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Recent Supply and Demand Developments in the German Housing Market

By Juliana Dahl and Małgorzata Góralczyk

Summary

Until about 2010, price developments in German regional housing markets were by and large in line with economic performance. By contrast, over the last six years, price developments have been increasingly driven by supply shortages and surging demand, particularly in large cities. On top of that, around 890,000 asylum seekers arrived in Germany in 2015. This led to an increase in population of 1 % and suggests an increase in demand for low-price housing in the short- to medium-term, resulting in potential upward price pressures for the real estate market.

This Economic Brief assesses whether the recent trend of rising prices constitutes a risk to financial stability in Germany and whether the high influx of refugees might affect price developments. Firstly, recent data suggests that in spite of noticeable increases in regional house prices in recent years, the housing sector does not pose a risk to financial stability in Germany. Secondly, over the medium-term, the inflow of asylum seekers is likely to have only limited effects on the rate of housing inflation. However, aggregate figures mask regional (urban-rural, East-West) differences in housing-market dynamics, and a prolonged period of zero or even negative real interest rates could theoretically trigger a misallocation of resources with negative rebound effects for the real economy once interest rates normalise. Also, high net-immigration followed by net-emigration poses significant demand and supply-management challenges for the (social) housing market.

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Introduction

The German housing sector is currently in a dynamic phase with prices growing strongly in the context of robust housing demand and insufficient and relatively inelastic supply. On average, house prices and prices for apartments in Germany have risen considerably since 2010, substantially outpacing consumer price inflation. These developments mainly result from a demand surge and supply shortages in large cities, while other (i.e. rural) regions even suffered from a fall in prices until recently.

Population trends in Germany might affect house price developments in the future. While between 2002 and 2010 the population in Germany shrunk, this trend reversed during the last six years with cumulative positive net immigration of around 2.9 million people. In 2015, 2.1 million people migrated to Germany while 1 million emigrated, resulting in a net migration of 1.1 million persons (1.4 % of total population), the highest annual inflow since the 1950s. Following the EU-Turkey agreement and the closing of the Balkans-route inflows of asylum seekers fell sharply from around 890,000 in 2015 to around 280,000 in 2016.¹

This brief highlights the main features and latest developments of the German housing market, presents the macroeconomic implications of refugee immigration for the German housing market, including a scenario analysis and draws policy conclusions.

The German Housing Market: characteristics and latest developments

The housing market drives a large part of private consumption expenditure and investment.² In Germany, since the mid-1990s rents accounted for around 17 % of total private consumption. Housing is equally important for total investments: it accounted for almost 30 % of total German investment and around 60 % of total construction investment in 2015. Moreover, housing accounted for roughly a third of total loans to domestic enterprises and resident individuals, while dwellings of private households represented around 40 % of wealth in the German economy in 2014.

A peculiarity of the German housing market is the relatively low homeownership rate. In international comparison the homeownership rate in Germany ranks among the lowest in the developed world though housing costs are moderate. Several historic factors might explain this, notably (i) the massive construction of social dwellings in the 1950s and 1960s in West Germany to give accommodation to its citizens and the displaced people from the Eastern parts of the former German Empire (1871-1918) and (ii) the large absence of owner-occupied housing in the former German Democratic Republic. Given the important stock-flow issues, this feature has been remarkably stable with only a slight increase in ownership. By 2014, only around 52 % of German households owned the dwelling they inhabited, compared with 67 % in the euro area.³

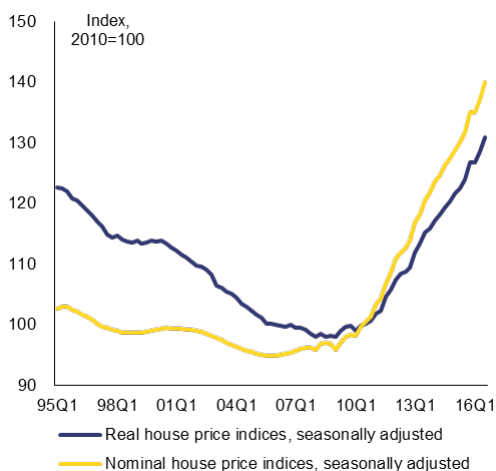
Price dynamics

House prices in Germany strongly rebounded in recent years following a prolonged contraction period.⁴ Several developed countries experienced protracted hikes in property prices during the last decades driven by common and country specific factors. For instance, low financing costs triggered rising housing demand in the United Kingdom (UK), Ireland, Spain and the United States of America (USA). Additionally, the tendency towards urbanisation, rising income and high employment bolstered demand in Ireland, while in Spain the pick-up in demand was driven by the boom in holiday houses market. Tax incentives also played a role as illustrated by the case of the Netherlands where the housing boom was notably fuelled by tax exemption of loan interests, which led to exceptionally high mortgage rates.⁵ In contrast to those countries, in Germany house prices declined in nominal and real terms. After a housing boom in the early 1990s driven by the reunification and additionally fuelled by public subsidy schemes and strong net migration, house prices in Germany followed a declining trend both in nominal and real terms from 1996 up to late 2000s.

Following a prolonged contraction period, the German housing market is currently in a dynamic phase with prices growing strongly given robust housing demand and insufficient and relatively inelastic supply.⁶ House prices accelerated noticeably in real and nominal terms

(30 % and 38 %, respectively) since 2010 (see Graph 1). In 2015, house prices increased by around 4.5 % and continued to grow even more strongly in 2016 (6 %).⁷ These recent upward dynamics in real estate prices in Germany result from strong housing demand, notably in top locations, and insufficient housing supply.⁸ On the one hand, strong demand for housing has been supported by the growing number of households, positive income prospects and low nominal interest rates that create favourable loan and investment conditions. On the other hand, insufficient and relatively inelastic supply was exacerbated by structural factors such as regulatory hurdles (i.e. regulations for construction land as well as environmental and energy efficiency standards).⁹

