

MAP REAL ESTATE MARKET INSIGHT

Frankfurt, July 2023¹

REAL ESTATE'S COMPACT SOLUTION: AN EXAMINATION OF MICRO-APARTMENT CONCEPTS AS A CRISIS RESILIENT ASSET CLASS

Introduction

In recent years, Europe's and Germany's big cities have increasingly seen the emergence of living concepts tailored to a growing clientele of predominantly younger people. Basically, the micro-apartment trend is about reducing the living space and accommodating everything necessary in a small flat. This is particularly popular with young professionals, but also with students and the older generation. They are looking for minimalist and affordable apartments in attractive neighborhoods mainly in the inner cities. At the same time, they don't want to compromise on quality of life. The spectrum of micro-apartment concepts is wide, ranging from so-called student living, business apartments and co-living to serviced apartments and senior living, the latter of which is tailored to the needs of retired professionals and 'golden agers'.

This has given rise to a new asset class that still generates higher yields than the traditional residential sector but has proven to be significantly more crisis-resistant. In addition,

numerous social trends indicate that demand for micro-apartments will continue to develop positively in the future because their target groups will continue to grow. Especially in the current housing shortage in German cities, which will continue to worsen in the medium term due to the sharp drop in construction activity, micro-apartment concepts offer an excellent way out through the efficient use of scarce space.

In this Market Insight, we will present the micro-apartment asset class in detail and examine its opportunities and risks from an investor's perspective. First, we briefly describe the different types of modern forms of living that are now included in this asset class. Then we show social trends that will increase the potential for micro-apartments in the future before we give an overview of the German market based on current data. Finally, we analyze in depth the strengths and weaknesses of the new asset class from the investor's perspective and show the opportunities and risks of the market.

Types of micro-apartment concepts

A uniform and generally accepted definition of the asset class micro-apartments does not yet exist. For example, terms such as micro-living and co-living are often used differently by market participants. Mixed forms of different types under one roof are also possible and often encountered. For our presentation, we generally distinguish between commercial and non-commercial residential use.² In both forms, additional services and community areas are

¹ The section on prime yields was updated in February 2024.

² In the case of mixed forms of commercial and non-commercial housing, the division should not only be based on the conditions of the overall market, but also with regard to the local market. In addition, the division also has implications for the developer's calculation. For example, for non-commercial housing the non-deductibility of the input tax results in a higher VAT burden.

offered, the significance and design of which can vary greatly depending on the individual project and the interior design and marketing scheme of the operator. The two forms differ primarily in the duration of the contract. To be considered non-commercial residential, there must be a longer term. It is debatable whether it must be more than three months or more than six months. Shorter terms are commercial housing, which usually includes additional services and community areas.

Figure 1: Types of Micro-Apartment Concepts

| ASSET TYPE | STUDENT HOUSING | CO-LIVING | MICRO-LIVING | SENIOR HOUSING | | |
|-------------------------|--|---|--|---|--|--|
| | | | | INDEPENDENT SENIOR LIVING | ASSISTED LIVING | NURSING HOMES |
| Typical location | City, Downtown, (close to Universities & Colleges) | City, Downtown | City, Downtown | Outside of a city, Downtown | Outside of a city, Downtown | Outside of a city, Downtown |
| Average size (units) | 150-300 | 50-300 | 50-300 | Continental Europe: 40-60 UK: 60-70 | Continental Europe: 40-60 UK: 60-70 | flexible |
| Target audience | Students | Young professionals Contractors Singles Divorced | Business travelers Young professionals Project workers | Self-sufficient elderly people without needs for care | Self-sufficient elderly people (65+ years) with min or no needs for care (non-dependent on medical assistance) | Seniors with physical and mental impairments |
| Average unit size (sqm) | 18-25 | 20-40 | 20-40 | 40-60 | 40-60 | 20-30 |
| Length of stay | 6-10-12 months | 1-3-12 months | 3 months+ | 5-8 years | 5-8 years | 2-3 years+ |
| Services | High level | Medium level | Minimum level | Minimum level | High level | Medium level |
| Facilities | High level | Medium level | Minimum level | Minimum level | Medium level | High level |
| Amenities | High level | Medium level | Minimum level | Minimum level | High level | Medium level |
| Community | High level | Medium level | Minimum level | Minimum level | High level | Medium level |

Modified presentation from Bonard, 2022: *Rented Residential in Poland – Trends and Prospects*. CEE Investment Awards, 27 October 2022.

Figure 1 shows the specifics of the different types of micro-apartment concepts. The small proportion of common areas and services is a characteristic of micro-living. If this proportion is higher, it is usually classified as co-living ('co' stands for community). The common areas include often co-working spaces or gastronomy. Both types typically feature fully furnished apartments with room sizes ranging from 20-40 sqm. The buildings with 50-300 units are in a central, urban location. The target groups for both types are similar. While micro-living operators often focus on business travelers, young professionals and project workers, co-living is aimed at young professionals, contractors, singles and divorced people.

In Germany, student housing is the most common form of micro-apartment concepts. Students live in around 42% of the micro-apartments in the country.³ They are very well suited as a target group because they do not need a lot of space, are interested in full furnishing and value good infrastructure, which also means proximity to the university or in the city or downtown. The number of rooms usually varies between 150 and 300 flats and the length of stay between 6, 10 or 12 months. The offer of services, facilities, amenities, and community areas is usually high level (see Figure 1). Due to the small apartment size (approx. 18-25 sqm), student housing apartments often appear comparatively inexpensive, even if their rents per square meter are higher. The opportunity to make contacts in the common areas is also attractive for students. Compared to classic student residences, which are structured similarly, student housing has many advantages because the properties are

³ DIWG (Deutsche Immobilien Wirtschafts Gesellschaft), 2022: Mikro Appartements. November 2022.

well supplied with modern equipment and the usual waiting time for an apartment is at micro-apartment facilities much shorter or non-existent.

