Institut der deutschen Wirtschaft Köln

IW-Report · 23/2017

Three Risks for the German Residential Property Market

Author:

Prof. Dr. Michael Voigtländer
Telephone: ++49221 4981-741
E-Mail: voigtlaender@iwkoeln.de

1 August 2017

iW.KÖLN.WISSEN SCHAFFT KOMPETENZ.

Content

JEL-classification:
D53: Financial Markets
R21: Housing Demand
R31: Housing Supply and Markets

Abstract

With prices surging in major cities since 2010, the debate about a potential speculative bubble in the German housing market has been gaining momentum. Overall, however, the German housing market is sound. Neither an excess of construction, nor an excess of mortgage lending have been observed, and thus the risk of a sudden burst in housing prices seems low. In the major cities in particular, there is a discrepancy between supply and demand. Combined with low mortgage rates, strong price increases are plausible. Nevertheless, this study also points to risks in the market. Specifically, investors should take into account the 3 following risks:

1. In rural regions, there is an excess of supply of single-family homes. Since demographic forecasts for the larger part of these regions are dismal, a price correction seems more likely.
2. In some big cities, completions in micro apartments have been enormously high. Moreover, most new micro apartments are let at high rental rates, overburdening most students who are meant to be the typical users. As the population aged between 18 and 25 is set to shrink over the coming years, there are grounds for a market correction,
3. Multipliers indicate optimistic expectations with regards to future rent increases, specifically in Hamburg and Munich. Although rental increases can be justified by a growing population, there is a risk of a tightening in rental regulation, preventing investors from putting rental increases in practice.

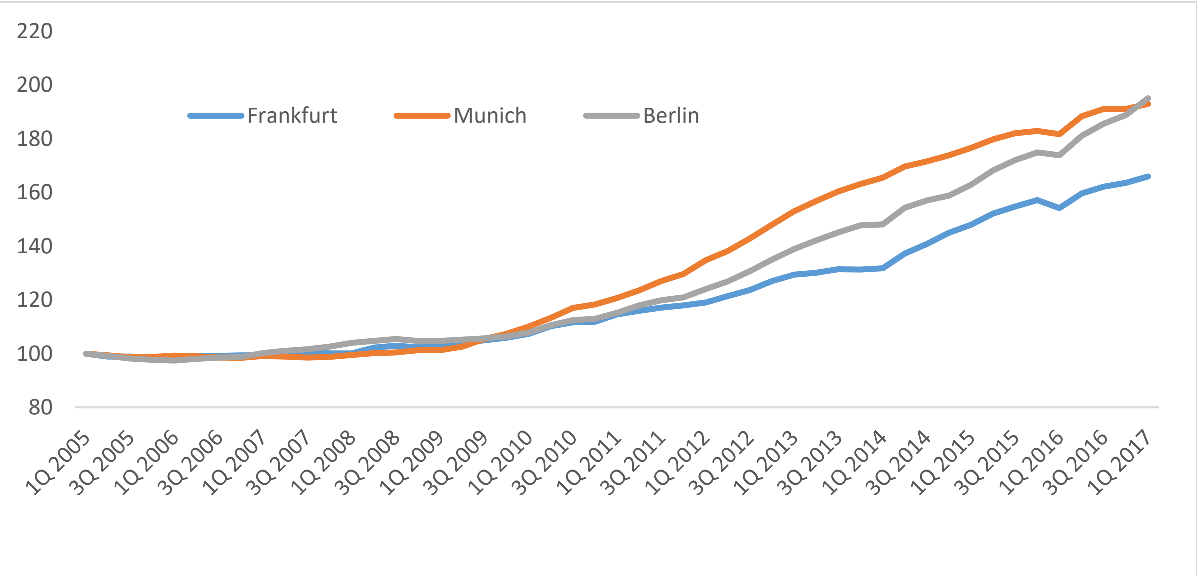
The German housing market appeared to be a haven for investors in recent years. The combination of high demand (migration), a robust economy and ultra-low mortgage rates offered the chance for high capital growth. Fortunately, the German market is less prone to overheating than other markets, but risks are emerging nonetheless. However, since demand continues to outpace supply in various sub-segments of the housing market, investment opportunities are still present.

1. Background

With prices in the housing market surging since 2010, concerns about a possible speculative bubble are rising in Germany. In major cities such as Berlin, Hamburg and Munich, prices have gone up by more than 50 percent since 2010 (figure 1). Thus, observers such as the Deutsche Bundesbank (2017) or Simons and Thomschke (2017) stress the danger of a market correction in the German property market. Perhaps the crises in the Spanish, English and Irish property markets were also triggered by a booming economy and low interest rates.

However, the situation in the German residential property market is different. We observe neither an exaggerated construction level, nor a mortgage-lending boom. In general, as this study shows, the market in Germany is sound, with no indication of overheating. Nevertheless, there are parts of the residential property markets that should be regarded with more caution. Markets in rural areas show signs of over-construction, as does the market for micro-apartments, which is especially attractive for foreign investors. In addition, there are signs of over-confidence in the development of rental increases in some major cities like Munich. Given the market forces, strong rental increases in the future are seemingly justified, but tightening rental regulations in Germany might counter the calculations of investors. Although there is currently a discussion about the justification of the rental brake, there is some chance that the regulation may be even tighter after the federal election.

