



Market Outlook & the impact on current market conditions on the real estate industry

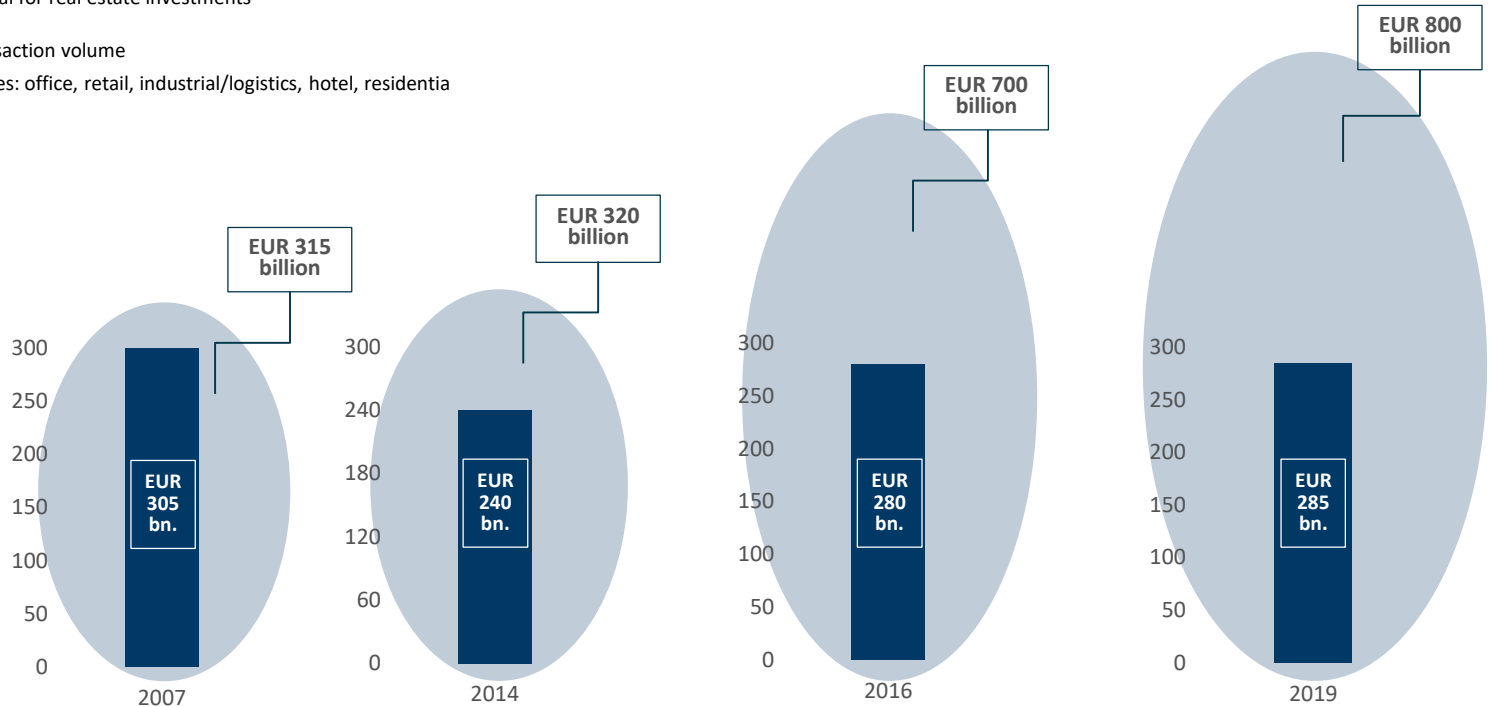
Frankfurt 23.01.2020
Thomas Beyerle

An aerial photograph of a city during sunset. The sun is low on the horizon, casting a warm glow over the buildings and streets. In the center, a prominent white cylindrical skyscraper stands out. To its right is another tall, rectangular building. The foreground shows a busy street with cars and pedestrians, and various other buildings of different architectural styles. A large red rectangular box with a white border is superimposed over the middle of the image, containing the text "Liquidity and Real Estate Markets".