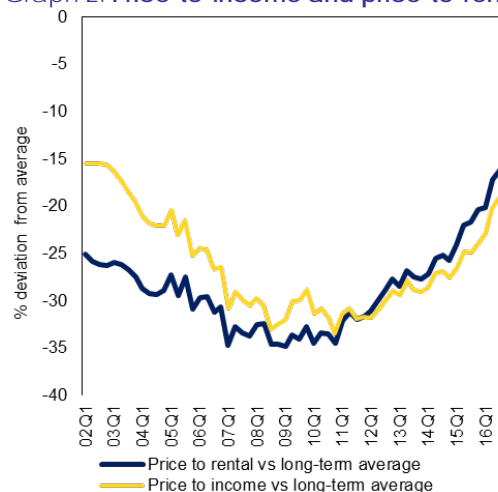
Graph 1: House price trends in Germany



Source: European Commission calculations; Organisation for Economic Co-operation and Development (OECD). Data for 2016 contain data until the third quarter 2016. Nominal house prices deflated using the private consumption deflator from national account statistics.

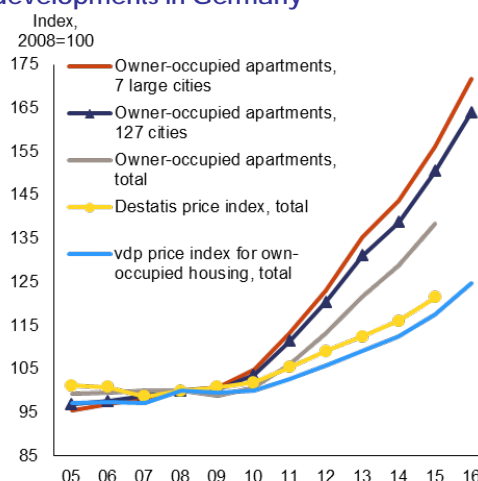
In contrast to regional price developments, aggregate house prices in Germany appear to be developing in line with their underlying fundamentals. European Commission calculations do not suggest a potential overvaluation on a national scale as house prices appear to be around a fair value (see Graph 2). Though aggregate house prices in Germany still appear to be in line with the underlying fundamentals (e.g. measured by affordability indicators such as price-to-income and price-to-rent ratios), these aggregate figures mask significant regional differences in housing market dynamics (see Graph 3).

Graph 2: Price-to-income and price-to-rent ratios



Source: European Commission, European Central Bank (ECB), Bank for International Settlements (BIS), Organisation for Economic Co-operation and Development (OECD).

Graph 3: (Regional) nominal house price developments in Germany



Source: European Commission calculations; bulwiengesa AG, Association of German Pfandbrief Banks (vdp), Federal Statistical Office (Destatis), Deutsche Bundesbank.

Note: the seven largest cities are Berlin, Cologne, Düsseldorf, Frankfurt am Main, Hamburg, Munich and Stuttgart.

Upward dynamics in property prices are concentrated in agglomerations where demand is expected to increase further in the future.¹⁰ In 2015, upward dynamics in real estate prices were most pronounced in large cities (6 % compared with 3 %-4 % economy-wide) and continued to intensify further in 2016.¹¹ In these areas, overvaluations of residential properties amounted to 15 %-30 %, suggesting that prices

decoupled from their underlying fundamentals (see Graph 3).^{12,13,14} In spite of strong differences among the regional housing markets, owner-occupied apartments in major cities continued to show the steepest overvaluations with prices for existing apartments outpacing those for new apartments.¹⁵

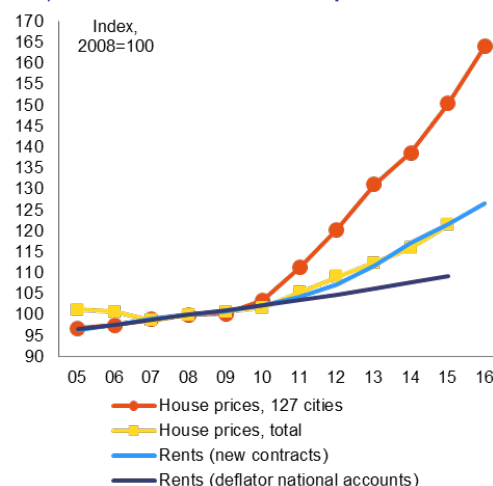
Demand dynamics

Given Germany's demographic profile, migration into cities is expected to intensify further in the future. Between 2011-2015 population density in large cities increased by 3.8%.¹⁶ Until 2035, the population is expected to grow by 15% in Berlin (around 500,000 persons), by 14% in Munich (around 200,000 persons) and by 11% in Frankfurt am Main (around 80,000 persons).¹⁷ Although accommodation in cities tends to prove more expensive for immigrants, metropolitan areas seem to be particularly attractive owing to job opportunities, personal connections, available public infrastructure as well as lower linguistic and cultural barriers.¹⁸ Large cities attract primarily not only young people and foreigners seeking employment but also elderly people who prefer urban areas to rural ones because of infrastructure advantages (mobility, health system, social network, leisure facilities). If growing population and urbanisation trends prevail in the future, it may further increase house prices. This could have social implications as socially vulnerable persons may be crowded out of the cities – where only 1% of housing was vacant in 2015¹⁹ – to peripheral areas.