Figure 1: Development of prices for used apartments
Index: 1/2005=100



Source: F+B

The following analysis will discuss the situation of the residential property market in general, and these specific risks. Firstly, an assessment is made of the probability of a speculative bubble, followed by a discussion of the risks in question. This short study ends with a conclusion.

2. A speculative bubble in the German residential property market?

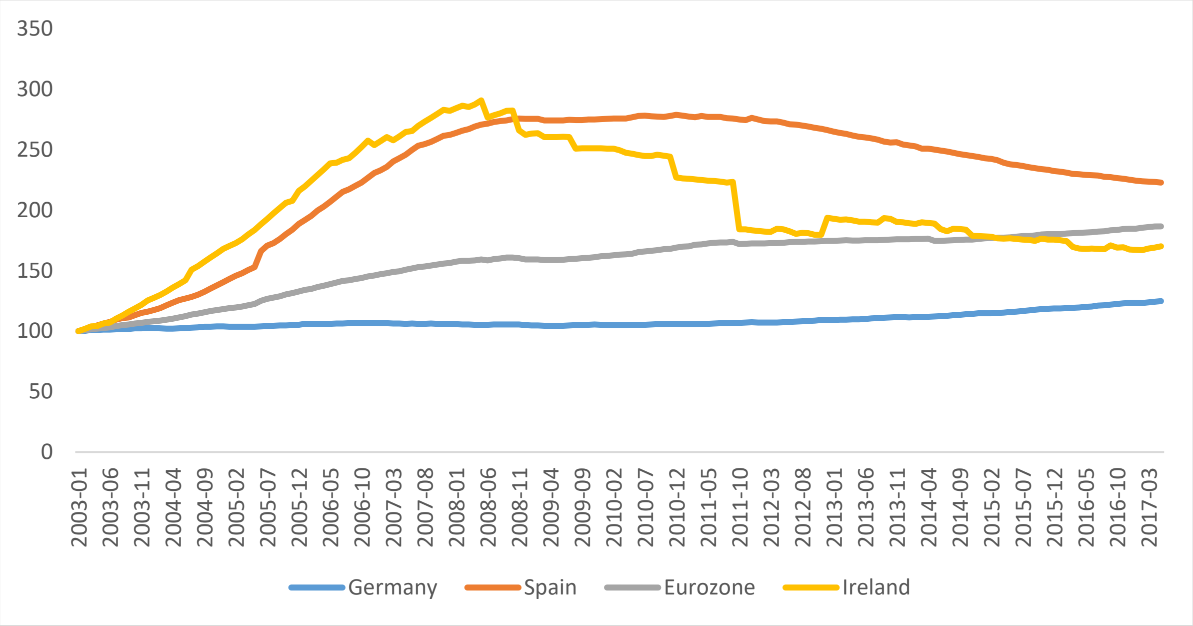
According to Stiglitz (1990), a speculative bubble is defined as follows: "If the reason that the price is high today is only because investors believe that the selling price will be high tomorrow – when `fundamental´ factors do not seem to justify such a price – then a bubble exists." Thus, the behavior of investors changes, and they tend to be overly optimistic.
The outcome of this overoptimism can be two-fold: investors build too many new housing units as they overestimate the future selling price, and investors and households make use of the leverage effect to boost their capital gains when selling the property, and in order to purchase more properties with a given equity (Reinhart and Rogoff 2011). In the short term, prices increase significantly, but as investors realize that the price development is not sustainable – either because of increasing vacancies (the case of Spain) or as mortgage delinquencies increase and the number of foreclosures grow (the case of the UK) – the bubble bursts.

Hence, to measure the risks for the German property market, it is helpful to take a closer look at the mortgage and construction markets.

Given its mortgage market, Germany is traditionally prudential (Hüther et al, 2015). Mortgage lending in Germany is typically characterized by high down payments, high amortization rates and fixed-rate mortgages. Consequently, the volume of mortgages is accustomed to developing smoothly. Figure 2 depicts the development of mortgage stocks in Germany, Spain, Ireland and the Eurozone.

In Spain and Ireland, lending for housing purchases increased dramatically between 2003 and 2007. The stock of mortgages more than doubled and outpaced price development considerably, whereas in Germany, the development remained smooth. Between 2010 and 2017, lending for housing purchases increased by 18 percent, which is below the increase in prices. Given the low mortgage rates and the development of gross domestic product, mortgage lending is disproportionally low, as Bendel and Voigtländer (2017) prove with an error correction model.