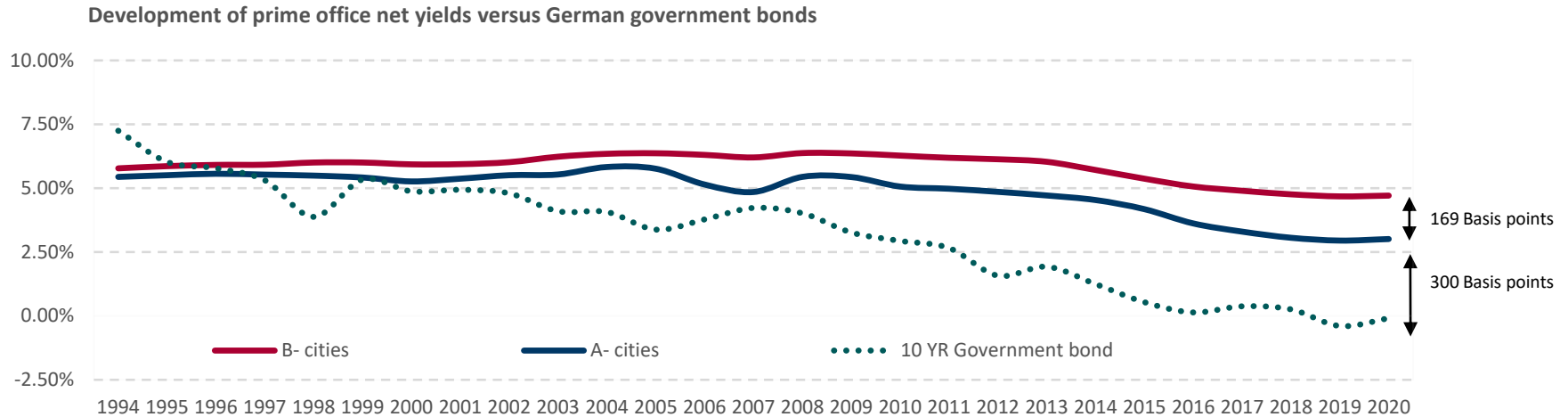
Liquidity and Real Estate Markets

Available capital for real estate investments in Europe

- Available capital for real estate investments
 - European transaction volume
- *all asset classes: office, retail, industrial/logistics, hotel, residentia



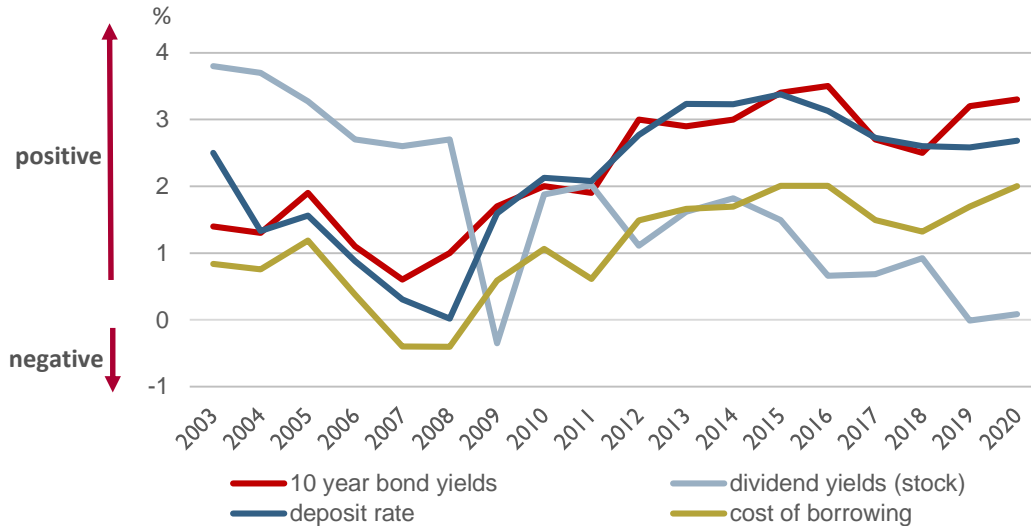
Office investments vs. bond yields



- Office prime yield of all Germany Top Markets fell beyond the 3%- mark and currently stands at 2.88% and thus, approx. 300 basis points higher than government bond yield.
- Interest rate turnaround postponed: We expect government bond yields to remain within the zero-interest rate range over the next 3 years, due too loose monetary policy