Independent senior living (senior apartments), aimed at older target groups, is still a new concept in Germany and not yet a strong market segment. The demands on the infrastructure and the location are different than in student apartments due to the different needs of older people. However, common areas and additional services are also very important here to counteract loneliness in old age. Offers of domestic help or care and freedom from barriers in the buildings are also in demand. Independent senior living is typically located downtown or outside of a city (see Figure 1). The average unit size varies in continental Europe between 40-60 sqm.

In general, the motive of living closer together with other people than in traditional housing and at the same time preserving one's privacy is to be regarded as very important for the attractiveness of micro-apartment concepts. The residents have their own flat and at the same time it is easy for them to socialize in the house and find like-minded people for activities or a get-together. Some operators provide an app which, among many other things, also offers a social media platform that residents can use to communicate. The range of additional services is large and ranges from fitness and yoga rooms to lounges and roof terraces to cinemas.

Megatrends paving the way for the micro-apartment market

Population growth, urbanization and other demographic trends

In all likelihood, the German population will continue to grow in the upcoming decades. In its central forecast, the Federal Statistical Office assumes a population increase from 83.2 million to 87.7 million in 2040.⁴ A large part of the growth is accounted for by the large cities. Frankfurt alone expects an increase of 7.4% from 2021-2030.⁵ The growth in the major German cities is mainly due to the influx of young professionals and immigration. At the same time, the number of one-person households continues to rise (see Figure 2). It increased sharply since 1970 and is projected to maintain this trend. In 2045, almost half of all German households will be single households.

These numbers show that the current housing shortage, particularly in the big cities, will not be resolved even if construction activity returns to previous levels. Significantly greater efforts are needed here. This creates market opportunities for micro apartment concepts because these concepts create space for a lot of flats in the little space available.

Another major demographic trend is the aging of German society. This will increase the demand for independent senior living. The number of people aged 67 and over, the generation of pensioners, will increase by 14% from 2021 to 2040, and by 24% by 2050.⁶

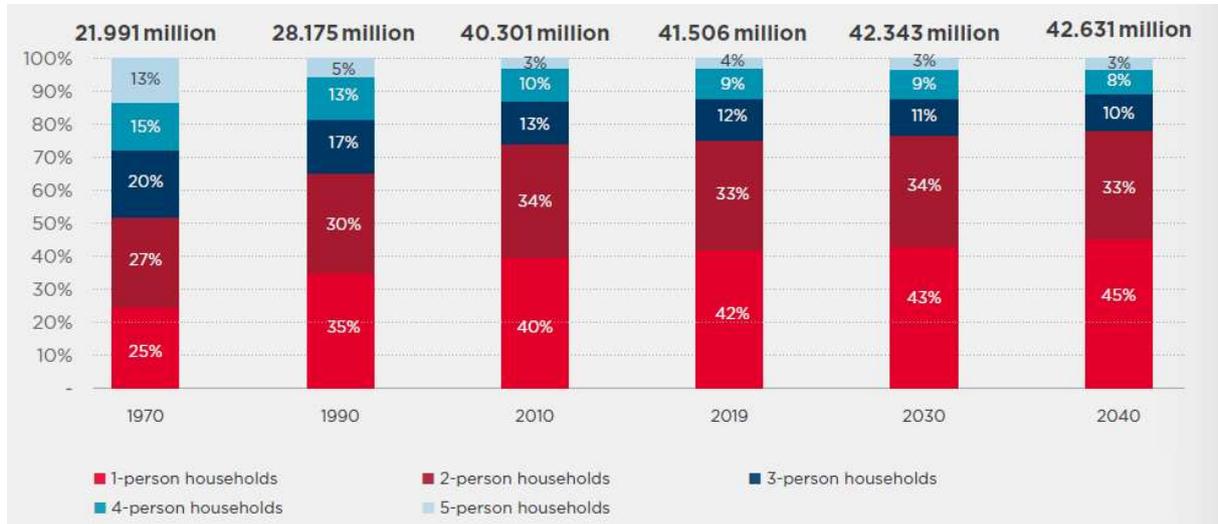
⁴ Statistisches Bundesamt, 2023: Ergebnisse der 15. koordinierten Bevölkerungsvorausberechnung. Variante 1 bis Variante 5 im Vergleich. <https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Bevoelkerungsvorausberechnung/Tabellen/variante-1-2-3-altersgruppen.html>

⁵ Stadt Frankfurt am Main, 2023: Neue Bevölkerungsvorausberechnung bis 2045: Kennzahlen im Überblick. In: statistik.aktuell, 02/2023. https://frankfurt.de/-/media/frankfurtde/service-und-rathaus/zahlen-daten-fakten/pdf/pdf-fsa/2023/fsa_2023_02_bevoelkerungsprognose.ashx

⁶ Statistisches Bundesamt, 2023: Ergebnisse der 15. koordinierten Bevölkerungsvorausberechnung. Variante 1 bis Variante 5 im Vergleich. <https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Bevoelkerungsvorausberechnung/Tabellen/variante-1-2-3-altersgruppen.html>

Even if part of this generation moves away from the big cities, the need for suitable housing will be high.