Figure 2: Stock of lending for housing purchase
Index: 1/2003=100



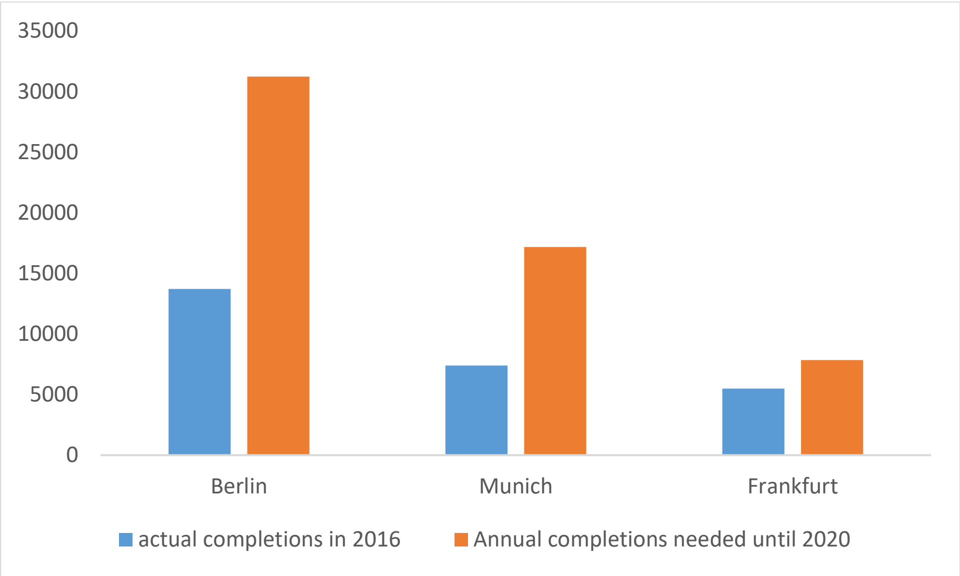
Source: ECB

What is more, the choice of mortgage products is not changing. In the US, as well as in other countries, low mortgage rates led to the emergence of riskier mortgage products with floating rates, high leverage rates and low-to-zero (or even negative) amortization. In Germany, however, leverage rates remain constant, while amortization rates and the duration of fixed-term mortgages have increased (Bendel und Voigtländer, 2017)

Construction activity in Germany has expanded over the last years. Since 2010, the number of completed housing units has increased by more than 70 percent. In total, 277,000 new housing units were completed in 2016. However, compared to 1995's record high of more than 600,000 housing units, the figure is less impressive. In the early 2000s, completions of more than 300,000 were average. More importantly, the influx of people to Germany boosted the demand for housing. Between mid-2011 and end of 2015 the population in Germany increased by more than one million people. Estimations by IW Cologne suggest that until 2020 roughly 385,000 new housing units per year are needed to match demand (Deschermeier et al, 2017a). The ministry of Environment, Nature Conservation, Building and Nuclear Safety estimates that an annual number of 350,000 housing units is needed (Bauchmüller / Gammelin, 2015).

In major cities, there is a discrepancy between demand and supply, too. Based on demographic forecasts, current vacancies, and typical housing consumption derived from the socio-economic panel (SOEP), Deschermeier et al. (2017a) calculate the annual number of completions needed for Frankfurt, Munich and Berlin. In Berlin, for example, more than 30,000 completions per year are needed to match the demand of a growing population. In 2016, however, only 13,700 housing units were completed. Between 2011 and 2015, the gap between the amount of construction needed and actual construction amounted to more than 50,000 (Deschermeier et al, 2017a). In all major cities, there is a huge discrepancy between demand and supply in the housing market. Figure 3 illustrates the situation for Berlin, Frankfurt and Munich, but it is similar in Dusseldorf, Hamburg, Stuttgart or Cologne (Deschermeier et al, 2017a).

Figure 3: Annual completions needed until 2020 and actual completions in 2016
Frankfurt: building permits in 2016



Source: Deschermeier et al., 2017a

According to recent demographic forecasts (Deschermeier, 2016), the demand for housing in major cities will increase until 2035. Berlin, Frankfurt and Munich can expect a population growth of more than 10 percent, increasing the number of completions required even further. The main reason why supply and demand do not match is that there is a shortage of building sites. There are enough investors, and project developers are waiting to build more, but building sites are currently the bottleneck in the market. To unleash the potential, municipalities need to overhaul their zoning plans, with the ambition to build new urban districts. In addition, land taxation should be overhauled to provide incentives to build faster on building sites (Voigtländer, 2017). Currently, building sites are often exempt from taxation. As prices for building sites increase by more than 10 percent in most cities, waiting will therefore become a favourable strategy for landowners.

Against this backdrop, the price development is at least explainable. In a market with prudential lending and a housing shortage (at least in the major cities) a market correction is less probable. Based on a “user cost of housing” approach in the tradition of Poterba (1984), Seipelt and Voigtländer (2016) calculate that even an increase in mortgage rates of 100 to 200 basis points will not necessarily provoke a drop in prices. Or vice-versa, the analysis of user costs suggests that there is still leeway for additional price increases.