Real estate vs. other asset classes

Return on prime office yields relative to other asset classes in Germany



Sources: Catella Research, bullwiengesa AG, Oxford Economics, Bundesbank, S&P Global

Notes: The chart shows relative returns computed as the difference between the net yield of commercial office investments (127 cities) and alternative asset classes: German 10-year government bond yields, equity dividend yields (DAX30), deposit rate with agreed maturity over 2 years denominated in euro and lending rate for collateralised loans more than € 1 million and maturity more than 5 years.

- The difference between net office yields and other asset classes has been consistently positive since 2009 (except for stock yield 2019)
- Real estate (office) yields exceeds yields on equities, government bonds, deposit rate and cost of borrowing.
- This will act as a positive driver for real estate in 2020, much as it did in 2019.
- Significant for strategic asset allocation and portfolio strategy
- There are no investment alternatives to real estate for the majority of investors for the time being.

New sources of capital in Europe - Asia vs. US investors

- A weaker EUR/USD and GBP/USD exchange rate has led North American investors to focus more intensely in Europe in the past decade.
- Asia Pacific investors (especially Koreans) were also increasingly attracted to Europe in recent times due to the unattractive exchange rates and high hedging costs against the US dollar, away from the traditional locations USA and Australia.
- In Europe, Won investors even benefit from a currency hedging premium of 100 to 150 basis points and lower refinancing costs.

Will this development continue in 2020?

- this is also due to future exchange rates (especially US Dollar Index) and the central banks
- While a further QE driven balance sheet expansion by the FED (which is highly correlated with the US dollar index) in 2020 is possible, the ECB's strategy is uncertain. The FED buys short-term government securities in the amount of 60 billion dollars a month to avoid further bottlenecks in repo market, further rate cuts are currently not planned but possible
- A more restrictive ECB and a decreasing US dollar index and would make USA and Australia more attractive again for Asian investors and could lead to a shift from APAC Investors to North America

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Real Estate Markets 2019 / 2020

New record volume, offices are investors darling, yields still decreasing

Key Facts commercial investment market Germany end of 2019

Transaction volume

€ 70.73 billion

+16.8 %



Strongest asset class

Office 52 %

+23 % (in volume)