Purchasing prices for houses have grown faster than rents but new rents have started to catch up since 2013. In the period 2010-2016 rent indices that refer to Germany as a whole, including also rural areas, rose by around 7½% (around 10% in Berlin). The real rent index – which is adjusted for consumer price inflation – grew by around ⅓% (around 2% in Berlin). The comparison of rent and price trends indicates whether the actual real estate price development is fundamentally justified. Over the same time horizon, new rents – expressed as a percentage of rents and prices – increased economy-wide by around 20% (in Berlin by around 46⅓%). This was significantly less than purchase prices over the same time (around 52⅓% and around 79½%, respectively). This trend suggests a decoupling between rents and purchase prices. New rental

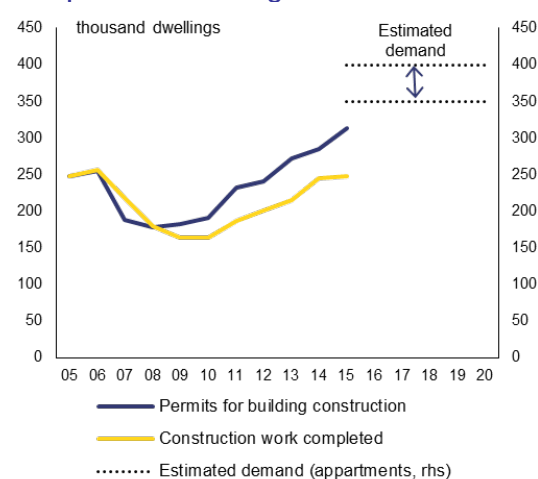
contracts reflect the price hike as landlords are passing higher purchasing prices to tenants. As a consequence, new rents have drifted apart from the overall rent index since 2011 (see Graph 4). A rental price brake²⁰ (*Mietpreisbremse*) introduced in Germany in 2015, applies to property markets experiencing significant price pressures and aims at curbing rent hikes on new tenancies to 10% above existing rental benchmarks (see Box 1).

Graph 4: Rents versus house prices



Source: European Commission calculations, Association of German Pfandbrief Banks (vdp), Federal Statistical Office (Destatis), Deutsche Bundesbank.

Graph 5: Building permits and construction work completed for dwellings



Source: European Commission calculations; Federal Statistical Office (Destatis).

Note: Permits and construction completed refer to the number of dwellings in the construction of new buildings and work on existing buildings; estimated demand refers to the range of annual demand estimated by the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BUMB).

Box 1: RENTAL PRICE BRAKE (MIETPREISBREMSE)

A rental price brake²¹ introduced in Germany in 2015, applies to certain property markets – primarily large cities – and limits rents on new tenancies to 10 % above existing rental benchmarks. The rental price brake applies in twelve federal states and comprise cities such as Berlin, Cologne, Düsseldorf, Frankfurt am Main, Munich and Stuttgart as well as many small and medium-sized towns and municipalities. Brandenburg and Thuringia implemented the rental brake most recently as of 2016. Overall, it currently affects a total of 313 municipalities, which corresponds to around 28 % of the population of Germany. The rental price brake also prohibits letting agents from charging fees to tenants; a significant change as the standard agent’s fee in Germany is equal to a month’s net rent. The existing system of local rental benchmarks (*Mietspiegel*) was introduced in the early 1980s. Rental observatories of each municipality construct benchmarks of rental values over a 4-year period, which are then used to index existing rentals during tenancy. The benchmark “mirrors” the developments of rents on the local market taking into consideration typical rent per square meter, the conditions, the quality and the location of the apartment. The quality of apartments is captured by different benchmark values for apartments deemed “simple,” “medium,” or “good,” also factoring in the building’s age. Over the following five years, rents in new contracts cannot exceed these rates by more than 10 %. This limit can be waived if the property has been improved by the owner. However, it is not allowed to upgrade “simple” apartments into “good”, then using that as a way to skirt the rent-rise limit. The law was introduced mainly to balance the discrepancies between prices agreed in rental contracts in the same neighbourhood initiated in different periods of time. The brake does not apply to new properties, so it does not impede construction. If a house is renovated at a cost that exceeds a third of the cost of a new building or if the building is constructed after October 2014, the 10 % rise limit is waived.

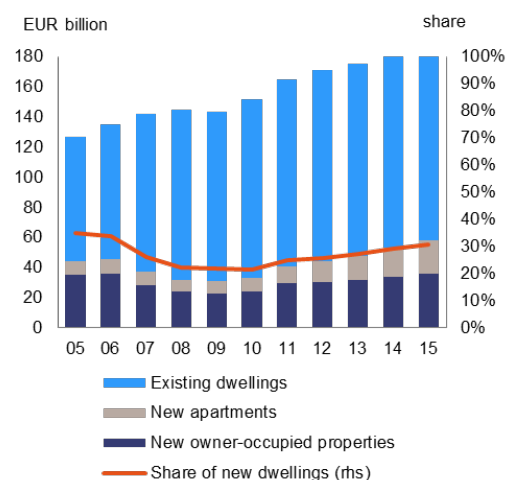
Supply dynamics

In spite of strong growth in construction, the expansion of housing supply seems insufficient to satisfy the demand so far, resulting in upward pressure on house prices and rents.

Between 2010 and 2014 the average annual growth rate of construction completions was 11 %. Yet, in 2015 the annual growth rate slowed down noticeably, resulting in almost 248,000 completions. Official projections – taking immigration into account – point to a demand of 350,000 annually until 2020 (see Graph 5).^{22,23} To respond to the increase in housing demand, government action aims at stimulating social housing (see Box 2); however, only around 57,000 council flats (i.e. social housing) were finished between 2010 and 2016.^{24,25} With an increase of 23.4 % (year-on-year) during the first eleven months of 2016, the number of building permits posted the strongest increase in scheduled building activity for 17 years. Permits for dwellings in residential homes showed the highest increase (125.4 %, year-on-year) largely due to the construction of shelters for asylum seekers and refugees and temporary homes.²⁶ However, part of the surge in permits might be due to other temporary factors. New laws on energy efficiency that entered into force in 2016²⁷ may have prompted investors to bring forward some

building-permit applications that would otherwise have been lodged later.

Graph 6: Structure of housing investment^{28,29}



Source: European Commission calculations; Bundesministerium für Verkehr, Bau und Stadtentwicklung (BMVBS), Deutsches Institut für Wirtschaftsforschung (DIW).

Investment in new dwellings picked up after 2010 but most of the housing investment corresponds to renovating existing properties.