Figure 2: Number and Proportion of German Households by Size - 1970-2040



Source: Cushman & Wakefield, 2021: *Microapartments. Young, profitable & crisis-proof?*

Education boom

Since the great expansion of the education sector in the 1970s, the number of German students has risen continuously and with significant growth (see Figure 3). The proportion of foreign students has also increased, attracted by the comparatively low cost of studying in Germany. In this group, there are often students with a higher willingness to pay and little knowledge of the customs of the local housing markets. They are particularly attracted by a professional student housing concept that makes it easy to rent an apartment. Further growth of student numbers is foreseeable, especially of foreign students. This is shown by the data of

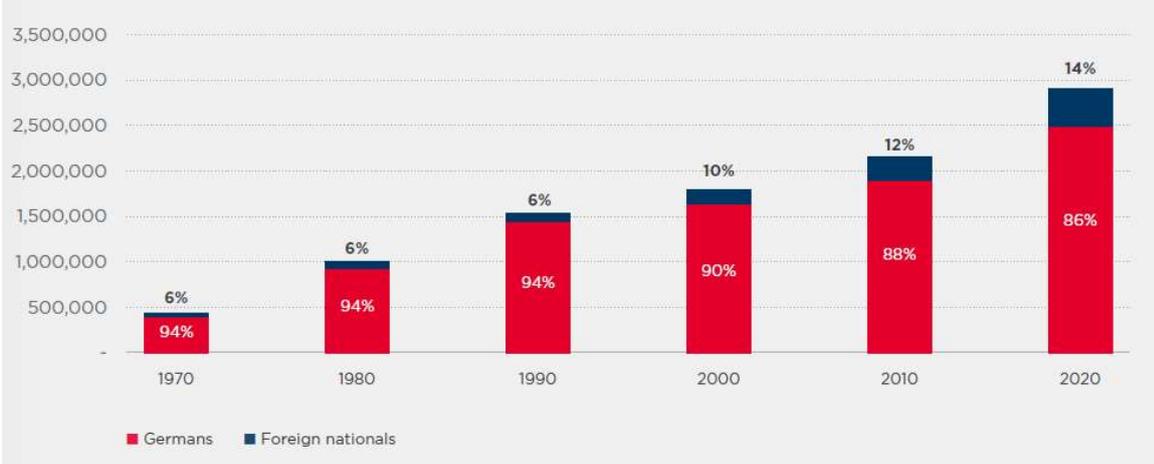
Figure 4, which shows the percentage of the young population in key European cities which will make up the students of tomorrow (15-19-year-olds). Due to a birth boom in Europe after the turn of the millennium, this group has increased again in the past 10 years and is still growing. After graduation, members of this age group will become young professionals and continue to be an important target group for micro-apartment concepts.

Digitization, Mobility and New Work

Together with globalization, digitization has changed the world of work significantly. The attachment to the existing workplace has decreased. Young professionals frequently change jobs and places of work. They prefer mobile forms of living and working. Project work which temporarily brings employees together in one location is a common phenomenon. Internships in different countries and fixed-term contracts make young professionals change their place of work more often. Digitization also means that the demands of prospective tenants in terms of flexibility and availability of rental offers are increasing. Easy access by an app or website is appreciated. Micro-apartment concepts offer suitable solutions for all of these aspects. Co-living at attractive locations with access to communal facilities in the building such as lounges, fitness, yoga and entertainment offers, and much more is

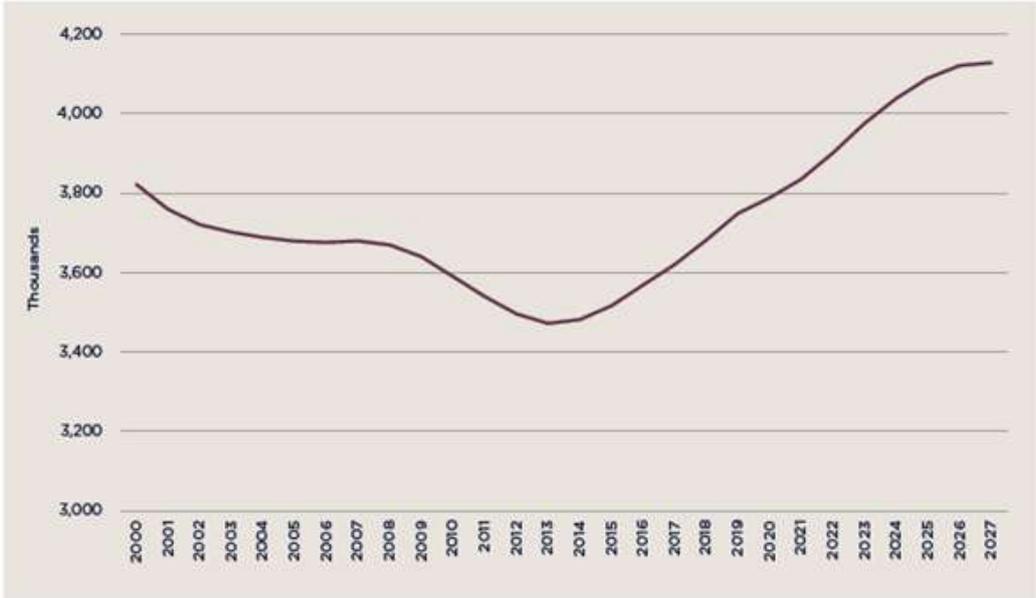
particularly suitable for young professionals. It is often the aim of the operators not only to create spaces to live in, but to establish a way of life.

Figure 3: Number of Students in Germany and Proportion of German and Foreign Students 1970-2020



Source: Cushman & Wakefield, 2021: Microapartments. Young, profitable & crisis-proof?

