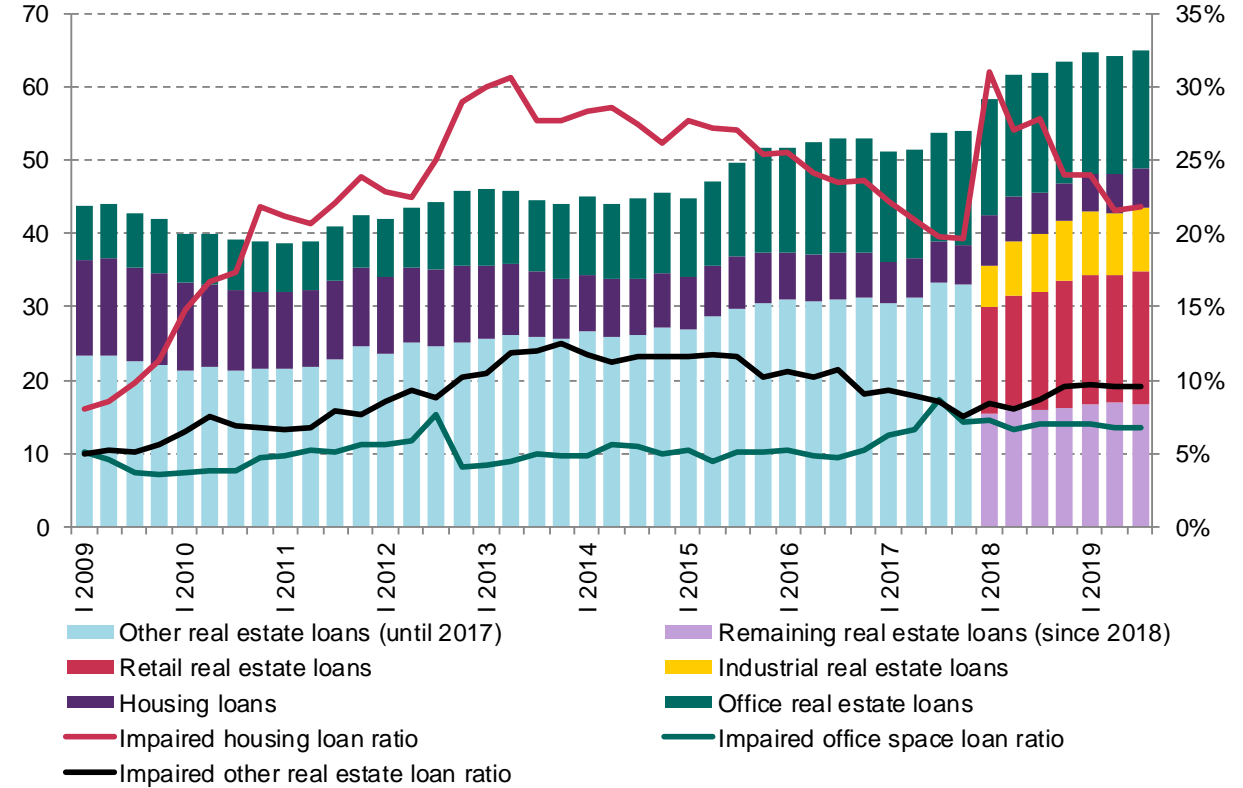
Some facts on CRE transaction volumes and on banks' exposure in CRE financing in Poland

Investment in the commercial real estate market in bln EUR



Source: Comparables.pl.