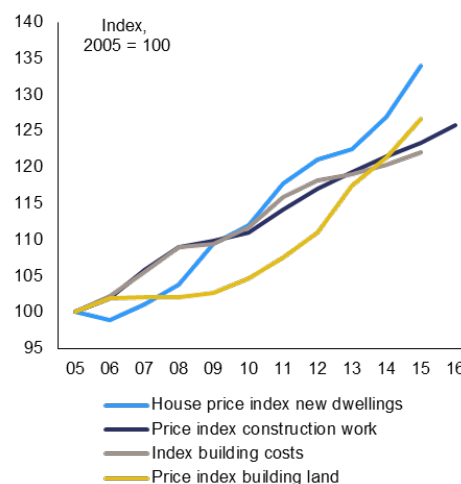
Investment in new dwellings had touched bottom in Germany in 2008/2009 before rebounding noticeably after 2010. Despite a pick-up of investment in new owner-occupied properties and new apartments, most expenditure, with a constant share of around 70 %, is used for renovating and

modernising existing dwellings. In 2015, almost 28 % (EUR 36.4 billion of total EUR 130.8 billion) of investments in existing dwelling have been used for energy related investments while the share of investments in energy-saving measures was around 32 % in 2010 (EUR 38.6 billion of total EUR 118.9 billion) (see Graph 6). In contrast, during the mid-1990s refurbishment and new investment were almost balanced.³⁰

Strong growth in German construction mainly reflects a surge in residential building. Since 2010, the construction sector has been on the rise again, triggered by a revival in residential building. In response to accelerating house prices, German construction investment rose on average by 1.9 % between 2010 and 2016. In 2015, the construction cost index – indicating the costs incurred by construction companies for building residential houses – showed an increase of 1.2 % (year-on-year). Part of construction costs are labour costs, which increased markedly by 3 % and material costs (0.2 %).³¹ Construction prices for residential buildings increased by around 2 % in November 2016 compared to the previous year (including VAT).³² Prices for building land picked up with a time lag of around four years and have been growing at an accelerated pace since then (see Graph 7, Graph 8 and 9). Taking into account

all these cost components, prices for new dwellings saw an even stronger rise than the general trends described above. Real estate firms' incentives to invest in new dwellings are reinforced by improving profit margins. This can be inferred from the widening gap between building costs and house prices for new dwellings after 2010 (see Graph 7).

Graph 7: House prices versus construction and building land costs



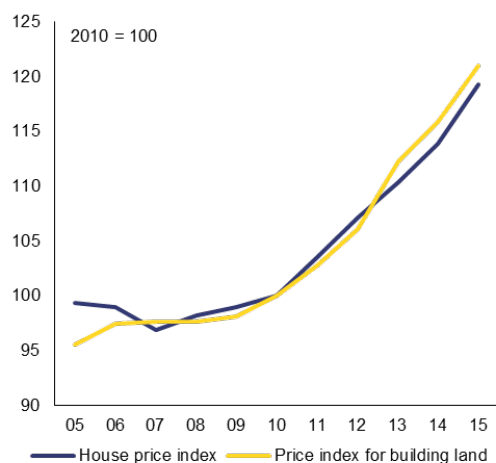
Source: European Commission calculations; Federal Statistical Office (Destatis).

Box 2: GOVERNMENT POLICY ACTION

National efforts to integrate refugees in Germany include measures to regulate the place of residence. The latest Integration Act adopted in August 2016,³³ regulates benefits, labour market integration and the residence obligation (*Wohnsitzregelung*).³⁴ The law allows the Department of Foreigners to determine, for a period of three years, where refugees may settle, either by prohibiting them from settling in certain areas or by allocating them to particular areas. The aim of this provision is to avoid a concentration of migrants in any one area. However, refugees who have found work, a place for training or academic studies are exempt from this rule.

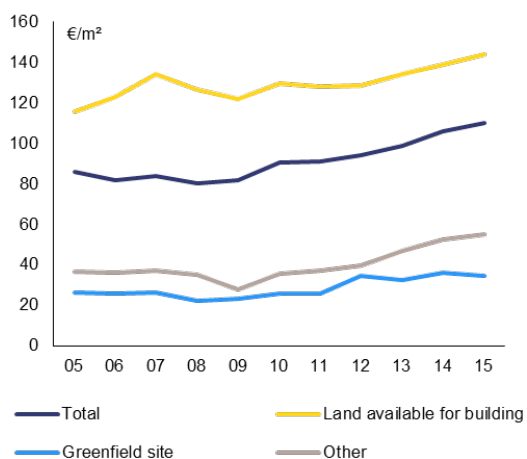
Once implemented, recent government initiatives aim at supporting refugees to enter the regular housing market and at stimulating residential construction. The Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety together with the Federal Institute for Research on Building, Urban Affairs and Spatial Development investigate how the integration of recognised refugees from temporary accommodation into regular housing can succeed, and how recognised refugees can find accommodation on the housing market.³⁵ In addition, in 2015 the Alliance for Affordable Housing and Building – comprised of various public sector and private sector stakeholders – delivered a set of recommendations that aim at revitalising construction and stimulating the energy-efficiency-related modernisation of buildings. Based on these recommendations, the Minister for Construction has put together 10-point action program to stimulate residential construction, particularly in the affordable segment.³⁶ So far, the government coalition failed to agree on the tax incentives for the acquisition or production cost of buildings and owner-occupied flats in qualifying regions, which was part of the 10-point plan.

Graph 8: Residential house prices and prices for building land



Source: Federal Statistical Office (Destatis).

Graph 9: Average purchase value of building land by type



Source: Federal Statistical Office (Destatis).