Nonetheless, a word of caution is necessary. The current situation in the property market is determined by the tremendous combination of strong migration and a booming economy in an ultra-low mortgage rate environment. Hence, a strong movement of prices can be justified, but the framework will worsen over time. Given the current conditions for real estate investors, a peak has been reached and the only question is how long the peak will last. An adjustment will happen eventually. As the German market does not show any indications of a speculative bubble, i.e. no over-construction and no mortgage expansion, the chances are good that the boom will end in a soft landing.

3. Three risks for the housing market

Although the German market’s overall performance is sound, sub-segments of the housing markets bear greater risks due to different reasons. That is, rural markets and the market for micro-apartments show signs of oversupply, while some major city markets face the risk of over-regulation.

3.1 Oversupply in rural markets

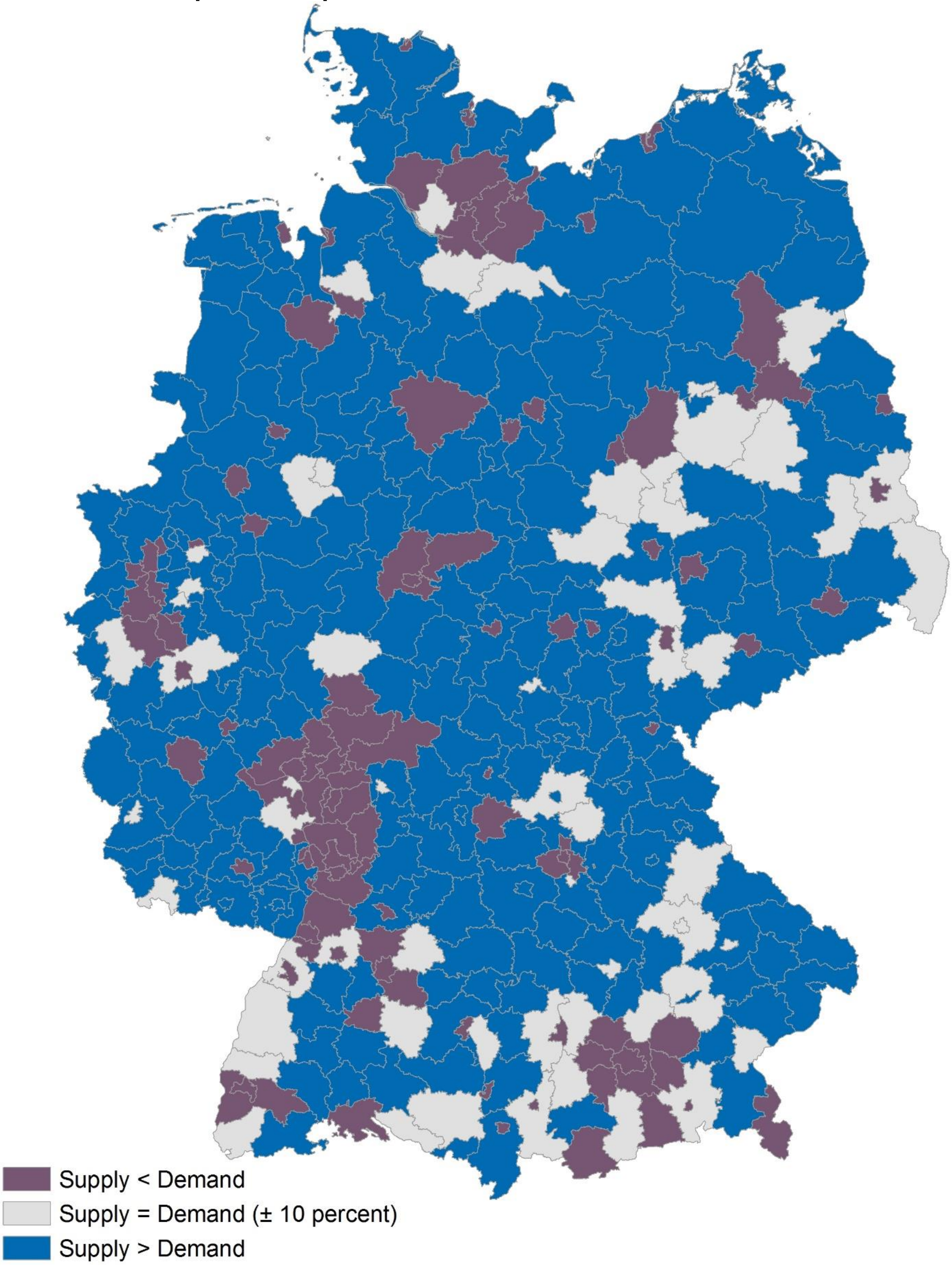
The booming housing market in Germany is attractive for domestic as well as international investors. With the major cities running out of investable properties, investors are progressively seeking alternatives. Indeed, due to the federal structure, Germany possess a great number of economically appealing cities. Mid-sized cities like Leipzig, Dresden, Regensburg, Karlsruhe or Münster are growing, and have seen a significant increase in prices over recent years. In addition, more and more investors are considering the outskirts of the major cities, since people move outside city limits as a result of housing shortages. However, the market in Germany is very heterogeneous and not all municipalities are growing. On the contrary, shrinking municipalities are still very much an issue. As the population in Germany is growing, people are progressively clustering in economically vital cities and their outskirts.