Prime office net yield

2.88 % Top 7

-18 basis points



Share of international investors

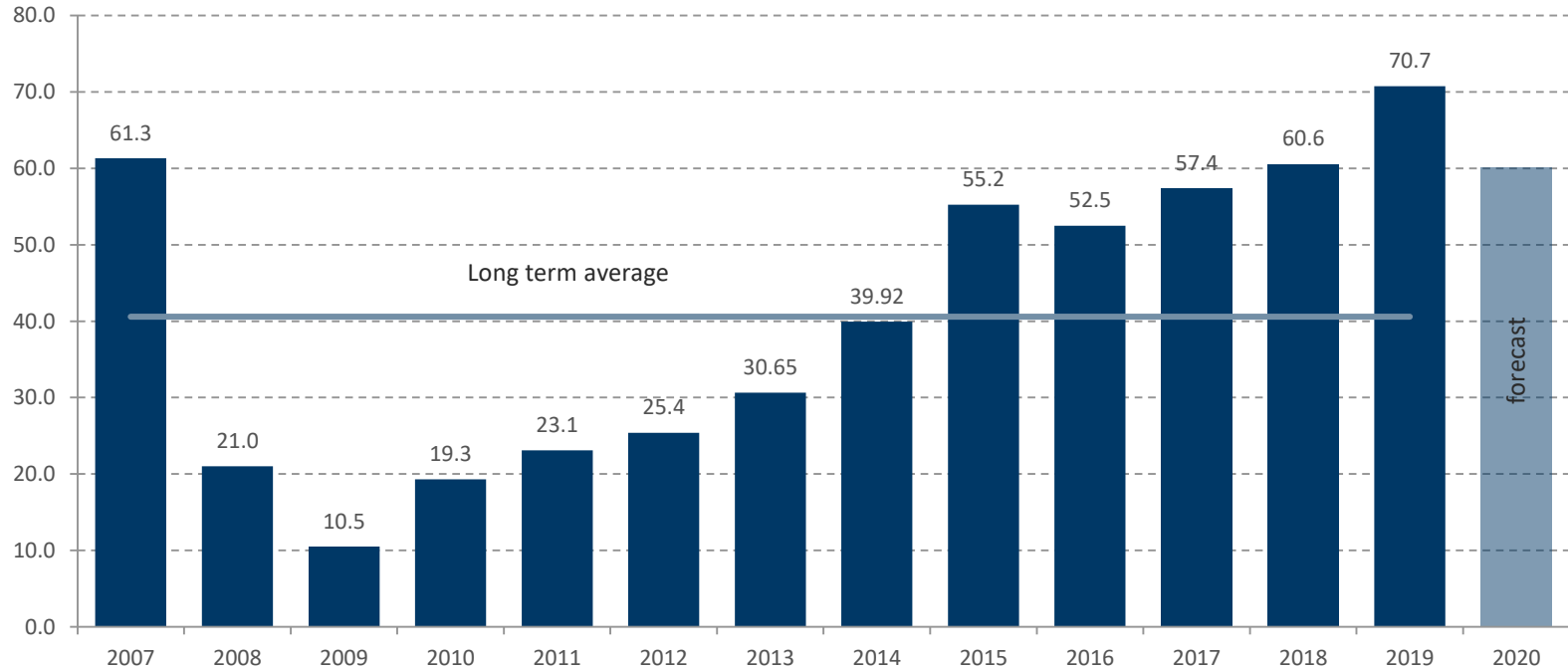
43 %

+0.8 percentage point



Last record volume exceeded strongly again

Commercial transaction volume in Germany, in € billion



Office market Top 7 – total year 2019

Positive take-up volumes and still increasing rents:

VACANCY RATE: 3.4 % (TOP 7)

OFFICE TAKE-UP: 3,932,250 M² (+2 % Y-O-Y)