Financial implications

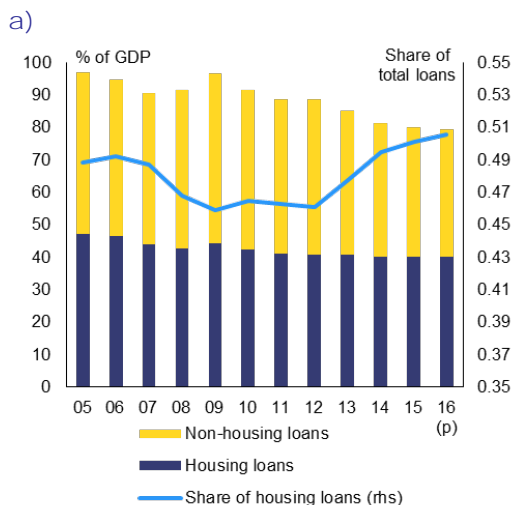
In spite of recent price dynamics, available data suggest that the housing market does not constitute a risk to financial stability but close monitoring is warranted. Housing bubbles constitute primarily a risk to financial stability if bank lending (conditions) are excessively loose. Since 2010 there has been no indication of falling borrowing standards for mortgages.³⁷ Though increasing, credit volume for housing purposes has remained at a moderate level (3.7 % in November 2016, year-on-year) compared with the 1980s and 1990s. The overall outstanding stock of mortgages increased nominally by 12.5 % from

November 2012 to November 2016. Mortgage loans represented approximately 70 % of household debt and in the first quarter 2016 around 50 % of all outstanding bank loans to domestic enterprises and households were loans for house purchases.³⁸ Growth in housing loans to domestic enterprises and resident individuals accelerated only slowly from -0.45 % in 2009 to around 3.3 % in 2015. At the same time, overall indebtedness of private households (as percentage of GDP and in percentage of disposable income) saw a steady decline since the early 2000s. The share of new mortgage loans for housing purposes with a long-term fixed interest rate for ten years increased from around 30 % in 2010-2014 to around 45 % in early 2015.³⁹

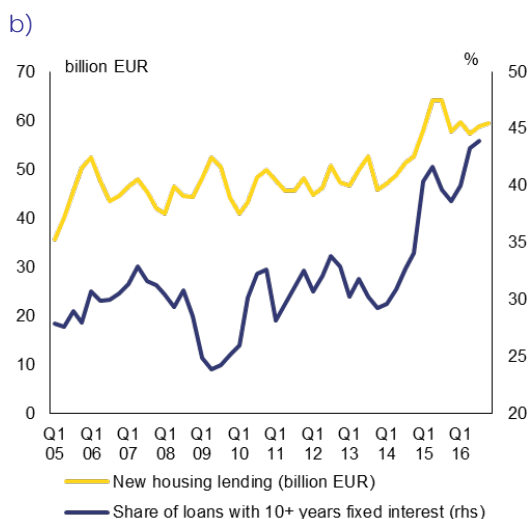
Housing loans are largely based on fixed interest rate agreements in Germany. Fixing interest rates for at least ten years is the common practice in mortgage-based borrowing in Germany: in July 2016, almost 44 % of outstanding mortgages had duration of more than 10 years, whereas around 35 % five to ten years (see Graph 10b). Firstly, this limits the flexibility to benefit from the low interest rate environment since re-mortgaging is dis-incentivised by comparatively high refinancing costs.⁴⁰ Secondly, from the financial stability perspective, the comparatively long fixation terms minimise the vulnerability of borrowers to interest rate shocks. In the same vein, the long duration fixed-interest rate agreements make Germany somewhat more resilient to rising interest as only a relatively small share of housing loans would react to fluctuations in interest rates due to a sudden correction. The shares of borrowed capital and debt-service-to-income stayed relatively constant, which can be explained by the low interest rate and high valuation of real estates.⁴¹

At the same time, low returns and high perceived risks on financial assets potentially increase demand for housing as an investment in 'safe' assets. In many places, e.g. in Munich, between 2010/2011 to 2015/2016, the relative increase in rents in the upper price segment were higher than in the lower price segments. This gives reason to believe that demand for upper price real estate comes mainly from residents in higher income classes or firms that use real estate for (owner-occupied) investment purposes.⁴²

Graph 10: Lending to domestic enterprises and individuals



Source: European Commission calculations; Deutsche Bundesbank.



Source: Deutsche Bundesbank.
 Note: 2016 includes data for new housing lending until the fourth quarter 2016.

Draft legislation has been adopted to reinforce macroprudential policies ensuring financial stability. Risks to financial stability may arise if price increases persist. In response to the recommendation by the Financial Stability Committee,⁴³ the Federal Government put forward a draft law to introduce counteractive measures. The law provides the necessary legal basis to allow the Federal Financial Supervisory Authority (*Bundesanstalt für Finanzdienstleistungsaufsicht*) to introduce minimum requirements for the credit-based financing of residential property purchases (e.g. caps on loan-to-value ratios, debt-to-income

ratios, debt-service-to-income ratios, debt-service-coverage ratios and amortisation requirements).^{44,45} The use of these instruments will depend on the assessment of potential risks to financial stability arising from excessive debt and price bubbles on the real estate market. A prolonged period of zero or negative real interest rates could potentially trigger a misallocation of resources with negative rebound effects on consumption, investment and economic growth once interest rates normalise. To this end recommendations to extend the macroprudential toolbox are being proposed now as a precautionary measure. The draft law is supposed to be passed until the end of the current legislature (i.e. before the federal elections scheduled for autumn 2017).

Implications of refugee immigration on the German housing market

In the medium-run, the high inflow of asylum seekers is expected to be reflected in both housing demand and supply though with only limited effects on house prices (see Box 3). As the dynamics of house price growth also depends on the rate of population growth, the inflow of asylum seekers might affect price developments on the German housing market to a limited degree. After a positive decision on the application or after the expiration of three months, asylum seekers are supposed to live outside of the initial reception centres in private apartments (see Box 2).

