Abstract: The paper presents the results of a study of transaction prices on the residential property market of one of the largest Polish cities – Szczecin. The period of study covers almost four years – from the end of 2005 to March 2009. This allowed the observation of market trends before and during the global financial crisis. The study divided the property market according to the criterion of the right to property exercised (freehold and cooperative member's ownership right to property). Although these rights are close to each in nature, they are different legal categories. An additional criterion of segmentation of the local property market taken into account was the floor area of the property. This has allowed to draw a conclusion as to whether the criteria mentioned above differentiate the local real estate market. It was examined whether properties subject to cooperative member's ownership right to property enjoyed the same interest as properties subject to freehold. It was determined whether the economic turmoil and the restrictive policies of banks have caused the property prices to fall and whether demand for smaller (and thus cheaper) flats has increased.

Key-Words: property market, real estate development, local impact of global crisis

1 Introduction

Global economic crisis started in the U.S. banking system and spread to the whole world. The first affected by the plight were banks and financial markets. Following those, problems reached the real economy, that is the industry, trade and services. Consecutive world economies registered or still continue to register negative GDP growth rates, rising unemployment and falling sales in various sectors. One of the few European countries which have not yet been affected by the recession is Poland. This does not mean that the country has not felt the impact of the crisis. Polish banking system is tightly linked to the global system and trouble of the headquarters did not remain without impact on the operation of the Polish banking sector. In light of the fact that the policy of banks is a major factor shaping the situation on the Polish real estate market (Pęchorzewski 2006, 2008, 2009, 2006b) it was examined, according to the principle "think globally – act locally", whether international economic and financial turmoil has had an impact on price levels, their variation and the number of transactions in the market of residential real estate in one of the major Polish cities - Szczecin. Szczecin is one of the oldest and largest cities in Poland (3rd place in terms of area
occupied (approximately 300 square km) and 7th in terms of population). The city is the centre of Szczecin agglomeration, bringing together the surrounding villages and towns. According to data from 31 December 2008, the city had 406,941 inhabitants (Central Statistical Office 2009). Szczecin is the largest urban area in north-west Poland.

![Figure 1 – Location of Szczecin on the map of Poland. Source: wikipedia.org](image)

Particular emphasis in the study has been laid on determining whether changes in the housing market have had the same force and the same nature, taking into account market segmentation in view of the vested interest in the premises. In Poland you can distinguish between two main rights to premises. The first is freehold, and the second is cooperative member's ownership right to the premises. These rights, although close to each in their nature, are different legal categories. The additional criterion of segmentation of the local real estate market into account was the floor area.

### 2 Research assumptions

Changes in the local real estate market have been analysed by examining a number of variables. These variables are the minimum, average and maximum recorded transaction prices in each month of the study. In addition, the number of recorded transactions and the level of price variability have been taken into account. The study covers the period from November 2005 to July 2009. Starting from the end of 2005, a dynamic growth in property prices (Pęchorzewski 2009c). This increase was due to liberalization policies of banks in providing mortgage loans, declining interest rates and falling unemployment rate and booming economy. The study will indicate whether the global crisis affected, and if so, to what extent, the development of the local property market.

As previously mentioned, in the study, the market has been segmented according to the type of ownership right and the usable floor area of the premises. Such precision allowed to examine whether the local market in Szczecin is homogeneous, or whether the type of entitlement to property (ownership right) affected the prices of property, their variability, and the number of transactions. Whether flats subject to cooperative member's ownership right to residential premises
enjoyed the same interest as the flats subject to freehold. The second criterion recorded in the study area was floor area of the flat. It was examined whether the economic turmoil and the restrictive policies of banks have caused the property prices to fall, and whether demand for smaller, and thus cheaper, flats has increased.

3 Selected ownership rights
The study took into account whether the traded premises are subject to freehold or cooperative member's ownership right to residential property. They are the most common rights to residential property in Poland.

Freehold
Freehold is the strongest ownership right. This right is transferable, conveyable and hereditary. Freehold is unlimited in time. Only the rules of social intercourse, and some laws restrict the exercise of that right. The owner can freely sell their right on the market, without asking anyone for permission, make it a contribution in kind to a company, while the owner's legal successor inherits that right. A property can be used, as by owner, by one natural or legal person, as well as by more persons.

Cooperative member's ownership right to the premises
The name of the law suggests that it is a variation of the ownership right to property, but this is a wrong association. Cooperative member's ownership right to property is a limited right in property. It is a transferable and inheritable right. It can be traded on the secondary market and the legal successor inherits the right. Transferability is limited, since the legal effectiveness of a transfer of cooperative member's ownership right to property depends on whether the cooperative board accepts the buyer as member of the cooperative. Thus, if the Board does not accept the buyer as a as member of the cooperative, the transaction is ineffective. It can be concluded that the transaction does not end at the notary, as in the case of transfer of ownership – in this situation, it is necessary to take the notarial deed to the board of the cooperative, submit an application for admission to the members, pay the appropriate fees and obtain a decision by the board confirming admission as a member of the cooperative, only then can it be concluded that the right has been successfully acquired. The boards of cooperatives generally accept as members those who have acquired the rights on the secondary market. Board of the cooperative may refuse to accept a member if this would be contrary to the statutes of the cooperative; the statutes of some cooperatives do not allow legal persons to become members or do not allow the membership to foreigners. Land registers can be established for the cooperative member's ownership right to property. Establishment of such a
register does not transform the right into freehold. In the Land Register, the housing association will continue to be registered as the owner, and the member will be entered as a person having a limited right in property.