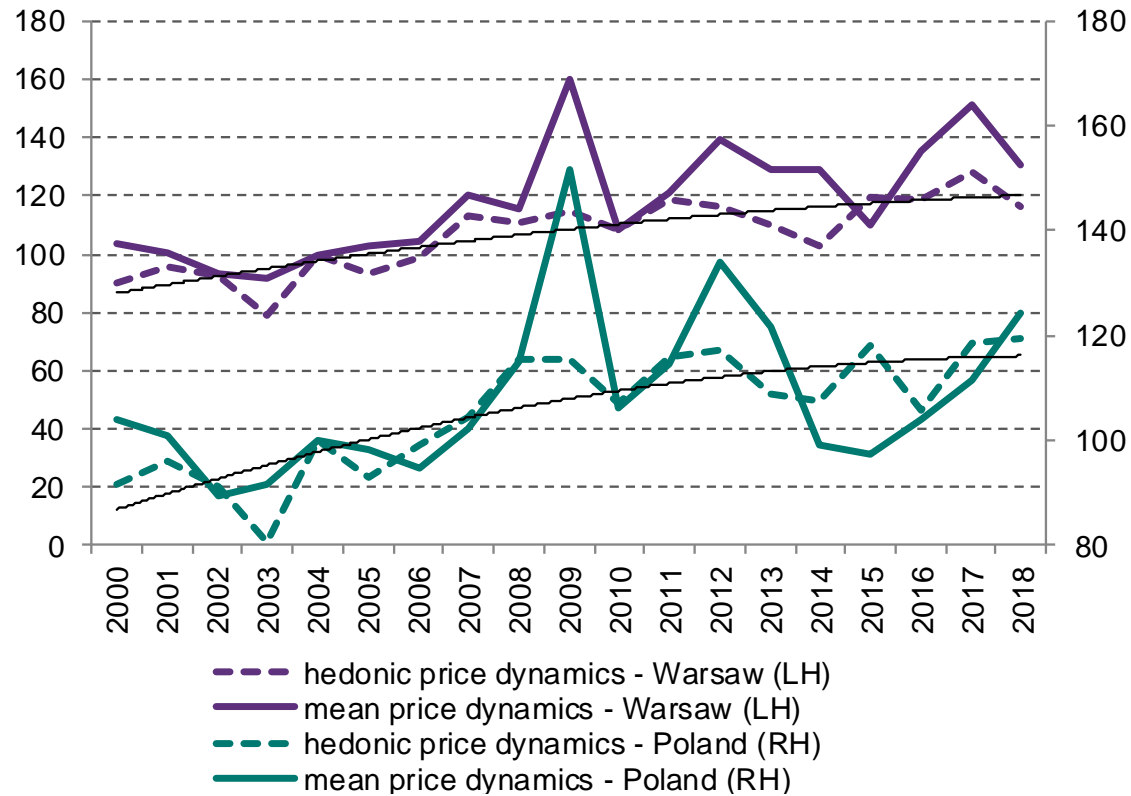
Outstanding loans for commercial property in bln PLN



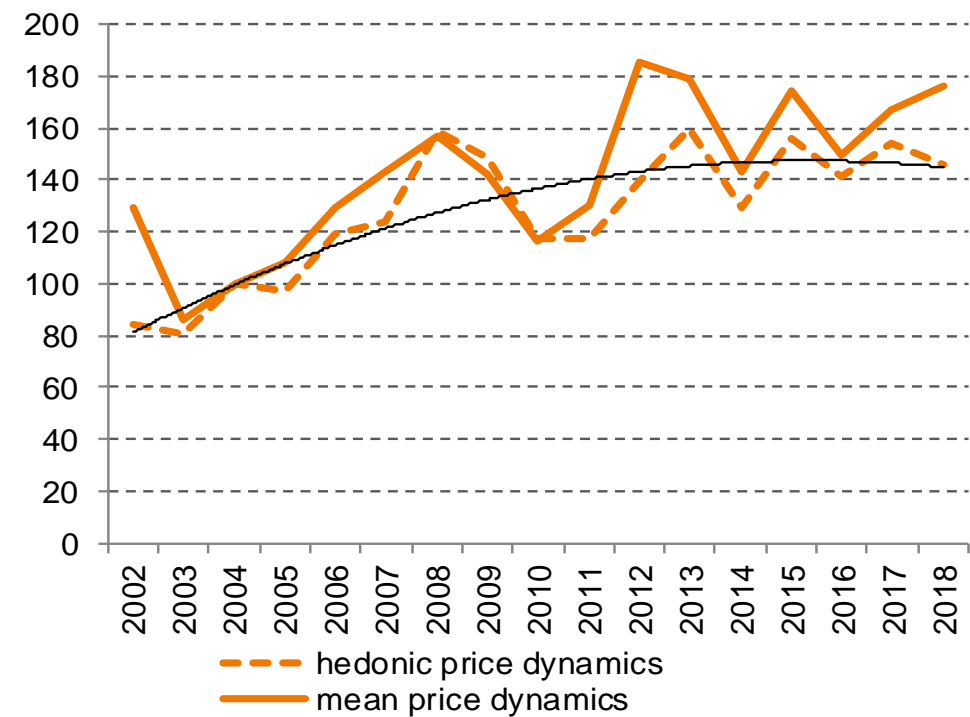
Source: NBP.