In 2014, housing conditions differed markedly between people with and without a migrant background. The rate of owner-occupied housing is lower for people with a migrant background (34.5 %) than without (54.8 %). The percentage of persons with a migrant background living in residential buildings with more than twelve dwellings (6 %) was twice as high as for people without migrant background (3 %). Moreover, the living floor space available to them (32.8 square meters per person) was smaller (without a migrant background 47.7 square meters) and they lived in households which paid a higher gross rent (excluding heating expenses) per square meter (EUR 7.26; without a migrant background EUR 6.69). Even within cities people with a migrant background paid higher rents than people without migrant background. The preference for cities is

Box 3: MODEL SIMULATIONS ON THE MACROECONOMIC IMPACT OF REFUGEE IMMIGRATION FOR THE GERMAN HOUSING MARKET

The inflow of asylum seekers is estimated to have a rather limited positive effect on real estate prices and rents. According to Deutsche Bundesbank, the effect of the inflow of asylum seekers on the rents and house prices could amount to a ½-1 percentage point increase over the next two years in comparison to the baseline scenario without refugee inflow.⁴⁶ Simulations using the European Commission's QUEST model give similar values. In theory, higher demand for housing in response to the inflow of asylum seekers raises the price of housing in the economy. Increased housing demand also leads to additional housing investment, which is, however, subject to supply constraints on land and in the construction sector. The simulation results suggest a price increase for housing of around ½ per cent over a two-year period and around 1½ per cent over ten years.

only one factor, the other related to the period of tenancy: people without migrant background tend to have longer rental contracts and can benefit from existing agreements (*Altverträge*). The rent burden (*Mietbelastung*) – defined as the share of gross rent (including charges) on household disposable income – was higher for people with migrant background (27.3 % compared with 25.1 %).⁴⁷

Though housing shortages are most pressing in urban areas, these locations are often preferred to rural areas. Although housing availability in cities appears less favourable for immigrants, urban agglomerations might be particularly attractive due to the available public infrastructure, employment opportunities, personal networks as well as lower linguistic and cultural barriers. Higher availability of social housing in cities might strengthen this trend leading thus to the creation of immigrant clusters. Network effects are the main driver of immigration to urban regions, where the share of foreign nationals is much higher (around 12 %) than in rural regions (almost 5 %). These tendencies are in line with the literature on economic geography that suggests that benefits from agglomeration overweight its costs⁴⁸ and include sharing (e.g. indivisible goods and services, or risk), matching (the higher the number of agents the higher quality of match) and facilitating learning.⁴⁹

Available vacant units in rural areas could improve demand and supply-management challenges resulting from high net-immigration. Empty properties are a financial and organisational challenge for both property owners as well as the public sector. In 2011, around 4.5 % of apartments (1.83 million) were unoccupied of which around 1.2 million (3.8 %)

were located in western Germany and 0.63 million in East Germany (7.1 %). High rates of vacancies have been observed in particular in multi-family houses in East Germany (on average 9 %). Despite an increase in population and demand for housing, a rise in empty flats of around 2.05 million has been observed between 2011 and 2014, which corresponds to 5.1 %. The rate of empty flats is expected to grow in the future, especially in shrinking rural areas.⁵⁰ By 2030, around 15 % of the districts are expected to have a very high risk of vacant rental flats and 18 % a high vacancy risk.⁵¹

Policy considerations on supply-side measures

In the short- to long-term, decreasing structural barriers and large-scale supply side measures are warranted to align housing demand and supply.

1. Reducing regulatory hurdles by simplifying complex administration (i.e. planning, building land and environmental regulations) could limit time and lower costs for the construction of new (social) housing thereby aligning increased housing demand with inelastic and relatively inelastic housing supply. Widening of city boundaries or easing restrictions for the number of storeys would directly satisfy this increased demand. Reducing constraints to building supply would also strengthen private investment, which is key given Germany's macroeconomic imbalances.⁵²

2. Increasing infrastructure investment provides scope to relieve strained housing markets as connectivity increases and rural areas become a more suitable alternative to cities. Building sites in urban areas are limited but at the same time in

high demand. Better connections to the surrounding villages of cities by public transportation would widen the scope for alternative property developments to meet the demand for more affordable housing.

3. There is scope for policies to make use of available vacant accommodation.⁵³ Available vacant units in rural areas could relief strained urban housing markets. Many regions in East Germany as well as rural and often peripheral municipalities in Western Germany indicate high vacancy rates.

Conclusion

In spite of noticeable increases in regional house prices in the past six years, recent data suggests that the housing market does not constitute a risk to financial stability in Germany. In line with assessment by the German government and the Financial Stability Board, given the available data the Commission currently does not see any risk of a real estate price bubble or any trends at the housing market posing an imminent threat to financial stability in Germany.⁵⁴ The recent house price developments reflect the working of a market mechanism, which should lead to a gradual narrowing of the gap between increased housing demand and yet insufficient housing supply (present since 2010).

In the medium run, the high inflow of asylum seekers is expected to be reflected in both housing demand and supply though with only limited effects on house prices. As the dynamics of housing price growth also depends on the rate of population growth, the inflow of the unusually large number of asylum seekers is likely to affect price developments on the German housing market to a limited degree; it may however strain markets where demand already outstrips supply. The data does not (yet) reflect this trend since many migrants are still in the process of the asylum procedure and reside in reception centres.⁵⁵ Hence, they are not yet subject to the residence rule of the Integration Act 2016, which allows regional governments to determine during the next three years where refugees may settle. However, given the high backlog in housing supply, the high influx of refugees undoubtedly increases the need for close monitoring and for policy action to reconcile housing demand and

supply and to counteract possible social repercussions from house price inflation.