Figure 4: Population of 15-19-Year-Olds in Key European Cities 2000-2027



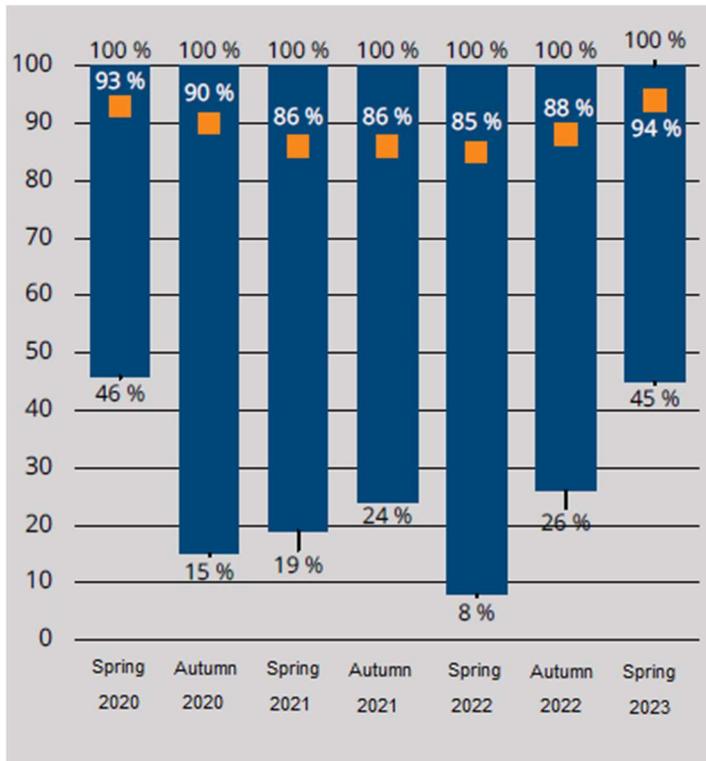
Source: Savills, 2022: European Student Accommodation 2022.

Market data of the German micro-apartment market

The Micro Living Initiative (Initiative Micro Living, IML) is a collaboration between companies that are active in the micro-apartment segment as owners, operators and/or administrators. Using a reporting system, it collects operational data from apartment buildings in Germany. The latest data from spring 2023 is based on reports from 123 properties with around 24,000 residential units. The results are not to be seen as a complete overview of the German market, but they can give a good insight into the segment.

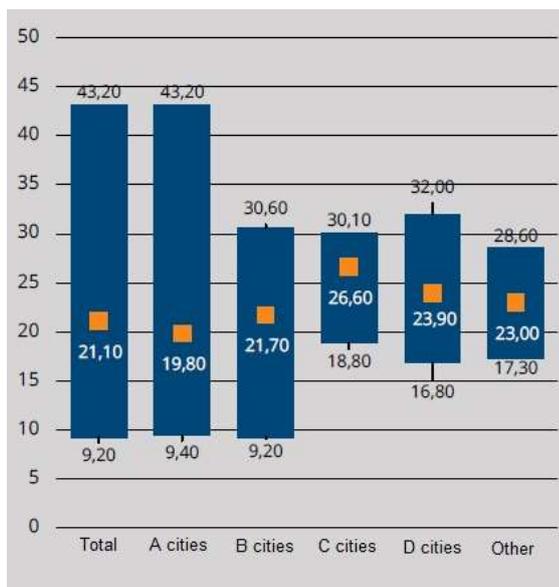
A share of 58% of the apartment buildings included in the study are located in the A cities (this corresponds to 63% of the apartment units). Figure 5 shows that the occupancy rate is high and averages 94%. Even in recent years, which have been characterized by a decline in occupancy due to the pandemic, the average rate has not fallen below 85%. Looking at the occupancy rate together with the overall quality of the objects (furnishings, common areas etc.) reveals a clear connection. The higher the quality, the higher the utilization. This proves that investing in quality is worthwhile for investors, even though rents are rising as a result.

Figure 5: Average Occupancy Rate in Micro-Apartment Objects in Germany– Min. / Average / Max.



Source: bulwiengesa, 2023: Initiative Micro Living. Marktreport Frühjahr 2023

Figure 6: All Inclusive Rents in Micro-Apartment Objects in Germany – Min. / Average / Max

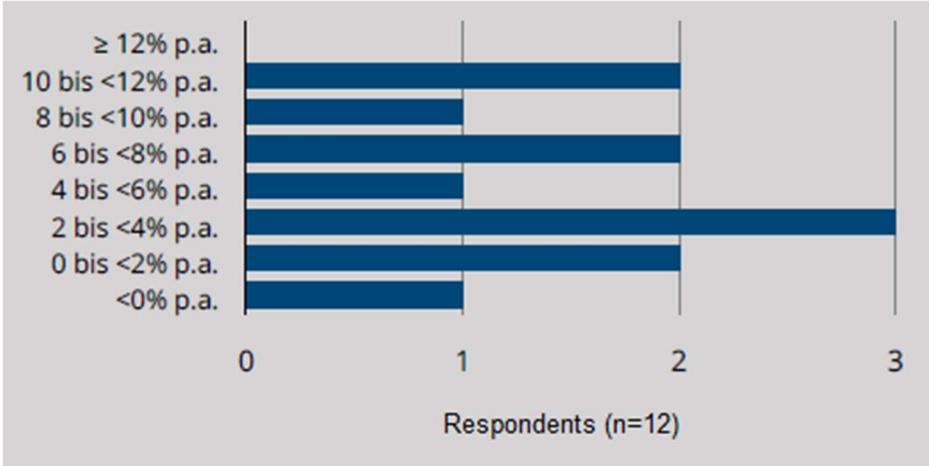


Source: bulwiengesa, 2023: Initiative Micro Living. Marktreport Frühjahr 2023

Figure 6 shows the rents which are charged in the properties in the study. As is usual in the market segment, this means all-inclusive rents. The bandwidth in the A cities is significantly larger. It goes up to €43.20 per sqm. However, the average rent is higher in the B to D cities.

