

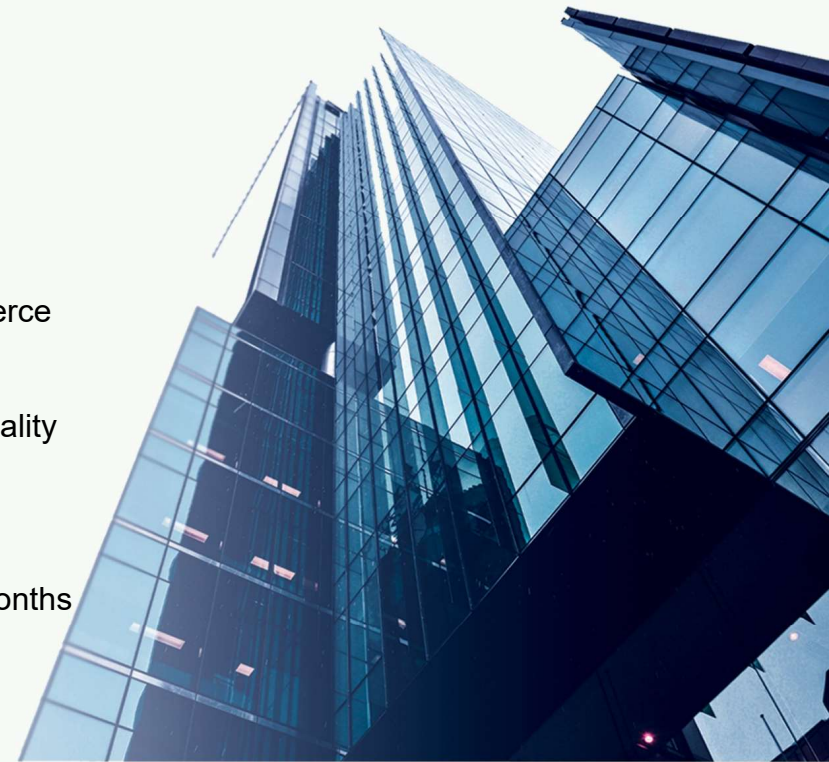
Pan-European Commercial Property Outlook

A semi-annual publication analyzing macro trends, operating fundamentals and relative valuation in four different pan-European property sectors.



14 October 2021

- Vaccine distribution and supportive fiscal policies have propelled economies
- Fundamental estimates again revised upward; 5-year CAGR now +1.1%
- Industrial is the best positioned sector due to strong tenant demand for ecommerce
- Residential supply still largely lagging demand; regulatory risk is growing
- B/B+ office fundamentals in trouble as WFH entrenchment catalyzes flight to quality
- Despite rebound in sales and footfall, health of retail sector is in limbo
- Comm. real estate is cheap vs. fixed income and expensive vs. public PropCos
- In aggregate, comm. real estate values should increase 0-5% over next 6-12 months
- Average quality industrial and residential set to outperform retail and office



Industrial



Office



Residential



Retail



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The analysis contained herein is based on pricing as of 13 October 2021:

GPR 250 Europe: 19.83 | STOXX Europe 600: 466

U.K. 10+ yr Corp Bonds: 2.75% | Euro 10+ yr Corp Bonds: 1.29% | USD 10+ yr Corp Bonds: 3.41%

Detailed market and sector-level estimates available in [Atlas](#) – Green Street’s interactive mapping and analytics platform.

See Appendix B for additional details on Green Street’s sector and market coverage, and key definitions.

Operating Fundamentals

Top of Mind: Qualitative Considerations

Supply Chain Snags: Despite surging demand, global supply chain bottlenecks threaten to put a ceiling on economic recoveries, particularly in industrial/manufacturing dependent regions.