Hedonic transaction price index in the office and retail market

Mean price and hedonic price dynamics of office buildings in Warsaw and whole Poland (2004=100)



Mean price and hedonic price dynamics of shopping malls in Poland (2004=100)

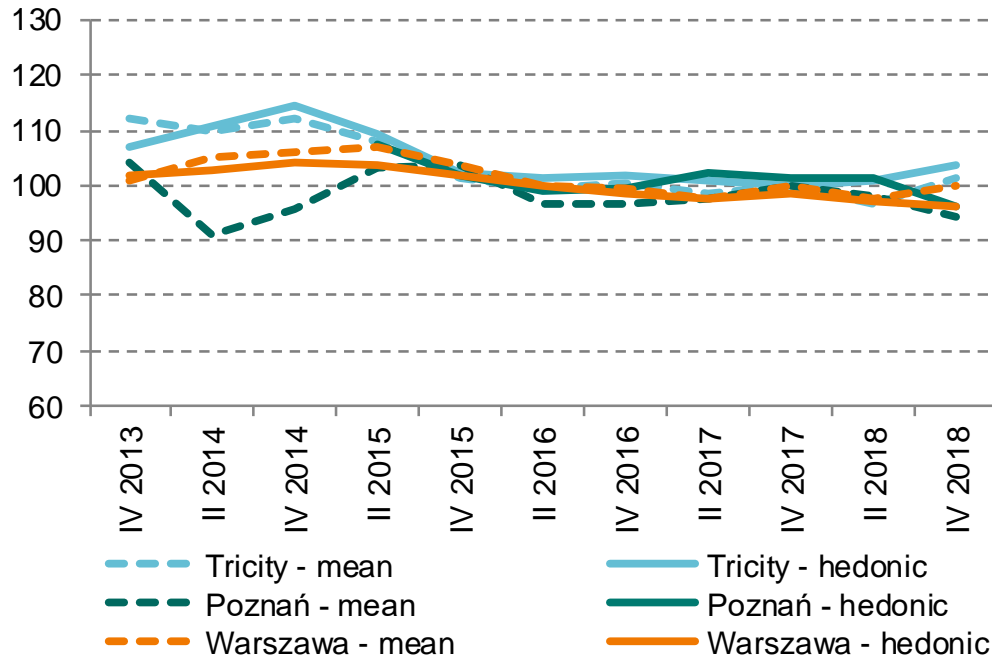


Note: The calculations draw on Leszczyński, R., and K. Olszewski. "Commercial property price index for Poland." *Bank i Kredyt* 46.6 (2015): 565-578.

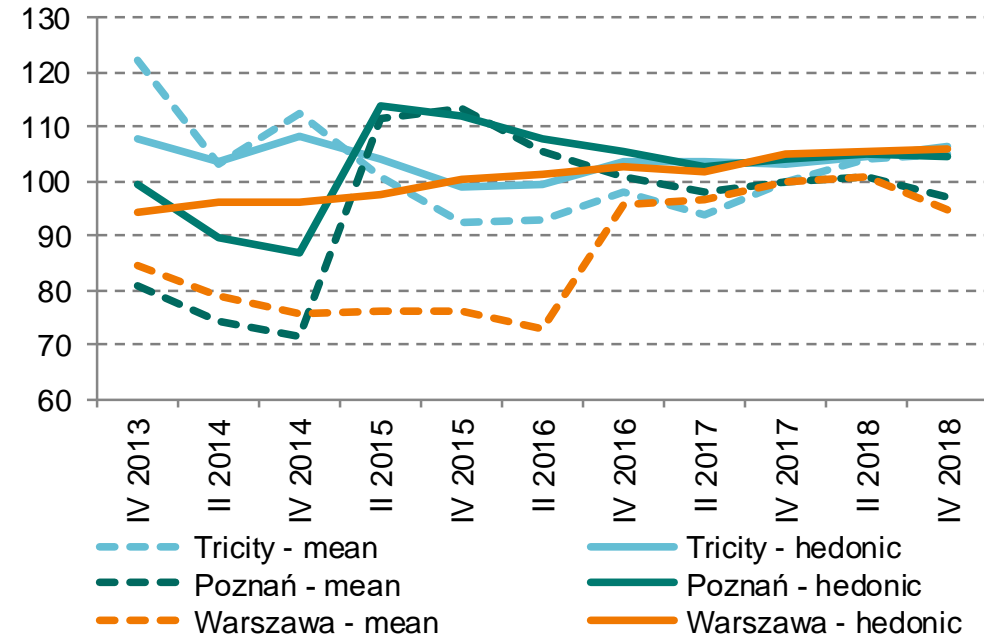
Source: NBP and Comparables.pl data.