Based on this level of rent, the vast majority of those surveyed see potential for increases over the next three years, in some cases significantly up to 10-12% per year (see Figure 7). However, the increased energy prices are not behind this, since the figures refer to the basic net rent ('Nettomonatskaltmiete'). Naturally, however, the operators are confronted with operating costs that have risen due to inflation, the passing on of which is definitely viewed as something the market can absorb.

Figure 7: Possible Annual Growth Rates of Basic Net Rent (Nettomonatskaltmiete) in the Next Three Years

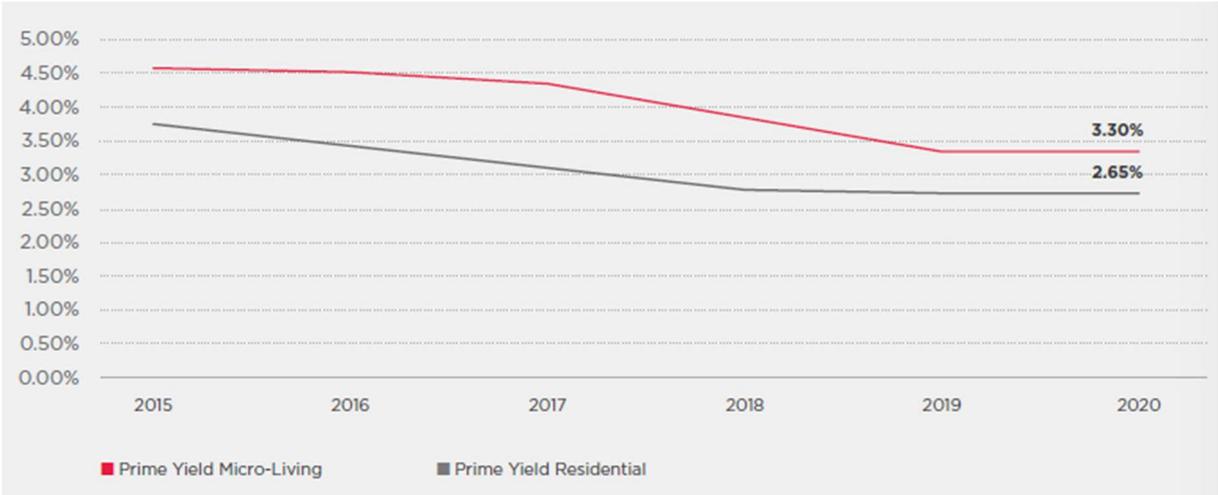


Source: bulwiengesa, 2023: Initiative Micro Living. Marktreport Frühjahr 2023

Prime Yields for micro-apartment objects

In recent years, inflation in construction prices and higher purchase prices have caused prime yields on the residential market to fall more and more. Figure 8 shows that since 2017, this development has not stopped at the micro-apartment segment. Nevertheless, at 3.3%, the prime yields achievable in 2020 were still noticeably above the level for the overall residential market.

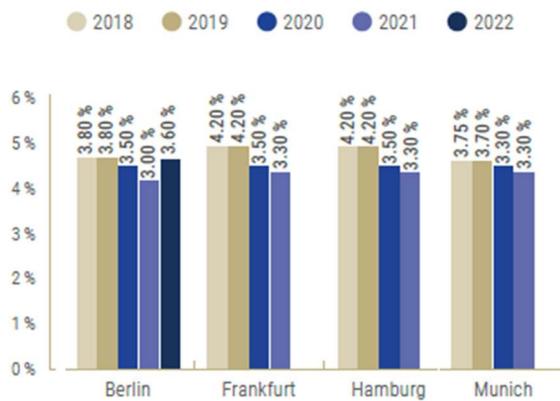
Figure 8: Prime Yields Residential and Micro Living in Germany 2015-2020



Source: Cushman & Wakefield, 2021: Microapartments. Young, profitable & crisis-proof?