Hence, Germany follows international trends, as explained by Glaeser (2012), for example.
Consequently, there are a number of counties in Germany with an oversupply of housing. Figure 4 shows the results of an analysis by Deschermeier et al. (2017b) of all 401 counties. As is clearly illustrated, the actual completions between 2011 and 2015 outweighed the completions required in many counties.

Deschermeier et al. (2017b) specifically point to the massive construction of single-family homes. In rural counties, more than twice the number of single-family homes needed have been built. Of course, in a country with increasing incomes, the preference for single- compared to multi-family homes might increase, but the scale of the shift would be enormous. More likely, counties with a less favourable demographic perspective will try to attract families with cheap buildings sites. However, only as an exception would this stimulate families to move from big cities to the countryside. More often, people from other rural counties or from the same counties will be attracted, leading to vacancies in other buildings.

In counties with an oversupply, a price correction is more likely if mortgage rates go up, or in the case of an economic upswing. Experiences from Ireland and other countries also suggest that rural counties in particular suffer from worsening conditions. Thus, investors should exercise caution when deciding on the alternatives to major cities.

Figure 4: Counties in Germany with oversupply, overdemand and equilibrium of actual and required completions



2011 to 2015; Equilibrium: relation between actual and required completions between -10 and 10 percent

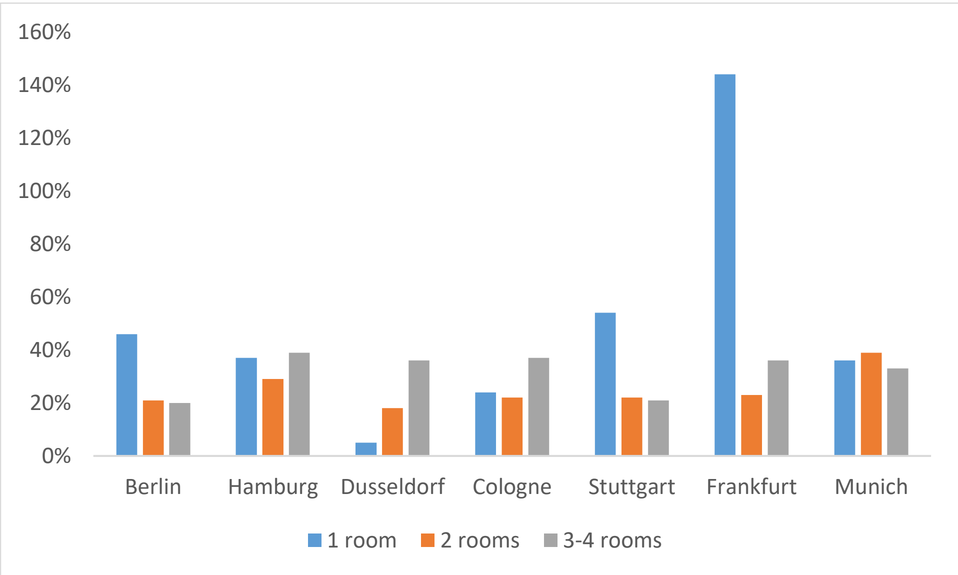
Source: IW Cologne

3.2 Overinvestment in the market for micro-apartments?

Micro-apartments have gained greater attention among investors in recent years (Savills, 2017). These kinds of housing units are attractive because they offer a higher rent per square meter. In addition, the number of single households is increasing. In Germany, the number of students in particular has increased due to a higher number of pupils deciding to continue their education and the shortening of school duration by one year. Consequently, the number of students increased from 2.2 million in 2010 to over 2.8 million in 2016. Furthermore, smaller apartments seem to be a reasonable response to the shortage of living space in major cities.

However, the calculations of Deschermeier et al (2017a) imply that in some major cities at least there has been an over-construction of micro-apartments. Based on the demographic change between 2011 and 2015 and on age-specific housing consumption, the number of additional micro-apartments was assessed with very different results for the major cities. While in Dusseldorf less than 10 percent of the required micro-apartments were built, the figure for Frankfurt was 144 percent (figure 5).

