

# RESIDENTIAL PROPERTY INVESTMENT COMPASS

01 | 2013



## Shrinking cities also offer potential for investors

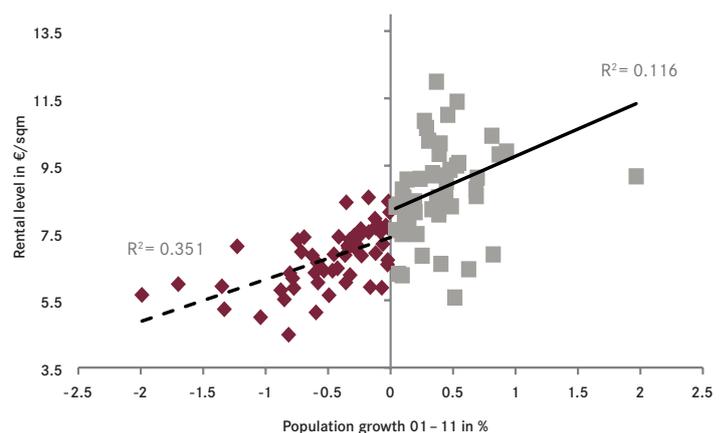
The larger the city is, the higher rent levels and increases tend to be. This was the result of the cluster analysis of the rental dynamic growth of the cities in Germany in terms of size in the last Residential Property Investment Compass. But will these results hold up in a detailed analysis at city level? This is the opening question of the following analysis.

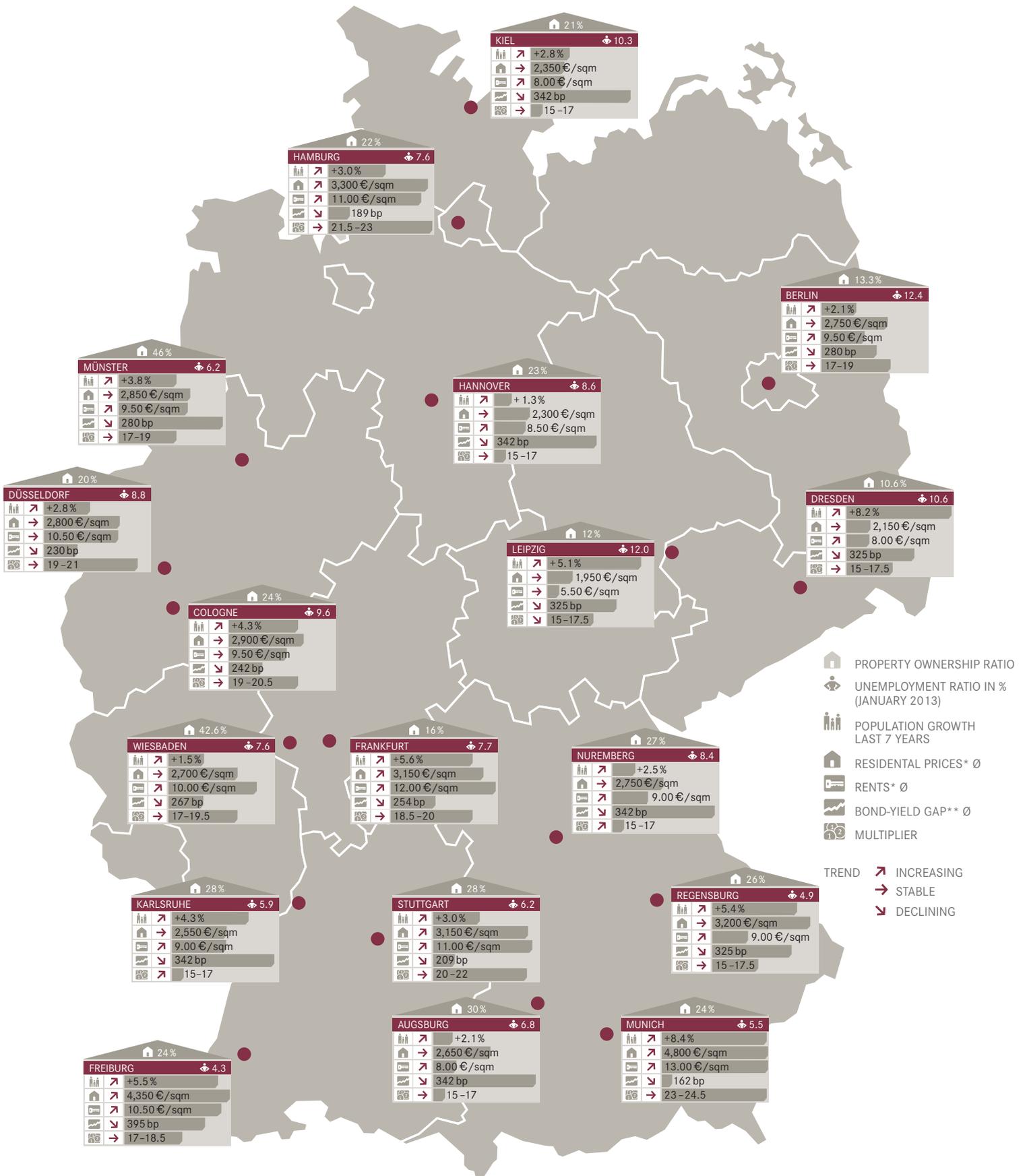
Population growth, economic development and supply trends are generally the main influencing factors in the development of a city's residential market. Therefore, empirical research was performed with regard to the extent to which they influence rents at city level. In the first phase, the extent to which the rent level depends on population trends was studied. It can be observed that cities with positive population trends had higher average rental rates than cities with a declining population between 2001 and 2011 (see figure 1). This can be attributed to the fact that a growing population increases the demand for housing and rents rise in the long term as a result. The analysis also shows that the momentum of the rental levels in markets with