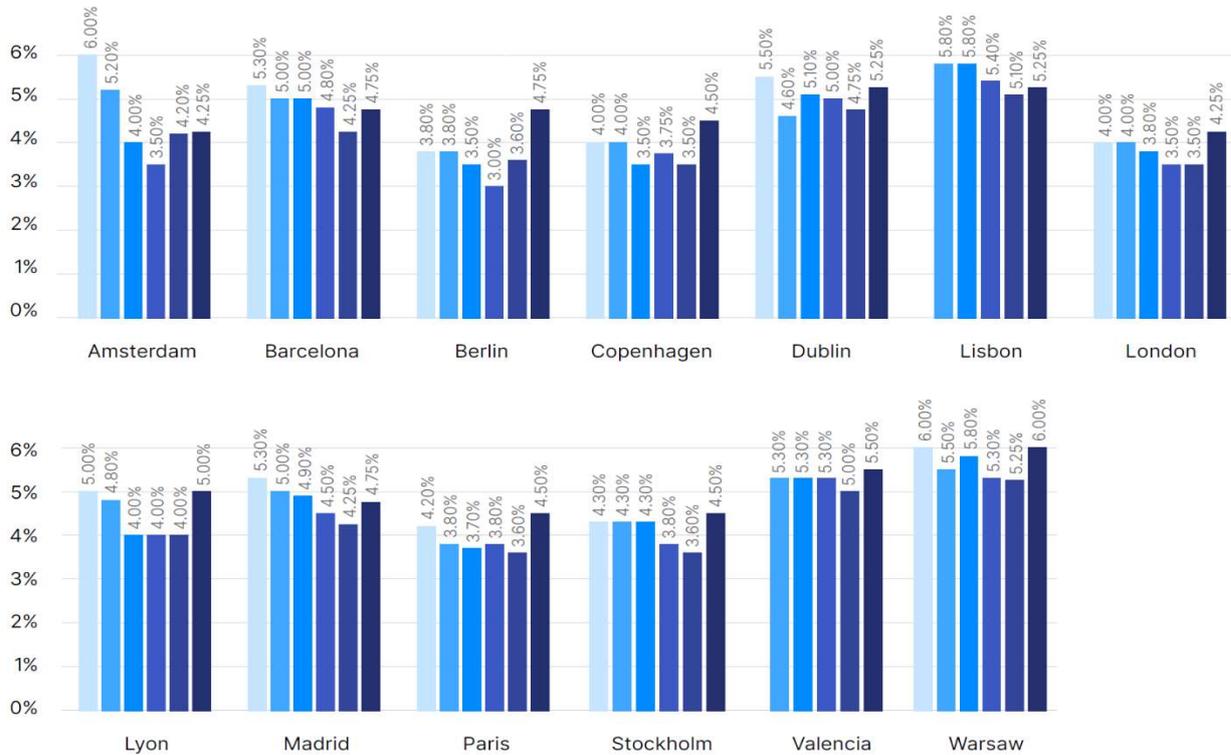
A comparison of prime yields for four German A-cities from 2018 to 2022 is shown in Figure 9. This data relates to the micro-apartment segment PBSA (purpose-built student accommodation). As this is the largest segment of the micro-apartment concepts of the German market, it should nevertheless convey the general situation well. The decline in prime yields has continued after 2020 in the cities considered. In Berlin, where a result for 2022 is also available, the prime yield increased by 60 basis points in that year. Data for 2023 is included in the comparison of 13 European cities in Figure 10. It shows that in all cities yields have risen sharply in 2023. At 125 basis points, Berlin shows the largest increase.

Figure 9: Prime Yields for The Micro Living Segment PBSA in German Cities (Purpose-Built Student Accommodation) 2018-2022



Source: Bonard, 2023: Student Housing Annual Report 2022.

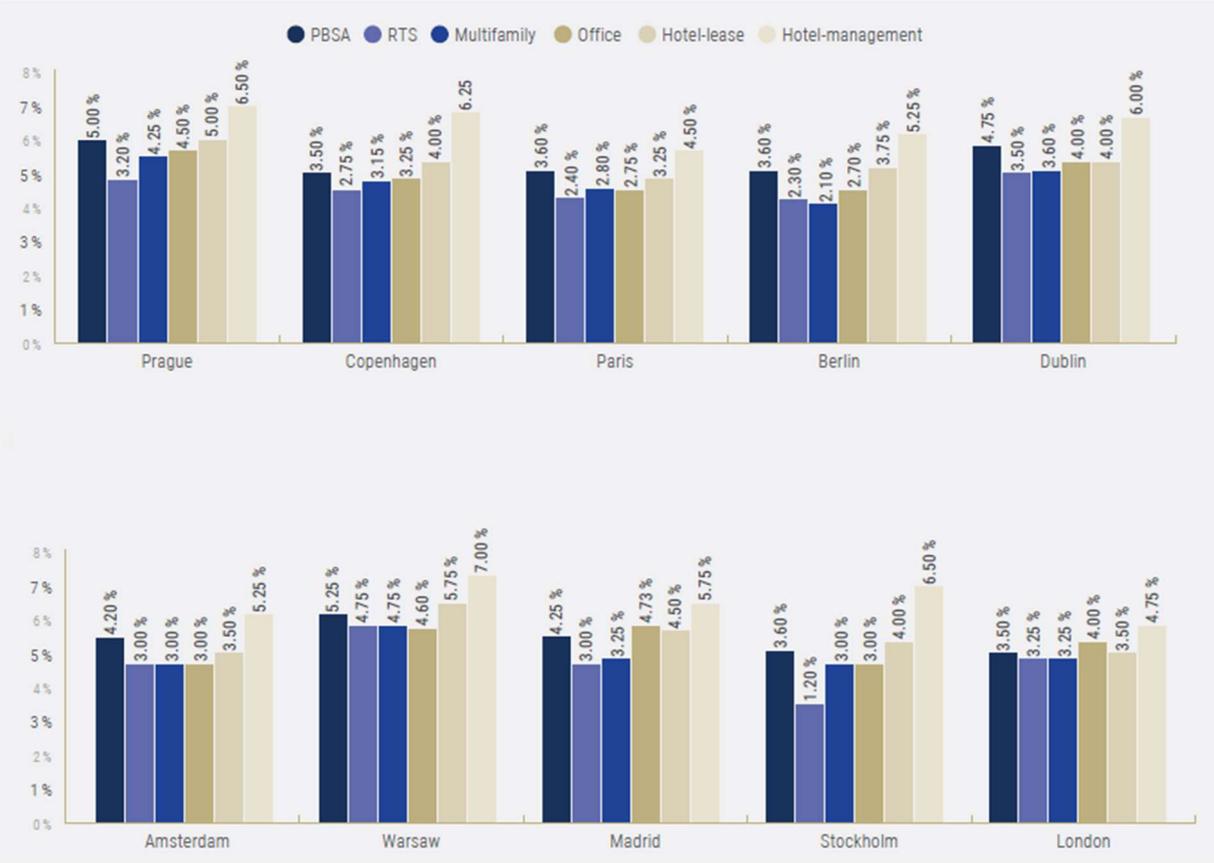
Figure 10: Prime Yields for The Micro Living Segment PBSA in European Cities (Purpose-Built Student Accommodation) 2018-2022