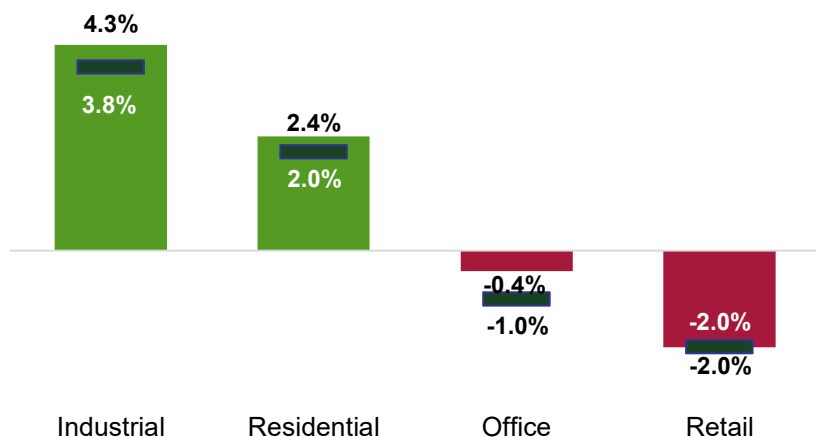
Climate Crunch: An increasing risk of carbon taxes and 'green' capex requirements could take a bite out of long-term growth; related taxes have already been approved in Germany and Austria.

Taxing Times: Goliath budget deficits and income inequality loom large (esp. in Southern Europe & U.K.). Property investors can't ignore the risk of more interventionist government policies (e.g., tax hikes).

Modest Upward Revisions

5-Year M-RevPAM* Growth Forecasts

■ Current Forecast ■ Prior Forecast (July '21)



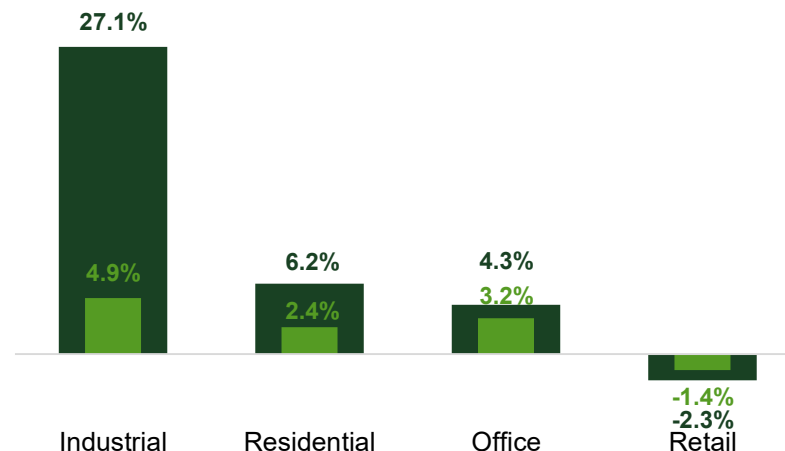
*Market-RevPAM growth: A single measure that combines changes in market-level occupancy and rent.

Property Values

Industrial Surges

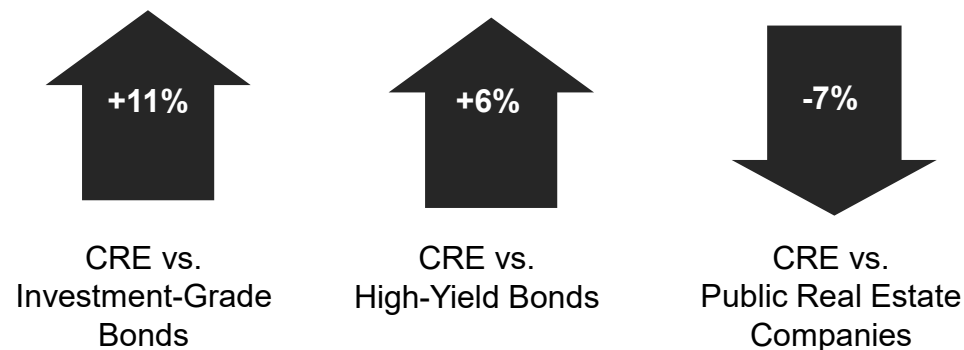
Commercial Property Price Indices (CPPIs)

■ Past 12 Months ■ Past 3 Months



Cheap vs. Fixed Income and Expensive vs. Public PropCos

Real Estate Fair Value vs. Investment Alternatives



Demand Drivers

New Concerns as Covid Eases

- Economic forecasts across Pan-European economies are rosier as strict Covid lockdowns are less frequent
- Supply chain disruption, natural gas shortages, and inflation fears are getting more media attention than Covid
- GDP growth should be steady from here on out; 2019 GDP levels reached in 2022 for most, Nordics in 2021
- Green Street's real estate forecasts implicitly assume the present inflationary scare will prove short-lived
- Northern European countries should deliver better economic performance, especially on the jobs growth front
- Southern Europe is more dependent on EU funds; Spain offers a notably more promising outlook than Italy