Hedonic rent index in the office and retail rental market in Warsaw, Poznań and Tri-City

Mean rent and hedonic rent dynamics for office space (2017 Q4 = 100)



Mean rent and hedonic rent dynamics for retail space (2017 Q4 = 100)

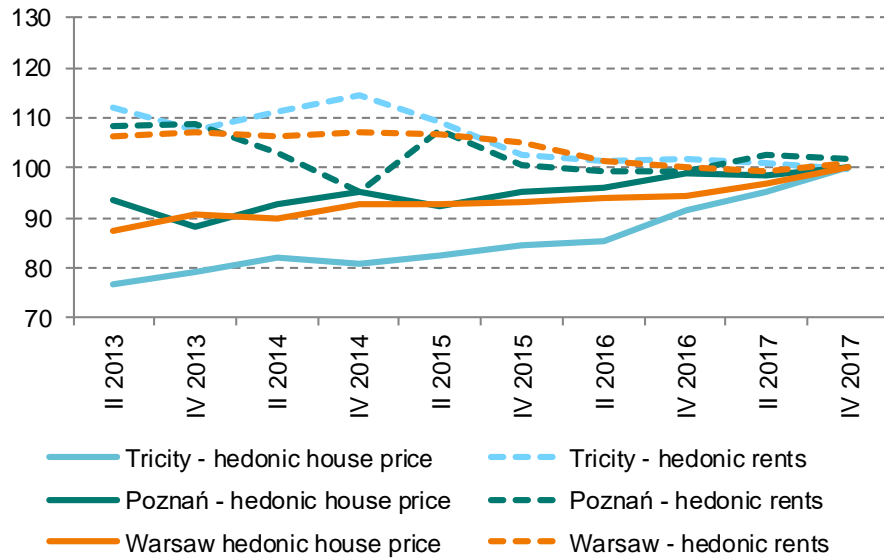


Note: The calculation of the index draws on: Olszewski K., Decyk P., Gałaszewska K., Jakubowski K., Kulig M., Modzelewska R. and Żywiecka H. (2018) Hedonic analysis of office and retail rents in three major cities in Poland. In: Łaszek J., Olszewski, K. and Sobiecki R. (Eds.): Recent trends in the real estate market and its analysis., Oficyna Wydawnicza SGH.

Source: NBP.

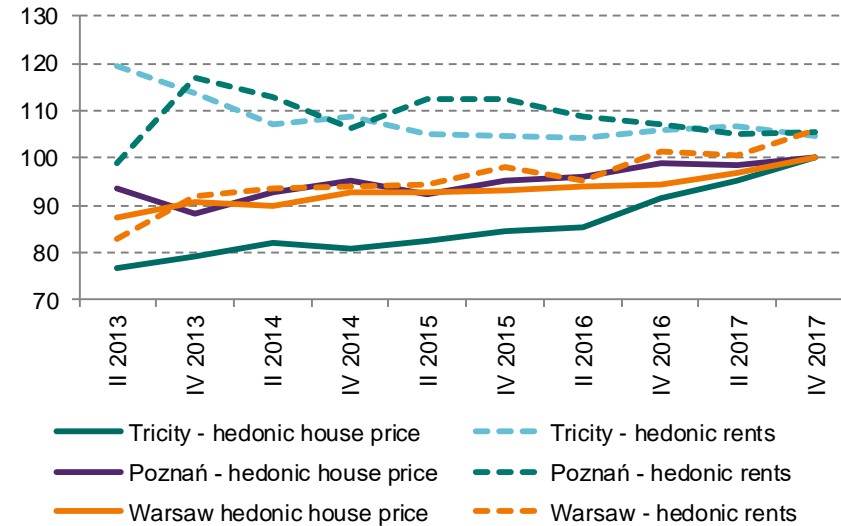
Comparison of the hedonic CRE rent index with the house price index