4 Research results

4.1 Residential property overall

Figure 2 – Average transaction prices per 1 sq. m on the market of residential property in Szczecin.

Figure 2 shows the formation of the average transaction price of housing in Szczecin, including the right to property. Trends in the two specified segments are similar. Marked increases in average transaction prices were recorded from the beginning of the study to the beginning of the second half of 2007. The following months brought about falling prices. However, price declines were not as large as the increases quoted earlier. The financial crisis had therefore had an impact on prices, however, it was not an impact of a scale comparable to the countries strongly affected by the crisis. It was also observed that more price declines have occurred among the dwellings that are the subject of freehold. It is quite an interesting observation, given that freehold is a much stronger law. A higher level of average prices in the case of flats in housing cooperatives may be due to the fact that the cooperative stock is more homogeneous and the average price is less exposed to the presence of transactions in premises at exceptionally low prices. Confirmation of this fact can be found in Figure 3, which presents the changes in time of the classical coefficient of variation being a quotient of the standard deviation of transaction prices and their average level. It is clear that for almost the entire study period, variability of prices was higher for the freehold flats than for flats in cooperatives. It can also be noted that the beginning of the crisis, namely the end of 2007 saw a
reduction in price variability. This was true irrespective of the type of ownership right. The sharp fall in variability of prices of freehold flats in July 2009 was due to the large decrease in the number of transactions (see Figure 4).

Figure 3 – Coefficient of variation of prices on the market of residential property in Szczecin.

Number of transactions recorded shown in Figure 4 indicates that in total, more transactions were recorded for freehold flats. Only in the last months of the study was reported a significant decrease in the number of transactions in the market of residential property. This decrease was much deeper in the case of freehold property. Decrease in the number of transactions was much higher than the price decrease. This means that the market declined in quantitative terms (banks halted lending).
Despite a sharp decline in demand, sellers were not willing to accept an equally sharp reduction of their price expectations.

Figure 5 shows the structure of the real estate market in Szczecin according to the specified rights. It can be seen that most of the period observed a greater share in the total transactions of transactions which are the subject of freehold ownership. In the second quarter of 2009, there was a significant drop in transactions of this type of premises. Decrease in the number of transactions in premises subject to cooperative member’s ownership right to property also occurred in this period. However, it was not so sharp.

The next stage of the study was further segmentation of the real property market. This segmentation included the criterion of floor area. The already discussed characteristics of the market were considered for small apartments (with an area of up to 40 sq. m), medium (ranging from 40 to 70 sq. m) and large, the floor area of which exceeded 70 sq. m.

Figure 5 – Structure of the real property market in Szczecin, according to the specified rights.

4.2 Small flats [up to 40 sq. m]
Average transaction prices on the market for small apartments were similar in nature to the ones recorded on the market as a whole. Especially, the beginning of the year 2007 was marked by a very dynamic growth in transaction prices, regardless of the nature of the right to property. The breakthrough of 2007-2008 is a stabilization of prices. Since the end of the year 2008 a decrease in prices was recorded. As in the market as a whole, so in the segment of small apartments, there were higher average price levels of the premises which are the subject of a cooperative member's ownership right to the premises. It was also noted that in the second quarter of 2009 prices for small cooperative flats began to grow while prices of freehold flats continued to decrease.
apartments).

Regarding the number of transactions, the segment of small flats is not very distinct from the whole market. The trends are similar. But there is a distinctive feature. In the segment of small flats is dominated by flats in cooperatives. Housing associations build more smaller apartments, hence the dominance of the cooperative member's ownership right to property in this segment. Regardless of the nature of the right to premises, 2008 and 2009 were characterized by a decrease in the number of transactions.

The structure of transactions in small apartments is shown in Figure 8. In contrast to the overall market, as already mentioned, there is a larger share of premises in cooperatives. Freehold flats, if they are not relatively new apartments, are located in Szczecin in tenements from the late nineteenth and early twentieth centuries. Flats in these tenements are mostly large. Despite their vigorous activity, developer have not altered the structure of freehold apartments so much that they can constitute a majority in the small apartments segment.

![Figure 8](image)

Figure 8 – Structure of the residential property market in Szczecin according to the specified rights (small apartments).