Fundamentals

Upward Revisions

- Pan-European commercial real estate to experience occupancy and rent declines in '21
- Five-year M-RevPAM estimates revised upward, largely due to occupancy assumptions; CAGR up 40 bps to +1.1%
- Industrial is the best positioned sector due to strong tenant demand for ecommerce deliveries and storage
- Supply is starting to match demand in residential albeit not everywhere; regulation could hinder supply growth
- Near-term office fundamentals likely to struggle; newer "green" buildings to command the lion's share of demand
- Retail outlook has marginally improved though fashion continues to struggle; open-air centers best positioned

Property Valuations

Headed Higher

- Pan-European commercial real estate values increased by 2.2% in 3Q21
- Industrial and residential asset values hit new highs; office values are improving and retail values remain mixed
- Pan-European commercial real estate screens cheap vs. both investment-grade and high-yield bonds
- Public property companies (excl. industrial) trade at c. 10% discounts to Green Street spot asset values
- Commercial real estate values expected to increase 0-5% over the next 6 to 12 months
- The office sector is expected to underperform other real estate sectors; starting yields are too sharp given outlook
- Dublin is a top market; favourable demand drivers leave room for property yield compression across sectors

Incrementally Higher: A fourth covid wave impacted much of Western Europe over the summer, but economies held up as strict government lockdowns were mostly avoided due to widely vaccinated populations. Current forecasts are roughly in-line with those from July '21. Most countries will return to 2019 GDP levels in 2022 before leveling off in the outyears.

Germany

- Furlough scheme limited job losses
- Supply bottlenecks have weighed on industrial activity

United Kingdom

- Boost from Covid restrictions being lifted in July
- Robust fiscal and monetary support

Nordics

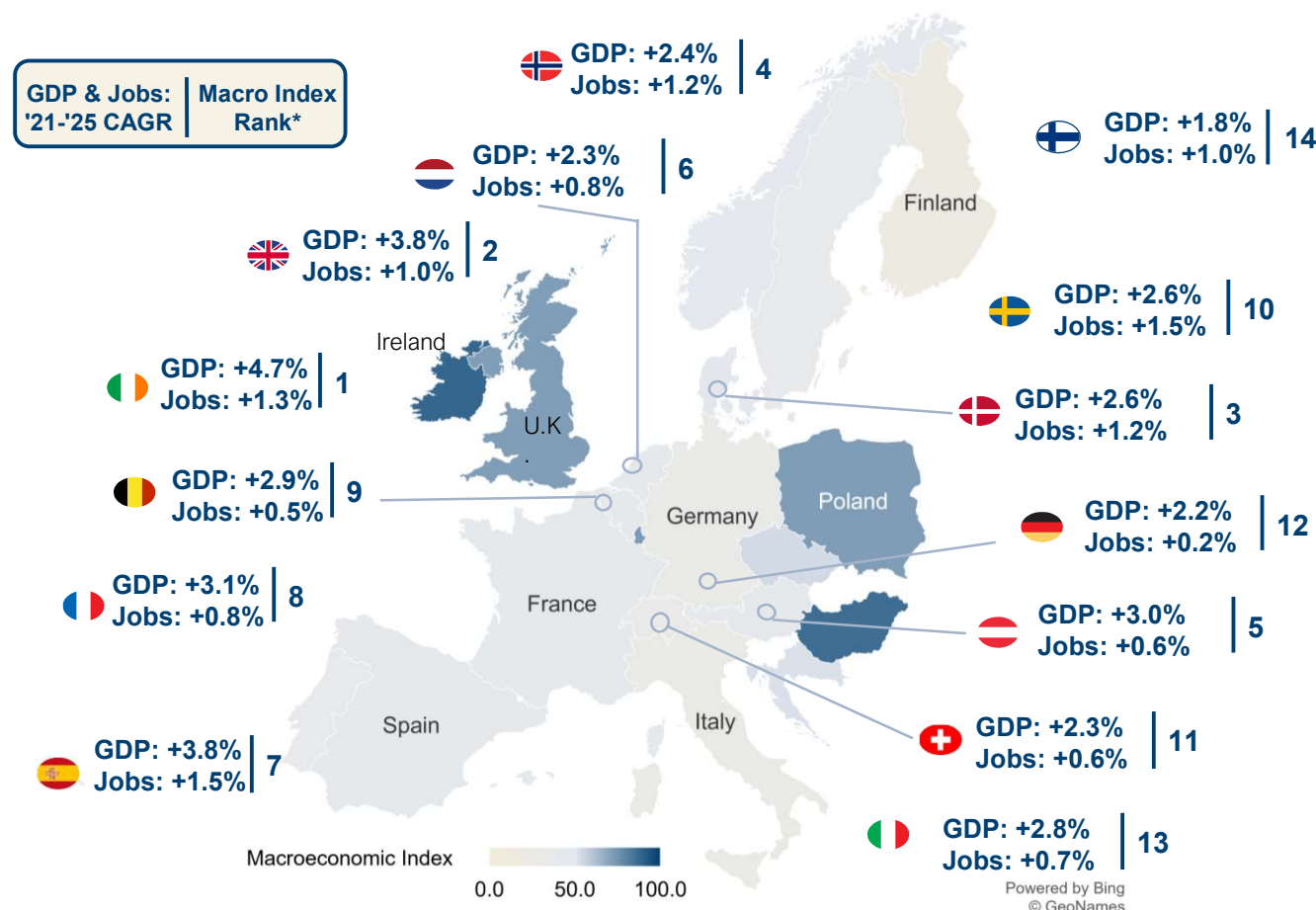
- Population growth expected to outpace Continental peers
- Governments are in healthy fiscal shape