Figure 5: Relation between actual completions and needed completions with respect to the number of rooms per apartment
2011 to 2015

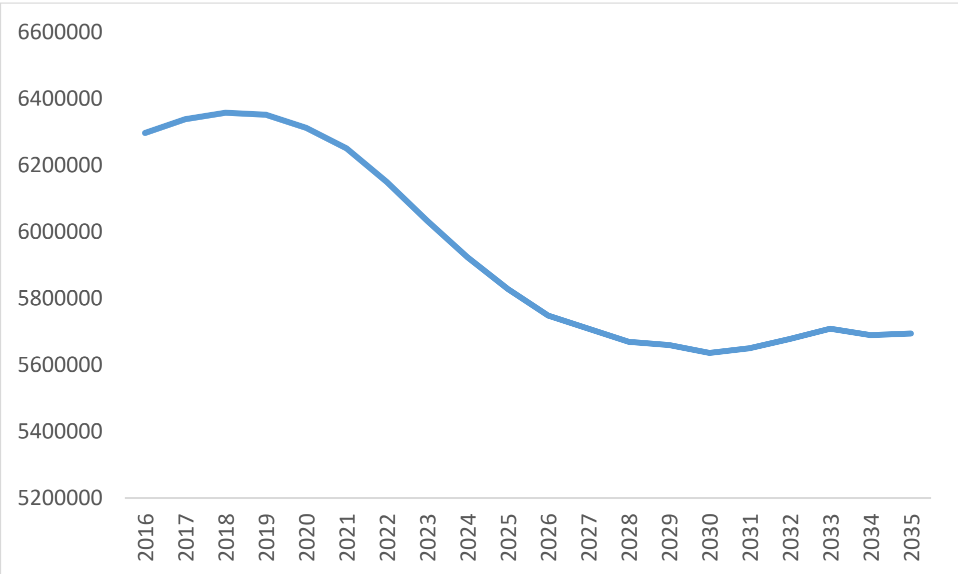


Source: Deschermeier et al, 2017a

Compared to apartments with more rooms, the relation between actual and needed completions is considerably higher in Stuttgart, Berlin and Frankfurt. One might argue that households shift their demand from bigger apartments to smaller apartments as a result of market pressure. However, the crucial point is that, in most cases, the newly built micro-apartments are more costly than larger existing apartments. Often, all-in rental charges for micro apartments are over 500 euro. For most students, micro-apartments are too costly and outweigh prices for other apartments (Seipelt und Deschermeier, 2016). Suppliers react to this and adjust the apartments based on the needs of young job starters or long distance commuters. Given the shortage of housing, this currently works. However, if the market relaxes, it is questionable whether rent levels will remain the same.

In addition, the prospective for student homes is deteriorating. Despite strong migration over the last years, the number of people in Germany aged 18-25 will plummet in the 2020s. This figure currently stands at 6.3 million, but in 2025 it will be a mere 5.8 million (figure 6). Furthermore, more and more Bundesländer are reverting to a school duration of 13 years (instead of 12). Bavaria and North Rhine-Westphalia just announced a lengthening of the regular school duration, which will result in a sharp drop in the number of students starting university in the coming years. This puts pressure on letting highly priced micro-apartments. Micro-apartments are not a risk on the whole, but most people prefer more spacious flats and accept living in micro-apartments solely to reduce costs or because they enable them to live in a more central location. The combination of high rental charges and less space is not the first choice for households with higher incomes presumably, although they offer some amenities like a concierge and laundry services. More pricy micro-apartments, on the other hand, might attract more demand even if market pressure slows down.

Figure 6: Population forecast for persons aged 18-25



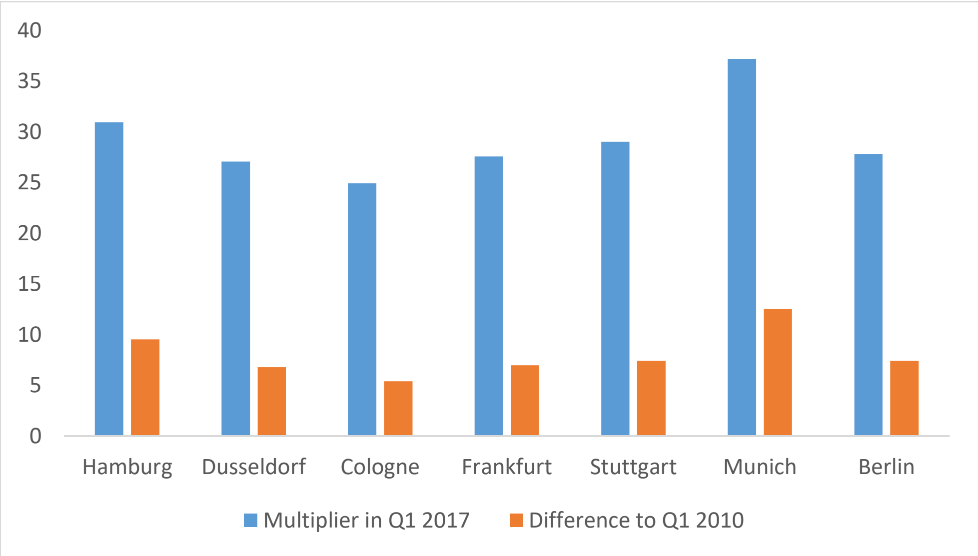
Source: IW Cologne

3.3 Regulation and expected rental increases

Over these past years, multipliers for apartments increased considerably. Multipliers show the relationship between the price of a property and the annual net rent. In the

50 biggest cities in Germany, the average multiplier increased from 19.5 in 2010 to 24 in Q1 2017. Some observers see this as a sign of overheating, but as mortgage rates dropped sharply, an adjustment of multipliers (or alternatively, yields) is reasonable (see Himmelberg 2005). However, multipliers have not increased equally in the cities. In Cologne the multiplier increased by 5.4, in Hamburg by 9.6, and in Munich by 12.5 (figure 7).