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- ¹ Federal Ministry of the Interior (2016), *280.000 Asylsuchende im Jahr 2016*, Pressemitteilung vom 11.01.2017, Bundesministerium des Inneren, Berlin.
- ² For previous analyses on the German housing market please see European Commission (2014), *Macroeconomic Imbalances Germany 2014*, European Economy, Occasional Papers no. 174, p. 46 and European Commission (2015), *Country Report Germany 2015 – including an In-Depth Review on the prevention and correction of macroeconomic imbalances*, Commission Staff Working Document, p. 46. For a recent assessment of the German housing market please see European Commission (forthcoming), *Country Report for Germany 2017 – Including an in-depth review on the prevention and correction of macroeconomic imbalances*, SWD(2017) 71 final.
- ³ European Mortgage Federation (2016), *Hypostat 2016. A review of Europe's mortgage and housing markets*. EMF.
- ⁴ House prices serve as link between key determinants of housing supply and demand. With regard to the demand side, the literature usually lists household income, demographic variables and interest rates as key factors. Disposable income and financing costs determine affordability and prosperity, for instance with respect to living space or quality of housing. Population and household formation directly affects the need for dwellings. In contrast to child birth, however, migration inflows immediately trigger additional need for housing. With regard to the supply side, the existing stock of dwellings, housing investment, depreciation, and construction costs are crucial. Moreover, underlying conditions like credit availability and financing terms, taxes, subsidies and other public policies can be decisive. European Commission (2014), *Macroeconomic Imbalances Germany 2014*, European Economy, Occasional Papers no. 174, p. 50.
- ⁵ Dreger, C. Kholodilin, K. A. (2013), *Immobilienmärkte im internationalen Vergleich*, DIW Wochenbericht.
- ⁶ The International Monetary Fund (IMF) has recommended to Germany to "remove impediments to housing supply expansion to relieve pressure on house prices, and develop the legal basis for real-estate-related macroprudential tools to better contain potential future excesses". International Monetary Fund (2016), *Staff Concluding Statement of the 2016 Article IV Mission*.
- ⁷ Deutsche Bundesbank (2017), *Monthly Report February*. Deutsche Bundesbank, Frankfurt am Main.
- ⁸ Deutsche Bundesbank (2016), *The German housing market in the low-interest-rate environment*, Guest article by A. Dombret in *"Immobilien & Finanzierung"*.
- ⁹ Deutsche Bank Research (2016), *Outlook 2017 – solid, despite diminished tailwinds, Focus on Germany*. December 2016, Deutsche Bank Research, Deutsche Bank, Frankfurt am Main.
- ¹⁰ For an outlook on price developments in the five major cities in Germany see Deutsche Bank Research (2017), *Deutscher Häuser- und Wohnungsmarkt 2017 – Ausblick auf Preise und Mieten der Städte Berlin, Düsseldorf, Frankfurt, Hamburg und München*, Deutschland-Monitor, January 2017, Deutsche Bank Research, Deutsche Bank, Frankfurt am Main. According to Deutsche Bank Research four criteria need to be fulfilled for prices to decline: 1. massive supply of housing, 2. increase of interest rates, 3. drastic decrease of (work) migration, 4. Price increases exaggerate so significantly that rent-purchase-decisions favour of renting.
- ¹¹ Deutsche Bundesbank (2017), *Monthly Report February*. Deutsche Bundesbank, Frankfurt am Main.
- ¹² Deutsche Bundesbank (2017), *Monthly Report February*. Deutsche Bundesbank, Frankfurt am Main.
- ¹³ Deutsche Bundesbank (2016), *Financial Stability Review 2016*. Deutsche Bundesbank, Frankfurt am Main.
- ¹⁴ According to the Global Real Estate Bubble Index 2016, Munich is prone to "bubble risk" while Frankfurt am Main is categorised as "overvalued". UBS (2016), *Global Real Estate Bubble Index 2016 for housing markets of select cities*, UBS Switzerland AG, Zürich.
- ¹⁵ Deutsche Bundesbank (2016), *Financial Stability Review 2016*. Deutsche Bundesbank, Frankfurt am Main.
- ¹⁶ Deutsche Bundesbank (2017), *Monthly Report February*. Deutsche Bundesbank, Frankfurt am Main.
- ¹⁷ IW Köln (2017), *Bevölkerungsentwicklung – in den Großstädten wird es eng*, IW-Pressemitteilung nr 1. Institut der deutschen Wirtschaft Köln, Köln.
- ¹⁸ Network effects are the main driver of immigration to urban regions, where the share of foreign nationals is much higher (around 12 %) than in rural regions (almost 5 %).

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- ¹⁹ Deutsche Bundesbank (2017), *Monthly Report February*. Deutsche Bundesbank, Frankfurt am Main.
- ²⁰ For general information please see: Federal Ministry of Justice and Consumer Protection (2015), *Die Mietpreisbremse*, www.mietpreisbremse.bund.de; For an assessment please see: Kholodilin, K., Mense, A. and Michelsen, C. (2016), *Die Mietpreisbremse wirkt bisher nicht*, DIW Wochenbericht 22/2016, Deutsches Institut für Wirtschaftsforschung e. V., Berlin. For a detailed analysis on the implementation in Germany please see: Federal Institute for Research on Building, Urban Affairs, and Spatial Development (2016): *Mietpreisbremse und Kappungsgrenze: Wie die Regelungen in den Ländern umgesetzt werden*, Bundesinstitut für Bau-, Stadt- und Raumforschung (BBSR), Bonn.
- ²¹ For a detailed analysis on the implementation in Germany please see: Federal Institute for Research on Building, Urban Affairs, and Spatial Development (2016): *Mietpreisbremse und Kappungsgrenze: Wie die Regelungen in den Ländern umgesetzt werden*, Bundesinstitut für Bau-, Stadt- und Raumforschung (BBSR), Bonn.
- ²² German Council of Economic Experts (2016), *Annual Report 2016/2017*. Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung, Statistisches Bundesamt, Wiesbaden.
- ²³ Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (2016), *Bericht zum Bündnis für bezahlbares Wohnen und Bauen und zur Wohnungsbau-Offensive*. Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit, Berlin. See also: Federal Institute for Research on Building, Urban Affairs, and Spatial Development (2015), *Wohnflächennachfrage in Deutschland bis 2030 – Wohnungsmarktprognose 2030*. Bundesinstitut für Bau-, Stadt- und Raumforschung (BBSR), Bonn. The sum of 350,000 new dwellings assumes 100,000 owner-occupied flats/houses, 170,000 rental flats in mansion blocks as well as 80,000 social dwellings.
- ²⁴ *Deutscher Bundestag* (2016), *Antwort der Bundesregierung – Wohnen und Leben in Deutschland*, Drucksache 18/8570, p. 10. Deutscher Bundestag, Berlin.
- ²⁵ In light of recent price developments and the high inflow of refugees, the IMF recommended to Germany to "help housing supply adjust to higher demand in the affordable segment." International Monetary Fund (2016), *Staff Concluding Statement of the 2016 Article IV Mission*. International Monetary Fund, Washington.
- ²⁶ Federal Statistical Office (Destatis) (2017), *Genehmigte Wohnungen von Januar bis November 2016: + 23,0% gegenüber Vorjahreszeitraum*, press release nr. 21/17. Statistisches Bundesamt, Wiesbaden.
- ²⁷ Deutsche Bundesbank (2016), *Monthly Report December*. Deutsche Bundesbank, Frankfurt am Main.
- ²⁸ Federal Ministry of Transport, Building and Urban Development (2012), *Strukturdaten zur Produktion und Beschäftigung im Baugewerbe – Berechnungen für das Jahr 2011*. Federal Ministry of Transport, Building and Urban Development, Berlin.
- ²⁹ DIW Berlin (2016), *Strukturdaten zur Produktion und Beschäftigung im Baugewerbe – Berechnungen für das Jahr 2015*. DIW Berlin, Berlin.
- ³⁰ Gornig, M., Goerzig, B., Michelsen, C., Steinke, H., Kaiser, C. and Klarhoefer, K. (2016), *Strukturdaten zur Produktion und Beschäftigung im Baugewerbe – Berechnungen für das Jahr 2015*, Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit (BMUB) and Bundesinstitut für Bau-, Stadt-, und Raumforschung (BBSR), Berlin.
- ³¹ Federal Statistical Office (Destatis) (2016), *Baupreise und Baukosten 2015*. Statistisches Bundesamt, Wiesbaden.
- ³² Federal Statistical Office (Destatis) (2016), *Baupreise für Wohngebäude im November 2016: +2.2% gegenüber November 2015*, press release. Statistisches Bundesamt, Wiesbaden.
- ³³ Federal Government (2016), *Integrationskonzept*, Bundesregierung Deutschland, Berlin.
- ³⁴ See also Flüchtlingsintegrationsmaßnahmen, in short FIM (a refugee labour market integration programme that provides work opportunities), "KompAS programme" (assessing competences, early activation, acquiring language skills), "Prospects for (young/female) refugees" (enables professional orientation and practical experience in a company to be combined), "Integration through qualification (IQ) support programme", European Social Fund (ESF) integration guidelines of the government focusing on the integration of asylum seekers and refugees (IvAF).
- ³⁵ Federal Institute for Research on Building, Urban Affairs and Spatial Development (2016), *Integration von Flüchtlingen in den regulären Wohnungsmarkt*. Bundesinstitut für Bau-, Stadt- und Raumforschung (BBSR), Bonn.
- ³⁶ Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (2015), Minister Hendricks introduces housing construction campaign, press release nr 325. Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit (BMUB), Berlin.