Southern Europe

- Tourism dependence hindering recovery
- Meager demographic growth prospects

Continent Other

- Easing of Covid restrictions a big plus
- EU €750bn fiscal support a lifeline



*Macroeconomic Index consists of: 5-yr GDP growth (50%), unemployment rate (30%), 5-yr employment growth (20%).

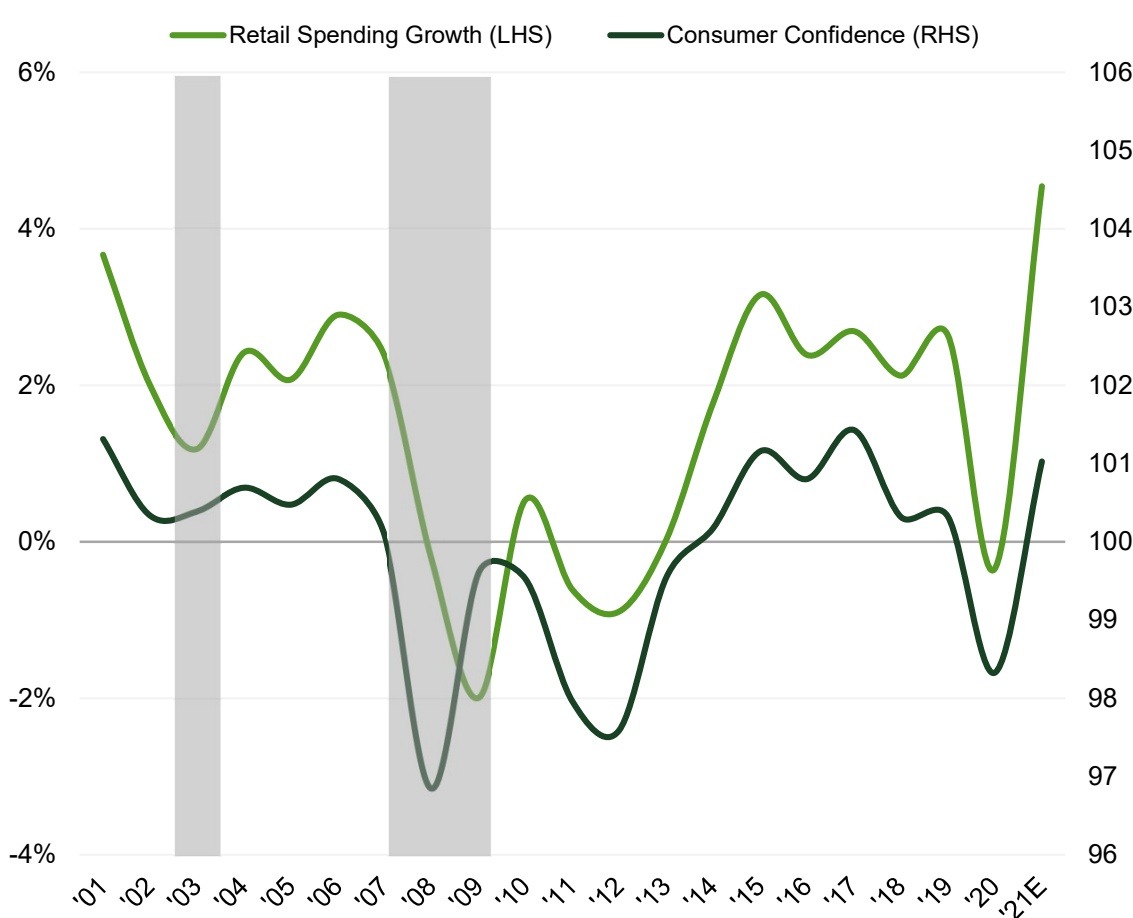
Sources: Green Street.