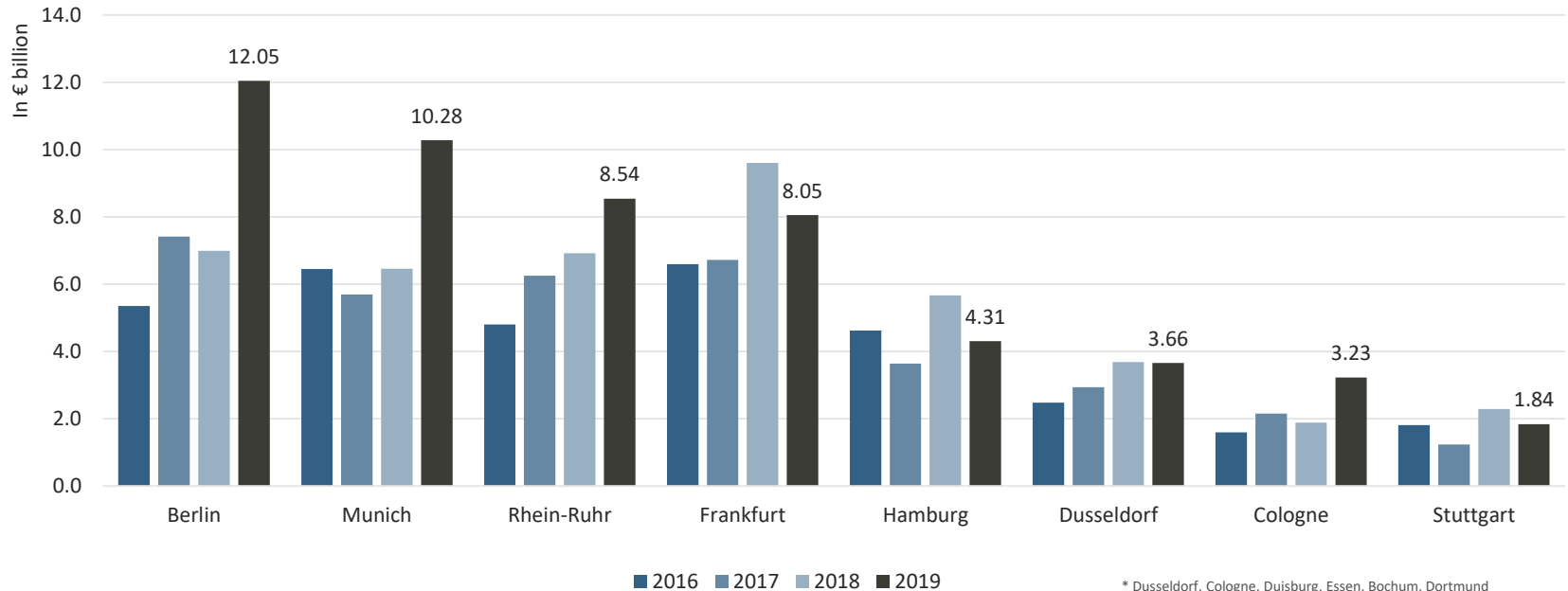


	1	2	3	4	5	6	7
Office stock	19.30 m. sqm	13.85 m. sqm	12.00 m. sqm	13.82 m. sqm	7.61 m. sqm	7.95 m. sqm	7.90 m. sqm
Take- up volume	989,630 sqm	765,480 sqm	735,260 sqm	530,600 sqm	469,250 sqm	290,580 sqm	313,030 sqm
Vacancy rate	1.4 %	2.1 %	6.8 %	2.9 %	6.0 %	2.3 %	2.0 %
Prime rent	39.50 €/sqm	39.50 €/sqm	45.00 €/sqm	29.00 €/sqm	28.50 €/sqm	26.00 €/sqm	24.50 €/sqm
Office prime yield, net	2.65 %	2.65 %	2.85 %	2.90 %	3.00 %	3.10 %	3.00 %

Investment volume in Top 7 with high proportion, Rhine-Ruhr gaining momentum

Commercial transaction volume in Top7 markets and Rhine-Ruhr area*

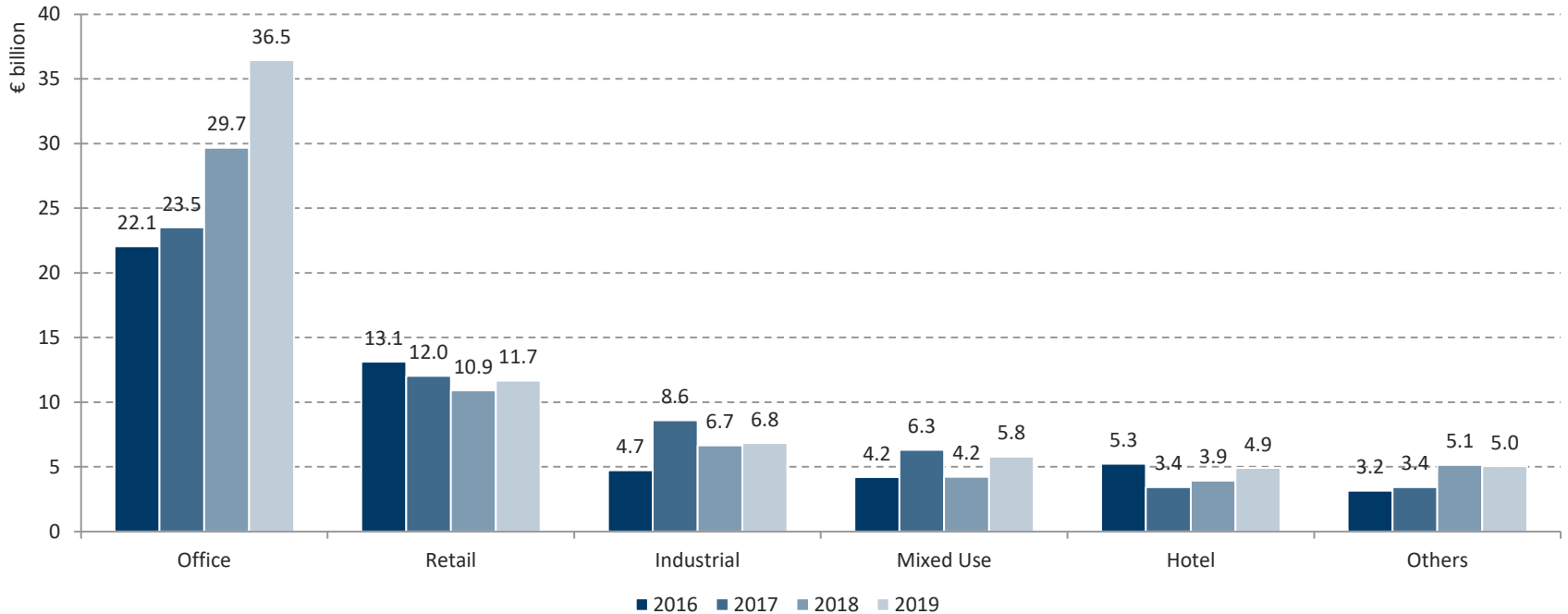
- Transaction volume in Top 7 markets: 43.42 € billion (+19% Y-O-Y)
- Top 7 proportion: 61%