Source: Bonard, 2024: Student Housing Annual Report 2023

For the German market as a whole, CBRE reports that on the one hand, according to CBRE, the transaction volume in Germany in 2022 is down 7% on 2021 (to €1.2 billion) and that the net prime yield in Germany's top 7 cities has risen by 0.4 percentage points to 3.75% in 2022.⁷ However, the demand for contemporary and target-group-specific residential offerings with and without services in metropolitan regions such as Berlin, Frankfurt am Main, Hamburg and Munich, as well as in well-functioning university cities, characterizes the resilience of this asset class. The increase in prime yields for the German market is still moderate compared with the sharp rise in interest rates and construction costs.

Figure 11: Prime Yields for Various Asset Classes in European Cities – September 2022



Source: Bonard, 2023: Student Housing Annual Report 2022

Figure 11 shows the prime yields of various asset classes in selected European cities compared to PBSA in September 2022. Of course, prime yields have naturally risen sharply in almost all asset classes since then. But nevertheless, this chart and the comparison between the asset classes is helpful to gain an understanding that PBSA is today an established type of the asset class in European big cities. The differences between the cities in Figure 11 generally reflect the different location risks. Berlin and Paris have the lowest yields overall. London, which has long been the safest location in Europe, no longer holds that position. The reason for this is the continuing uncertainty due to Brexit. Traditionally, hotels and, above all, hotel management are seen as more risky investments, for which investors expect higher returns as compensation. Nevertheless, the gap between hotel management and PBSA is already consistently quite large. This has surely to do with the particularly strong

⁷ CBRE, 2023: Investmentmarkt für studentisches Wohnen und Mikroapartments 2022 trotz Zinswende nur leicht gebremst. <https://news.cbre.de/investmentmarkt-fuer-studentisches-wohnen-und-mikroapartments-2022-trotz-zinswende-nur-leicht-gebremst/>

impact of the Covid-19 crisis on the hotel industry. Another reason is probably the increasing demand for a new way of modern short stay living thanks to Airbnb, micro-living etc. Micro-apartments, represented here by the PBSA yields, show noticeably higher yields in all cities than the residential asset classes. With the exception of Madrid, they are also higher than in the office sector. This shows the typical picture of a young asset class that involves a little more effort and risk for investors than the established market segments. In the course of establishment, this difference will decrease in the future, as we have already shown above.

Investor motivation and risks and challenges

Investments in micro-apartment objects can offer a way out of the currently tense situation on the real estate market. The office market, which was the preferred segment for the majority of investors in the past, has almost collapsed and is currently characterized by a sharp decline in the transaction volume. Peak purchase price factors in German A-cities are currently 21.1 times annual rents, 12-13 factors lower than in 2021.⁸ In the logistics market, which had long been more resilient, the Covid-19 boom has subsided. In addition to data centers, micro-apartment concepts are proving to be particularly durable in the current situation.

In Germany, a major reason for the success of micro-apartment concepts is that the rent brake ('Mietpreisbremse') does de facto not apply to furnished apartments.⁹ Consequently, the local comparative rent does not limit the rent, so that in some cases significantly higher rents can be achieved. These are justified for this is the high cost of services and common areas. The small apartment sizes make the apartments still affordable for the tenants.

Another reason which speaks in favor of micro-apartments from an investor's point of view are the low barriers to entry into the market (see Figure 12). Due to the different types of this asset class, interest does not have to be limited to a specific type. Also, the market is characterized by a large number of suppliers, none of which dominate. Small companies and private persons still have access. Finally, the administrative costs for investors are low because the daily operations are taken over by professional operators.