Figure 7: Multipliers in big cities



Source: F+B, IW Cologne

There are two reasons why multipliers differ from one city to another. Firstly due to a different assessment of risks (volatility and vacancies), and secondly because of anticipated increases in rental charges. A different assessment of the risk premium is possible, but not very plausible. All big cities listed in figure 7 have experienced a sharp increase in demand since 2010, and the risk of vacant apartments in each of these cities is negligible. Hence, a different expectation concerning rental charges might be more relevant. As prices reflect the future discounted cash flow of a property, a stronger rent increase justifies a higher multiplier. In the past, rental increases in Munich and Hamburg outpaced increases in other major cities, so a stronger increase in multipliers would appear likely.

However, even though the market allows for them, it is questionable whether these rental increases can actually be implemented, owing to tightening in rental regulations in Germany. In 2015, the so-called “rental brake” was introduced in Germany, allowing rental charges for new contracts to be raised no more than 10 percent above the level of the reference rate set out in the rental table (Mietspiegel). Exceptions are made for new buildings and modernisations. The problem is that

rental tables do not reflect the current market, as they are based on data from the last four years. Deschermeier et al. (2016) show that in most cases market rental rates are significantly higher than the reference rent plus 10 percent. This means that the rental brake is de facto a rental stop.
Moreover, research on the rental brake has revealed that the rental brake is currently failing to achieve its purpose (Kholodilin et. al., 2017; Hein / Thomschke, 2017). One reason could be that landlords can maintain existing rental charges, as they are under no obligation to lower them. They can argue that the rent in the former contract was above the threshold level, and since tenants do not have access to the previous contract, there is leeway to circumvent the regulation. Another reason could be that both tenants and landlords are either uninformed about the rental table, or simply ignore the regulation. Only a small share of tenants would be willing to go to court and endanger their relationship with a landlord.

Nevertheless, the situation might change after the next federal election. All parties except for the free democrats want to maintain the rental brake. Their ideas differ in some points, but the parties that wish to maintain the regulation agree on one thing: the regulation must be enforced more strictly. Landlords have to be expected to provide tenants with access to the previous contract, thereby making it more difficult to circumvent the rules. Thus, it will be harder to raise rent in the future. However, the new coalitions in North Rhine-Westphalia and Schleswig Holstein wish to scrap the rental brake, so investors are faced with a certain degree of uncertainty.

Investors might argue that the rental brake is not relevant to their calculations. If the rental brake is enforced strictly, a sale to owner-occupants, who have an unrestricted demand and adjust their willingness to pay to market conditions, is a solid exit. While in some cases this might be possible, in more and more cities, so-called Milieuschutzsatzungen (community preservation rules) are being introduced, aimed at preventing gentrification, and often include rules that forbid selling to owner-occupants. In addition, community preservation rules do not allow for extensive refurbishment, which could also be used as a means to increase rental charges to market levels. Thus, there is a risk that rental charges will be frozen in some major cities, or only increase slowly, without the option of an economic exit.

4. Conclusion

Overall, the German housing market is in sound condition. Neither an excess of construction nor an excess of mortgage lending have been observed, and thus the risk of a sudden boom in house prices seems low. In major cities in particular, there is a discrepancy between demand and supply. Combined with low mortgage rates, strong price increases are plausible. Nevertheless, this study also points to risks in the market. Specifically, investors should take into account the following:

- an oversupply of single-family homes in rural regions,
- high completions in micro-apartments in some major cities, which combined with a shrinking population of 18-to-25 year olds might give grounds for a market correction,
- and, the uncertainty surrounding rental regulation, which could be tightened, especially in the big cities.

Investing in the German housing market can still be attractive, but a sound understanding of the market is necessary to avoid costly failures. Although, perhaps, the best time to invest in Germany has been and gone, there are still opportunities for investors. The focus of this paper has been the risks, but two opportunities must also be highlighted.

Firstly, the analysis of required completions revealed that there is a particular shortage in two- and three-room apartments (living room, bed room and one additional room). Despite the influx of migrants, the average age of German households is increasing constantly. A share of up to 40 percent of housing demand will be allotted to households aged 65 and over in the near future (Deschermeier et. al., 2015). Moreover, “silver agers” are more likely to purchase, since they have had enough time to accumulate capital.

Secondly, as a result of a housing shortage in the major cities, German households specifically are seeking alternatives. As work places and most amenities (leisure, shopping, and education) can be found in the major cities, Germans are looking for locations that provide good access to public transportation, to enable convenient and fast commuting. This creates an opportunity for smaller cities in the areas surrounding major cities, such as Siegburg (near Cologne), Neuss (near Düsseldorf) and Offenbach (near Frankfurt).