* Dusseldorf, Cologne, Duisburg, Essen, Bochum, Dortmund

Previous year volume surpassed again, office volume increased further

Commercial transaction volume by asset classes



Most prominent transaction volume in Top 5 markets*

Date	Type	Name	Location	Asset	Price in Mio. €	Gross yield, %	Buyer	Vendor
2019-12	Single Asset	The Squire	Frankfurt	Office, Retail, Hotel	950.0	3.85	AGC, Hana Financial Investment	Blackstone Group
2019-06	Single Asset	Die Welle	Frankfurt	Office, retail	620.0	3.80	Invesco Real Estate	AXA Investment Managers - Real Assets, Norges Bank (NBIM)
2019-06	Single Asset	T8	Frankfurt	Office	400.0	3.25	Wirtgen Invest	Mirae Asset Global Investments
2019-04	Single Asset	St. Martin Tower	Frankfurt	Office	130.0		Igis Asset Management, Meritz Securities, Pubity AG	Hansa Gruppe
2019-11	Portfolio	ADO residential portfolio	Berlin	Residential	950.0		Gewobag	ADO Properties
2019-02	Single Asset	Oberbaum City	Berlin	Office	500.0	4.10	Blackstone Group, Quincap Investment Partners	HVB Immobilien AG
2019-04	Single Asset	Pressehaus am Alex	Berlin	Office	365.0	3.85	German Estate Group (GEG)	Tishman Speyer
2019-03	Single Asset	B:HUB	Berlin	Office	350.0		JP Morgan Asset Management	Streletzki Gruppe
2019-11	Single Asset	Glasmacherviertel	Dusseldorf	Residential	375.0		Various investors	Adler Real Estate, Brack Capital Properties
2019-04	Single Asset	Herzogterrassen	Dusseldorf	Office	140.0	4.80	Godewind Immobilien	Office First (Blackstone)
2019-02	Single Asset	KAP 1	Dusseldorf	Office	50.0	3.80	German Estate Group (GEG)	Bayerische Versorgungskammer (BVK)
2019-03	Single Asset	Airport Business Center	Dusseldorf	Office	40.0	4.60	Godewind Immobilien	Blackstone Group
2019-01	Single Asset	Gänsemarkt-Passage	Hamburg	Office, Retail	120.0	2.20	Signa Holding GmbH	MEAG
2019-01	Single Asset	Poseidon Haus	Hamburg	Office	110.0	3.90	Arax Properties	Barings Real Estate
2019-10	Single Asset	Euler Hermes Hauptverwaltung	Hamburg	Office, Retail	160.0		HanseMerkur Grundermögen	Quantum Immobilien AG
2019-12	Single-Asset	Tucherpark	Munich	Office, Hotel, Logistics	1,100.0		Hines, Commerz Real	HVB
2019-10	Single asset	Die Macherei	Munich	Office, hotel	600.0	3.80	Bayerische Versorgungskammer, Universal Investment	Accumulata Real Estate, Art-Invest
2019-06	Single Asset	Siemens Campus – 60% Share	Munich	Office	450.0	2.90	Aroundtown Holdings, RFR Holding	Ginkgo Tree Investment
2019-09	Single Asset	Lenbach Gärten	Munich	Office, Residential	390.0	2.50	Hines Immobilien	Norges Bank Investment

* Majority of transactions are core investments

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Risks

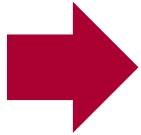
Global risks in the real estate market?