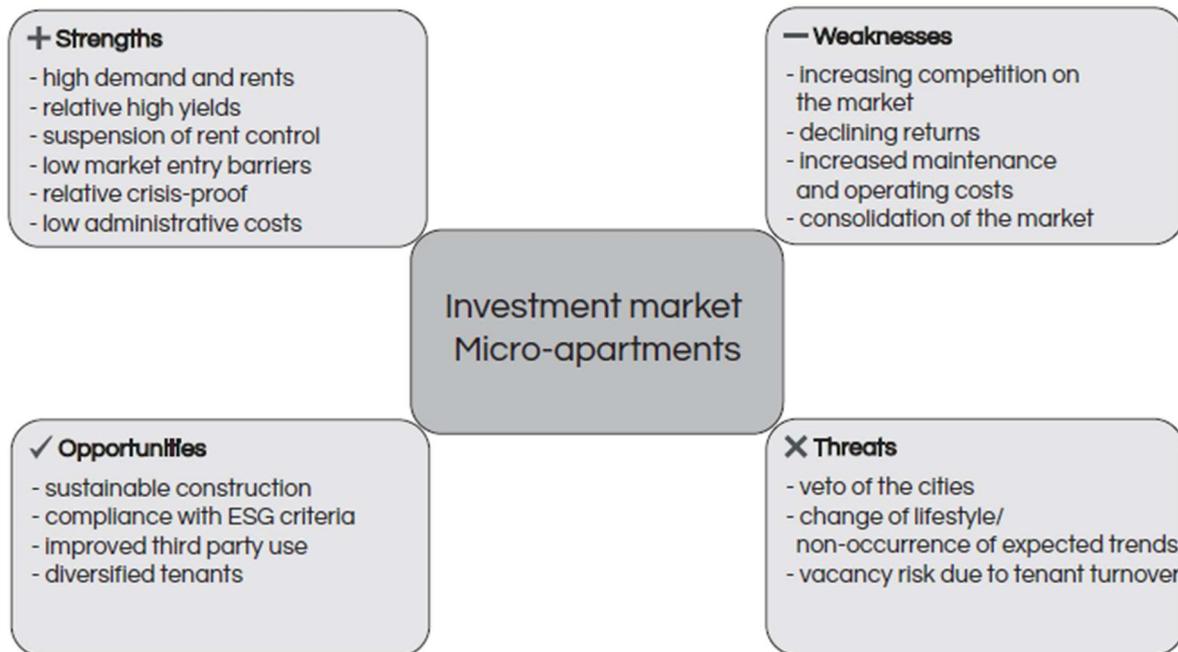
This positive outlook could lead to increased activity from investors, which would result in rising purchase prices and lower yields. The same applies to the effect of further rising construction prices. However, as shown, there is still potential for higher rents. The risk of a consolidation of rents in the still young market can currently be assessed as rather low. The recent initiative of some Bundesländer to abolish the de facto exemption of furnished apartments from the rental price brake would also have had consequences.¹⁰ In view of the dramatic shortage of housing supply, against which micro-apartment concepts make an important contribution, such a regulation would mean a serious weakening of the German business location. However, the initiative has been rejected by the federal government.

⁸ Cf. NAI apollo, cited by Thomas Daily; <https://web.thomas-daily.de/core/article.html>?

⁹ The use of the furniture is added to the rent and does not have to be shown separately. Thus, the comparison with the local comparative rent is not possible, since this is a cold rent. Cf. REIUS, 2023: Student Housing, Mikro- und Serviced Apartments: Ausnahmen von der Mietpreisbremse? <https://www.reius.de/2023/05/05/student-housing-mikro-und-serviced-apartments-ausnahmen-von-der-mietpreisbremse/>

¹⁰ <https://bundesverband-micro-living.de/bml-lehnt-gesetzesinitiative-des-bundesrates-ab-waere-todesstoss-fuer-junges-segment-micro-living/>

Figure 12: Investment Market for Micro-Apartments: Strengths, Weaknesses, Opportunities and Threats



Source: DIWG (Deutsche Immobilien Wirtschafts Gesellschaft), 2022: Mikro Appartements. November 2022.

Since the properties are mainly being built as new buildings and have a lower energy requirement due to the good use of space, they can usually be built in an environmentally friendly way and are suitable for sharpening the ESG profile of the investors. One risk is that some cities with regard to urban development may not appreciate the appearance of the micro-apartment buildings any longer. The influence of the high rents in micro-apartments on the rent levels in cities is also criticized. For these reasons, there could be a reluctance to issue building permits for new buildings or for developments into micro apartment concepts, which would impair investors' businesses. However, this could have a positive effect on the existing properties since their value would increase due to the prevention of the expansion of supply.

Another argument in favor of micro-apartments are the good opportunities for third-party utilization. The structural characteristics of the buildings facilitate the renting of the properties even without an operator and/or the sale of the apartments according to condominiums, provided that the local building code does not prevent this.

Conclusion

Undeniably, demographic and social trends indicate bright prospects for micro-apartment concepts including micro-living, co-living, student housing and independent senior living. This asset class caters to growing target groups and offers excellent solutions for various modern forms of living. Student housing, the oldest of these concepts, has by far not yet reached the point of market saturation, while micro-living is now valued by many investors and has become established. The concept of co-living, which is still new in many places, is gaining ground in Europe. Last but not least, independent senior housing is another new segment that has promising development ahead of it.

Demand from prospective tenants for micro apartment concepts is very high and in surplus, so that operators can achieve high occupancy rates and often also realize further rent increases. In addition, the labor shortage, the struggle of companies for the acquisition of young talents also fuels the demand for micro apartment concepts. Employers increasingly have to offer attractive housing in major cities in order to be attractive to job candidates. Here, too, the crisis resilience of the asset class becomes apparent. Added to this is the good third-party usability of micro-apartment houses. Here, the municipalities and authorities are called upon to facilitate changes of use from commercial housing to housing. The current and medium-term housing shortage has a strong supportive effect here.

For new projects, a sustained, more restrictive approval policy by the cities would mean an upgrade for existing properties but does not appear very likely overall. The growing housing shortage is likely to limit the cities' ability to put up such barriers. In addition, environmental friendliness and ESG compliance is a quality of micro-apartment concepts which sets these apart from many other projects and is difficult to ignore. By reducing per capita emissions, micro apartment concepts reduce the carbon footprint of their tenants and help the real estate sector meet the emissions targets of the Paris Climate Agreement. Micro apartment concepts also make a valuable contribution in terms of the 'S' in ESG. This is an aspect that is often overlooked. They bring people from different nations and races together and create contacts and connections. The social relations create happiness and satisfaction, help overcome racism and sexism, have a positive effect on health and thus also on the sickness rate of the employees. This is of true societal significance.

As an asset class, micro apartment concepts offer above all a crisis resilience that is not present in many other segments. Thus, these investments contribute to a reduction of risks in investor portfolios. This can be particularly important in the current environment of increasing threats to the real estate market.

Note:

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