The variability of prices of small apartments was, the same as the on overall market, greater in the case of apartments which are the subject of freehold. Typical levels of price variability did not clearly change as a result of the financial crisis.
4.3 Average apartments [from 40 to 70 sq. m]

In the segment of medium-sized flats, of an area of more than 40 sq. m but not exceeding 70 square meters, it was observed that after a period of dynamic price increases at the end of 2006 and 2007, there have been no significant price declines in the following months, especially among cooperative flats. The price declines reached the segment of medium-sized flats later than the overall market. Declines did not begin until the end of 2008. A slightly lower advantage of prices of flats in cooperatives was also observed.
In the case of the number of transactions in medium-sized apartments, it was observed that the prevalence of transactions in one type of flats over the other alternated each month. So it cannot be clearly indicated which type of right prevailed in the medium-sized apartments segment. Since the end of 2008, declines in the number of transactions were recorded for both rights to residential premises. As in the case of small flats, the second quarter of 2009 saw a sharp decline in transactions in apartments which are the subject of freehold.

Figure 11 – The number of recorded transactions in the residential real property market in Szczecin (medium-sized apartments).

Figure 12 – Structure of the residential real property market in Szczecin according to the specified rights (medium-sized apartments).

Figure 12 illustrates the balanced level of share of freehold and cooperative flats. The collapse of
the freehold flats market, upset this balance only in the second quarter of 2009.

The transition from the segment of small to medium-sized apartments did not change the view of the variability in prices. Greater variability in prices was still observed for apartments which are the subject of freehold. This data is illustrated in Figure 13. During the crisis, variability has decreased for freehold flats. In the case of private apartments, there was no such phenomenon.

![Figure 13 – Coefficient of variation of prices on the residential property market in Szczecin (medium-sized apartments).](image)

4.4 Large apartments [over 70 sq. m]

![Figure 14 – Average transaction prices per 1 sq. m on the residential real property market in Szczecin (large apartments).](image)

Only in the segment of large apartments (characterized by a floor area of over 70 square meters) of
the residential real property market, there has been a longer period in which the average prices of freehold flats were higher than the average prices of cooperative apartments. This period is a period of financial crisis. It is quite interesting information telling that the prices of large apartments were not highly sensitive to the crisis. In large cooperative flats, the price decline was much more pronounced.

![Graph showing the number of recorded transactions on the residential real property market in Szczecin (large apartments).](image1)

**Figure 15 –** The number of recorded transactions on the residential real property market in Szczecin (large apartments).

![Graph showing the structure of the residential real property market in Szczecin according to the specified rights (large apartments).](image2)

**Figure 16 –** Structure of the residential real property market in Szczecin according to the specified rights (large apartments).

The fact that housing associations do not build large apartments was reflected in the data presented in Figures 15 and 16. You can see them a significant advantage of housing which are the subject of
ownership. Despite the lack of price decreases, the number of transactions declined in the segment of large apartments, just as it did in the previous segments.

![Figure 17 - Coefficient of variation of prices on the residential property market in Szczecin (large apartments).](image)

In the context of price variability, as in other market segments, there was greater price variability in freehold apartments. Interestingly, this variability, after an initial decline in the first months of the crisis, grew in the following months.

## 5 Conclusion

The article presents the results of a study of the local residential property market for the recorded prices, their variability and the number of transactions, taking into account the type of rights to property, and its floor area. Overall patterns of changes in prices and number of transactions were similar in all studied segments. Greater price variability was observed for freehold flats, which confirms that the offer of flats in the stocks of housing cooperatives is less diverse.

The financial crisis has brought itself to light primarily in the number of transactions. The fall in prices was more moderate than the decline in the number of transactions.

The study found that, despite the greater "power" of freehold, its receipt by the market in terms of transaction prices do not reflect its strength. It was even noted that prices of apartments that are the subject of cooperative member's rights to property were higher than prices of freehold apartments.

At least a few reasons for this fact can be traced:

- Difference between the standards of accommodation. A large part of freehold flats are properties located in apartment buildings in poor condition, requiring a major investment.
- Floor area. Flats in cooperatives are mostly approximately 50 square meters in size, and
these are the most sought after. The old stock is made up of flats where the floor area is much larger, and in such a situation, taking into account the metric area and expenditure, it is a better solution for richer people to purchase a house.

- Lack of elevators in buildings. Flats in cooperatives are often in old tenements. The spread between stories in such buildings often exceeds 3 meters, which means that the fourth floor of such buildings may be the sixth or seventh in new buildings.
- Location. The stocks of housing cooperatives are often housing estates with good transport connections, schools, kindergartens, and public administration offices.
- An important reason is also the habits of Poles for the management of cooperatives and therefore limited accountability, and lack of awareness and knowledge of the functioning of housing communities.

In conclusion of the study, it may be noted that due to very strong demand pressures caused by unsatisfied housing needs, the crisis has not affected the price decreases as much as in countries strongly affected by the crisis. Decrease in the number of transactions was induced by inhibition of bank lending, rather than lack of willingness on the part of people to purchase their own homes. The specificity of the housing stock in the capital of Western Pomerania has resulted in the "strong" freehold right to property, in view of the other aforementioned factors, being treated by the market "worse" than the cooperative member's ownership right. Prices of apartments subject to both rights responded similarly to the crisis. Continued monitoring of the local market will perhaps allow to capture other seemingly illogical characteristics of the real estate market in the future.

References:


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