Figure 3 Hedonic price index for the housing market and hedonic rent index for the office market, Q4 2017=100



Source: NBP and authors' calculations

Figure 4 Hedonic price index for the housing market and hedonic rent index for the retail market, Q4 2017=100



Source: NBP and authors' calculations

Estimation of the office stock in Poland

Preliminary results

Estimation of the office stock in Poland

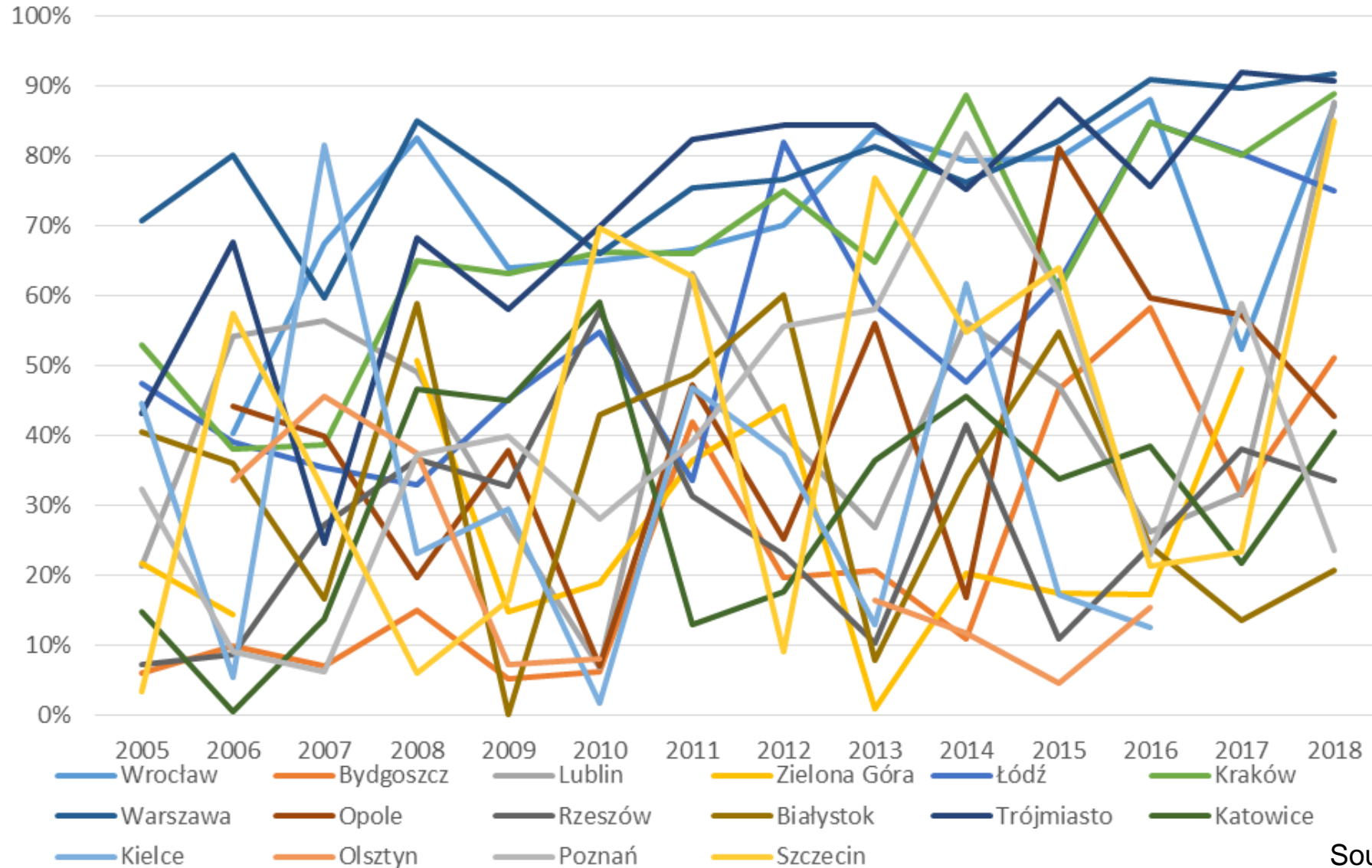
There is no official estimate of the office space stock.

Large brokers provide data on the CRE stock in major cities, however focus on income generating properties. We miss owner occupied CRE space.