- Global economic turbulence
- Trade dispute/ USA/ China/
- Brexite / EU 27
- Currency War
- Iran crisis
- Economic indicators
- Climate Change
- Political stability
- Restriction of sources of capital
-



Basel IV - Limiting debt capital?

- New regulations for real estate financing 2021
- In future, the risk weighting of real estate loans will primarily be based on the Loan to Value (LTV) ratio, i.e. the ratio of the loan amount to the value of the real estate at the time of financing.
- In order to take the properties into account as collateral when calculating the minimum capital requirements, extensive operational requirements must be met.
- Differentiation as to whether financing is dependent on the cash flow of the property itself. If this is the case, which is particularly the case in commercial financing, the risk weighting increases significantly, with the result that more equity must be maintained.



Alternative forms of financing from non-banks such as loan funds, crowdfunding and private debt are increasingly competing with traditional banks. The trend is reinforced by stricter capital requirements.

Are rules of thumb for real estate and economic development still valid?

"If GDP falls by 1%, office take-up falls by 10% with a time lag."

"If the employment index falls by 5%, office take-up falls by 10% with a time lag."

- Net office space turnover vs. GDP development in Europe (34 metropolises) - *yes, valid*
- Ifo Employment barometer vs. office space turnover in DE - *yes, valid*
- Residential property prices vs. GDP in DE - *no, does not apply to residential property*
- Office space turnover vs. GDP in DE - *yes, it tends to be true*



Responsible handling of space production/developments by the players in the real estate industry

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The crystal ball as a forecasting aid

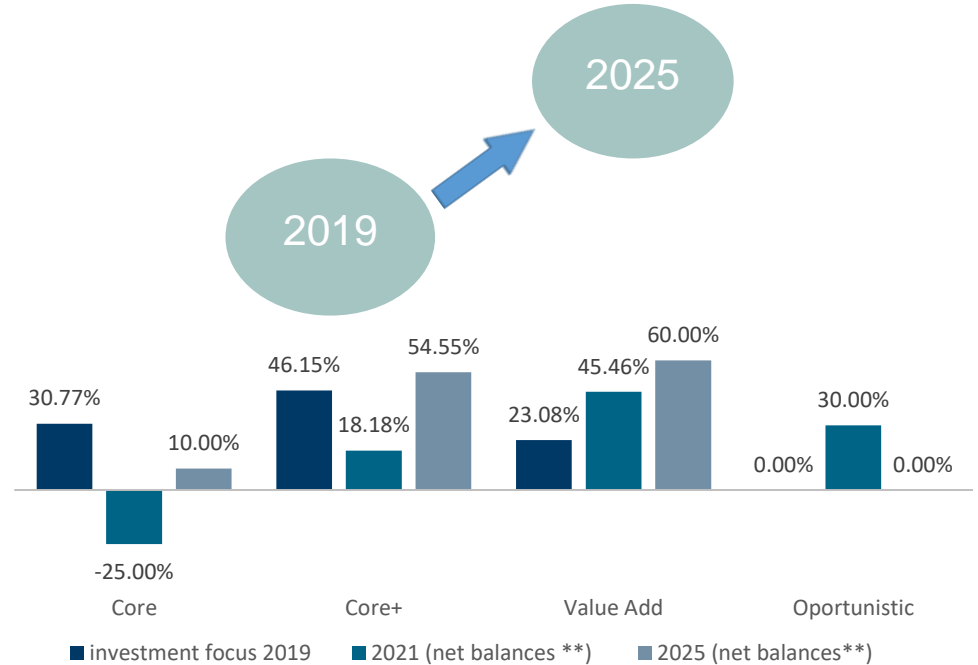
New investment impulses - investment focus by Family Offices in Germany

currently invested future*

Social properties	(22%)
Hotels	(44%)
Micro-apartments	(23%)
Residential	(84%)
Student/Senior-Housing	(15%)