Of course, a combination of these two factors is feasible and increases the likelihood of success.

The German housing market was a haven for investors in recent years. The combination of a high demand (migration), a robust economy, and ultra-low mortgages rates offered opportunities for high capital growth. Fortunately, the German market is less prone to overheating than other markets, but risks are emerging nonetheless. However, since demand continues to outpace supply in various sub-segments of the housing markets, investment opportunities are still present.

References

Bauchmüller, Michael **/ Gammelin,** Cerstin (2016), Hendricks will 350.000 neue Wohnungen bauen, in: Süddeutsche Zeitung, 20 January 2016, http://www.sueddeutsche.de/politik/deutschland-milliarden-in-den-sozialen-wohnungsbau-1.2826255 [31-07-2017]

Bendel, Daniel / **Voigtländer**, Michael, 2017, Eine Risikoprüfung für die deutsche Wohnimmobilienfinanzierung, in: IW-Trends, Vol. 43, No. 4, p. 41–57

Deschermeier, Philipp / **Kochskämper**, Susanna / **Schier**, Michael / **Voigtländer**, Michael Der Wohnungsmarkt 2030 - Wie und wo die Generation 65+ leben wird, Gutachten für BPD Immobilien

Deschermeier, Philipp, 2016, Die Großstädte im Wachstumsmodus – Stochastische Bevölkerungsprognosen für Berlin, München und Frankfurt am Main bis 2035, in: IW-Report, Vol. 39/2016

Deschermeier, Philipp / **Haas**, Heide / **Hude**, Marcel / **Voigtländer**, Michael, 2016, A first analysis of the new German rent regulation, in: International Journal of Housing Policy, Vol. 16/2016, Issue 3, p. 293-315

Deschermeier, Philipp / **Henger**, Ralph / **Seipelt**, Björn / **Voigtländer**, Michael, 2017a , Zuwanderung in die Großstädte und resultierende Wohnungsnachfrage - Gutachten für die d.i.i Immobilien GmbH

Deschermeier, Philipp / **Henger**, Ralph / **Seipelt**, Björn / **Voigtländer**, Michael, 2017b, Wohnungsmangel in den Städten, Leerstand auf dem Land, in: IW-Kurzberichte Vol. 44/2017

Deschermeier, Philipp / **Seipelt**, Björn, 2016, A Hedonic Rent Index for Student Housing in Germany - Survey on 15 Metropolitan and Student Cities for Deutsche Real Estate Funds in Cooperation with ImmobilienScout24

Deutsche Bundesbank, 2017, Konjunktur in Deutschland, in: Monatsbericht Februar 2017, p. 48-59

Glaeser, Edward, 2012, Triumph of the City: How Our Greatest Invention Makes Us Richer, Smarter, Greener, Healthier, and Happier

Hein, Sebastian / Thomschke, Lorenz (2017), Notizen zur Mietpreisbremse, empirica paper No. 240, https://www.empirica-institut.de/fileadmin/Redaktion/Publikationen_Referenzen/PDFs/empi240shlt.pdf [31-7-2017]

Himmelberg, Charles / **Mayer**, Christopher / **Sinai**, Todd, 2005, Assessing High House Prices. Bubbles, Fundamentals and Misperceptions, in: Journal of Economic Perspectives, Vol. 19, No. 4, p. 67–92

Hüther, Michael / **Voigtländer**, Michael / **Haas**, Heide / **Deschermeier**, Philipp, 2015, The importance of long-term financing by banks – Advantages and future challenges, IW Analysis 102, Cologne

Kholodilin, Konstantin / **Mense**, Andreas / **Michelsen**, Claus (2016), Die Mietpreisbremse wirkt bisher nicht, in: DIW Wochenbericht, No. 22/2016

Poterba, James M., 1984, Tax Subsidies to Owner-Occupied Housing: An Asset-Market Approach, in: The Quarterly Journal of Economics, Vol. 99, No. 4, p. 729–752

Reinhart, Carmen M. / **Rogoff**, Kenneth S., 2011, This Time is Different: Eight Centuries of Financial Folly

Savills - Savills Research Deutschland, 2017, Im Fokus Studentenwohnungsmarkt Deutschland

Simons, Harald / **Thomschke**, Lorenz, 2017, Frühjahrsgutachten Wohnimmobilien 2016, in: ZIA Deutschland (Hrsg.), Frühjahrsgutachten der Immobilienwirtschaft 2017, Berlin

Stiglitz, Joseph E., 1990, Symposium on bubbles, in: The Journal of Economic Perspectives, Vol. 4, No. 2, p. 13–18

Voigtländer, Michael, 2017, Luxusgut Wohnen - Warum unsere Städte immer teurer werden und was jetzt zu tun ist

Voigtländer, Michael / **Seipelt**, Björn, 2016, ACCENTRO-IW Wohnkostenreport – Droht eine Überhitzung des deutschen Wohnungsmarktes? Eine Analyse von Mieten und Wohnnutzerkosten für 402 Kreise, Gutachten für die Accentro AG