an increasing population trend are much more pronounced than in markets with a declining population.

### RENTAL LEVEL AND POPULATION GROWTH

1





The PATRIZIA Residential Property Investment Compass Germany is a summary of relevant factors impacting specific German residential property markets. In this forum current market assessments and qualitative observations are published on a regular basis.

Sources: Primary data Research PATRIZIA Immobilien AG (offer and transactions database with more than 3,400 investment offers from EUR 1 million per year, regional press), German Federal Labor Office, Bertelsman Foundation, Empirica, Bundesbank.

\* As of construction year 2000, good/very good location, modern property quality.

\*\* The bond-yield gap is calculated as the difference of an average yield for an apartment house (in good/very good location and good property quality) and the yield of a 10-year government bond.

In concrete terms, the results of the analysis are as follows. The average rent in the 109 markets researched was €7.80/sqm. The difference between the cities with a positive or negative demographic trend was approximately €2.00/sqm; this means: in cities with a growing population, the average rent was approximately €8.80/sqm, and rents rose by an average of 12.6% over five years. In cities with a declining population, rent was approximately € 6.80/sqm with a rental increase of only 8.4% in the past five years. In other words: cities

with a positive, long-term net migration rate have an approximately 4.0% higher rental increase than cities with a declining demographic trend. This again shows the importance of the qualitative housing needs in the new segment, because, although the overall population is in decline in many cities, there is a significant rental increase in higher-quality, contemporary apartments. Currently, this is a trend that gets little consideration in the investment behavior of many institutional investors.

**RENT BASED ON POPULATION TRENDS**

SAMPLE	Rent *		Rental increase in five years	
	Average	St. dev.	Average	St. dev.
All cities [N=109]	7,80 €/sqm	1,68 €/sqm	10,39%	10,39%
Cities with a positive population trend [N=51]	8,84 €/sqm	1,59 €/sqm	12,62%	11,02%
Cities with a negative population trend [N=58]	6,78 €/sqm	0,89 €/sqm	8,42%	9,46%

\* New apartments since the year 2000 with higher-quality features with a size of 60-80 sqm; St. dev.: Standard deviation

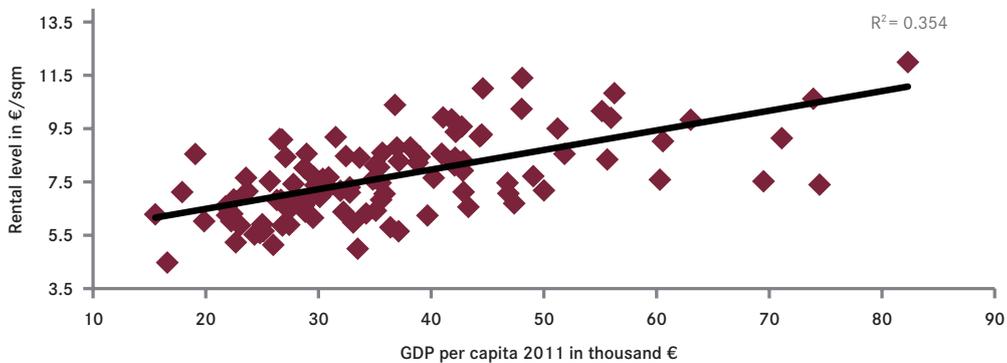
Source: PATRIZIA, company's own calculations, empirica.

Positive economic trends in a city usually result in an increasing population. However, economic growth does not just influence demographic trends, it also directly influences salaries and the inhabitants' consumer behavior. As a result, the demand for qualitatively better and generally more expensive housing and rents increase accordingly.