Office	(92%)
Logistic	(22%)
Food retailing	(67%)
Serviced apartments	(15%)

Retail	(63%)



*Segments ranked by strength of future change in investment activity

**Difference between the percentage of survey participants who would like to "invest more" in the respective risk class in the future and the value of those who "invest less"

New investment impulses - Megatrend ESG

- The megatrend sustainability or ESG is likely to be felt on the real estate markets in 2020.
- Above all, we expect the boom in sustainable financial products to have a stronger impact on the real estate industry, not least because of the continued growth in investor demand for green buildings, ESG funds, social real estate and impact investing.
- Increased capital from sustainable bonds and green funds will explicitly look for investment opportunities in the real estate market.
- Stakeholder pressure will also continue to increase.
- In the coming years, we believe that it will become much more difficult for "non-sustainable" companies or real estate to raise debt capital.

Outlook & Trends

Globalization & Urbanization

- Ongoing urbanisation and globalisation are changing employment demand and tenant preferences (coworking, vending machine hotels)
- Straight migration to Europe positive demand shocks on the housing markets No easing of the situation in the demand for residential property and in the construction sector

Growth driver

- We continue to expect a lot of market liquidity to flow into niche markets such as micro apartments, student & senior housing and hotels
- Logistics sector remains strong demand driver
- According to preqin, over 2 trillion dollars of dry powder capital is available worldwide (>300 bn in real estate)

Transaction volume

- Office market: We expect a moderate decline in the volume of commercial transactions (also due to a lack of supply)

Economic influence on the CRE market

- In the course of an economic downturn, office markets (especially prime locations) are traditionally more affected, while residential markets are less volatile. In the meantime, a lot of institutional money has been invested in the "alternative housing market", so this statement should be treated with caution.
- All in all, we do not expect any major impact on the real estate market for the time being in view of the expansive monetary policy, high investor demand and a stable employment situation.

Sustainability

- We expect investor demand in the area of sustainability to continue to grow:
 - Green bonds & buildings, ESG funds, social real estate
 - Impact investing

Real estate risks

- Collapse of an office landlord (Co-Working)
- Regulatory intervention in the housing market



We are getting closer - for the 4th year in a row ! - the end of the cycle, but continued strong growth drivers make a major slump unlikely. The majority of investors currently have no investment alternatives to real estate in the ongoing zero interest rate environment.

Catella Research thesis for 2020

- Germany narrowly escaped a technical recession in Q3'19, and the situation in the industrial sector is expected to stabilize. Economic growth is expected to pick up again in 2020 but will be weaker than in 2018.
- While significant yield compressions are no longer expected in the office segment, stronger declines are still forecast for logistics properties, retail parks and residential and student housing.
- Growth potentials
 - Berlin, stable metropolitan regions
 - Logistics
 - Social and healthcare properties
 - student housing
- Continued liquidity inflows in the real estate market: There are no investment alternatives in a persistent zero-interest environment.
- In view of the - still planned - federal elections in 2021, we expect positive fiscal policy impulses, e.g. increased investment in infrastructure projects, restructuring measures or spending or economic stimulus programmes to stimulate demand
- Liquidity meets risk, but still opportunities!

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The „but“ conclusion



- In view of the apparently still positive situation on the capital and real estate markets, the question arises how investors can strategically deal with the persistently low interest rate environment
- It will be a challenge to avoid misallocations in the medium to long term against the background of artificially maintaining the capital landscape
- For those who were not paying attention at school:

The main character, the rich and beautiful Dorian Gray, has a portrait that ages instead of him and in which the traces of his sins are inscribed. While Gray becomes more and more immoderate and cruel, his appearance remains young and immaculately beautiful.

- If we replace “Dorian Gray” with “real estate markets” this may be one way to explain the “endless cycle”