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- ³⁷ European Central Bank (2016), *Results of the October 2016 euro area bank lending survey (BLS)*. European Central Bank, Frankfurt am Main.
- ³⁸ Deutsche Bundesbank (2016), *Financial Stability Review 2016*. Deutsche Bundesbank, Frankfurt am Main.
- ³⁹ Deutsche Bundesbank (2016), *Financial Stability Review 2016*. Deutsche Bundesbank, Frankfurt am Main.
- ⁴⁰ European Commission (2016), *Country Report Germany 2016 – including an In-Depth Review on the prevention and correction of macroeconomic imbalances*, Commission Staff Working Document, p. 32-33. European Commission, Brussels.
- ⁴¹ Deutsche Bundesbank (2016), *Financial Stability Review 2016*. Deutsche Bundesbank, Frankfurt am Main.
- ⁴² Handelsblatt (2017), *Wohnungsbaukredite: Blase, welche Blase?* 12.01.2017. Handelsblatt.
- ⁴³ Financial Stability Committee (2015), *Second Report to the German Bundestag on financial stability in Germany*. Financial Stability Committee, Frankfurt am Main.
- ⁴⁴ Legislative proposal for the amendment of the financial services supervision law. Respective legal bases are introduced as regards relevant loans provided by credit institutions, alternative investment funds (AIFs) and insurance enterprises. The draft law provides for corresponding amendments to the German Banking Act (KWG), the Insurance Supervision Act (VAG) and the German Capital Investment Code (KAGB). Federal Ministry of Finance (2016), *Gesetz zur Ergänzung des Finanzdienstleistungsaufsichtsrechts im Bereich der Darlehensvergabe zum Bau oder zum Erwerb von Wohnimmobilien zur Stärkung der Finanzstabilität vom 31.10.2016*. Bundesministerium der Finanzen, Berlin.
- ⁴⁵ The new draft legislation adds precision to existing rules and enhances legal certainty in order to facilitate residential mortgage lending. For example, it specifies that credit scoring procedures can take into account increases in value resulting from construction measures or renovations to residential real estate. In addition, the new legislation will explicitly stipulate that – as is already the case – the rules governing consumer loan contracts will generally not apply to equity release credit agreements (*Immobilienverzehrcredite*). This is supposed to help to eliminate the uncertainties that some credit institutions encounter when interpreting the rules on granting loans to older people, for example.
- ⁴⁶ The simulation results are based on updated estimates of the impact of socioeconomic and demographic variables on house prices as well as on estimates of the expected development of GDP per capita, the population figure, refugee migration and the supply of housing per inhabitant in line with the latest macroeconomic projections for the German economy. Deutsche Bundesbank (2016), *Monthly Report February*. Deutsche Bundesbank, Frankfurt am Main.
- ⁴⁷ Federal Statistical Office (Destatis) (2016), *Deutliche Unterschiede in der Wohnsituation von Menschen mit und ohne Migrationshintergrund*, press release. Statistisches Bundesamt, Wiesbaden.
- ⁴⁸ Combes, P.-P. and Gobillon, L. (2015), *The empirics of agglomeration economies*, in: Duranton Gilles, J. Vernon Henderson, William C. Strange (Eds.) (2015), *Handbook of Regional and Urban Economics 5*, Amsterdam.
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- ⁵⁴ Financial Stability Committee (2016), *Third Report to the German Bundestag on financial stability in Germany*. Financial Stability Committee, Frankfurt am Main.
- ⁵⁵ Around 430,000 pending applications in December 2016.

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