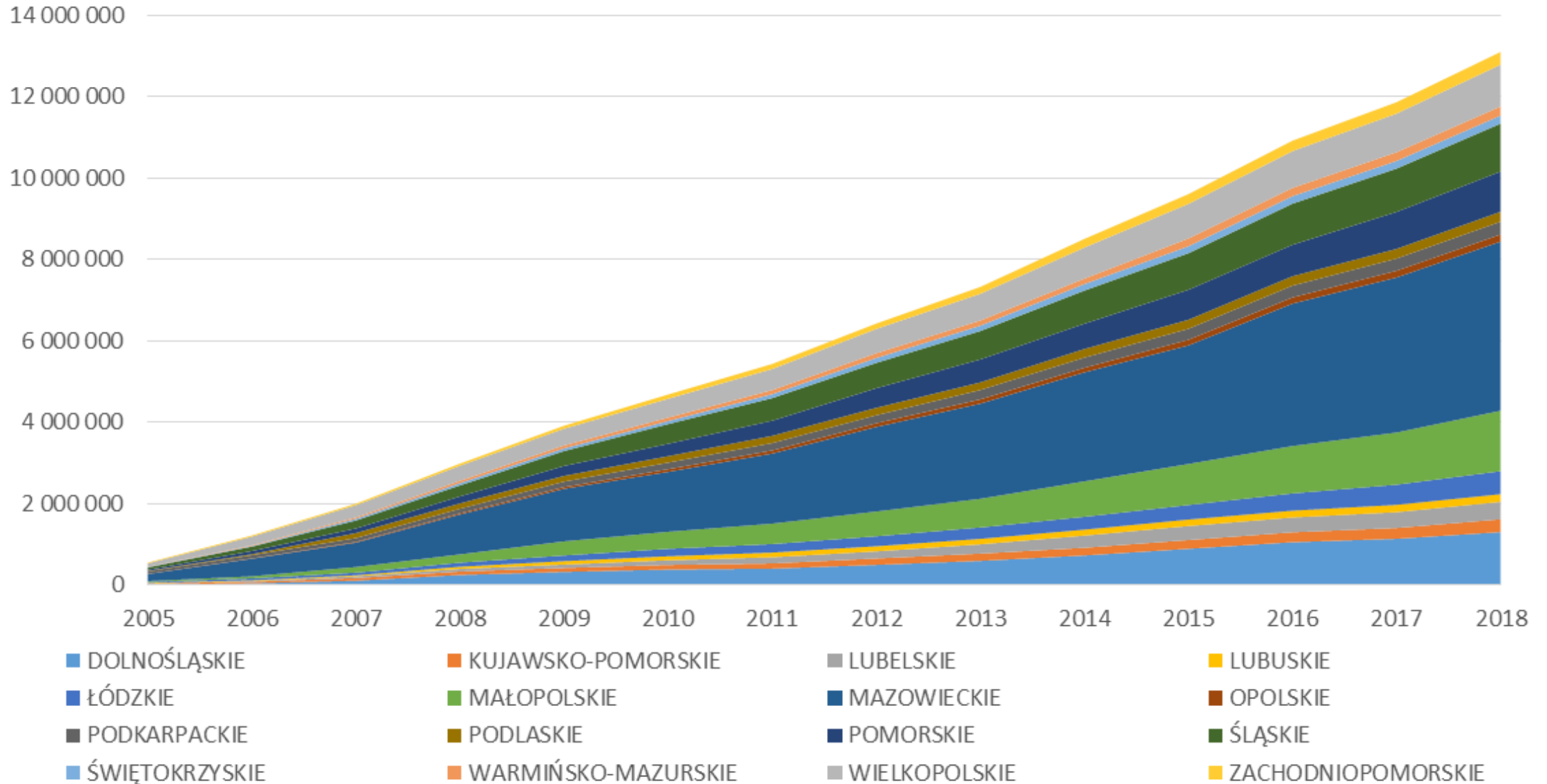
The whole stock can be estimated with the help of Statistics Poland data on newly delivered and extended CRE space

Such information is needed e.g. to include office space in the production function, for the analysis of economic growth

Share of newly delivered office space in the capital cities in the newly delivered office space in the voivodeship, %



Office stock in the voivodeships, sqm, delivered since 2005



Office stock in the voivodeship capital cities, sqm, delivered since 2005