Thus far, the research has shown that positive demographic trends are associated with the demand for additional housing and that a growing GDP generates demand for more expensive and higher-quality housing (see figure 2).

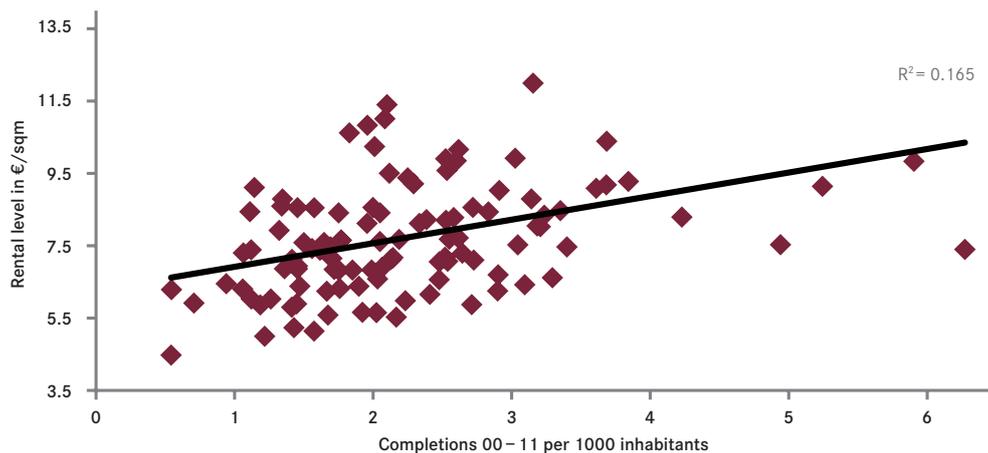
**RENTAL LEVEL AND GDP PER CAPITA**

2



**RENTAL LEVEL AND COMPLETIONS**

3



More housing must be available on the market to satisfy this demand. Therefore, the available rental space based on buildings per 1,000 inhabitants is included and compared with the rents. It is apparent in the analysis that average rents are higher in markets in which more new apartments were built (see figure 3). This shows that, in the context of Germany's largely fixed construction costs, the rental level plays quite an important role in terms of building activity. In the second phase, these findings were studied using a multiple regression

analysis of the rental levels of 109 German cities, based on population trends, completions per 1,000 inhabitants as well as GDP or GDP per capita as explanatory variables. The explanatory power of the model was over 65% or approximately 60% and showed that this fundamental data has a significant impact on rental trends. The findings from the cluster analysis are therefore confirmed in principle. In figures, the best explanatory model for rent trends in a city is as follows:

$$\text{Rent} = 6,62 + 13,04 * \text{Pop. growth (01 - 11)} + 0,34 * \text{completions per 1.000 inhabitants (01 - 11)} + 0,05 * \text{GDP (in mio. €)}$$

R<sup>2</sup>=0,66

P-value (0,000) (0,000) (0,001) (0,000)

...

For the selection of locations for developing a portfolio of rented apartment houses of more recent construction years, at first glance this exact analysis of the fundamental data means that cities with an increasing population and steadily growing economic performance are of great importance as they have the highest rental growth. Since the high demand cannot be satisfied so quickly by the construction of new apartments, it can be assumed that the situation in these markets will not change in the medium term. This applies not least because it can be observed that adequate building sites are no longer available in these cities to provide the corresponding supply. Therefore, investing in these cities is difficult or is associated with low yields due to the high demand of investors with a limited supply.

lower than in the top markets. However, these differences are generally compensated by lower purchase prices, meaning that good rental yields can also be achieved in these cities.

### LOCATIONS WITH A DECLINING POPULATION MAY ALSO OFFER INVESTMENT OPPORTUNITIES

It is therefore important to expand the focus of investments to locations with a negative population trend in the fundamental data or with a relative lower GDP or GDP per capita. Since analyses show that significant rental increases can be expected in these cities in the area of new higher-quality apartments, they are likely to be somewhat

Despite these trends, the key names dominated events in the discussion about the current market trends. Munich maintained its position as Germany's most expensive rental market. The average rent for new apartments in Munich (from the year 2000, higher-quality features, 60–80 sqm in size) has reached approximately €13.00/sqm. Frankfurt and Hamburg held second and third place with €12.00/sqm and €11.00/sqm respectively followed by Stuttgart and Düsseldorf with €10.75/sqm and €10.50/sqm respectively. However, the greatest rental increases with more than 5% in the course of the year were well outside the metropolitan areas in Coburg, Speyer and Amberg, where the rents in these markets were only around €6.00/sqm to €7.50/sqm and new construction activity was comparably low in these markets. No negative rental trends were observed in cities of comparable sizes in the terms of new construction in Germany. The most significant negative rental trends were just over 3% in Pirmasens in the course of the year.

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