Demand Drivers: The Consumer

Commercial Property Outlook – October '21

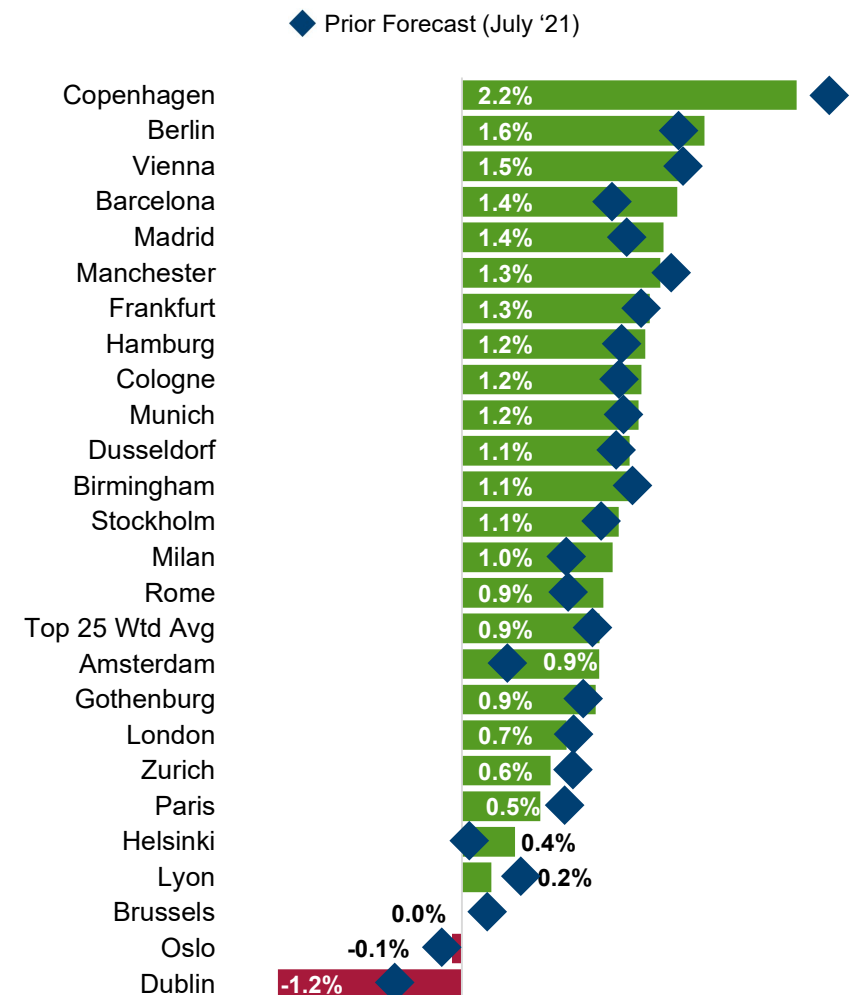
On the Rebound: Pan-European retail spending and consumer confidence are rebounding from the pandemic lows. Consumers are feeling more confident as the prevalence of strict lockdowns is fading and haven't been scared off by the specter of higher inflation / energy costs (yet). Incomes and retail spending should benefit from open economies.

Pan-European Spending and Consumer Confidence



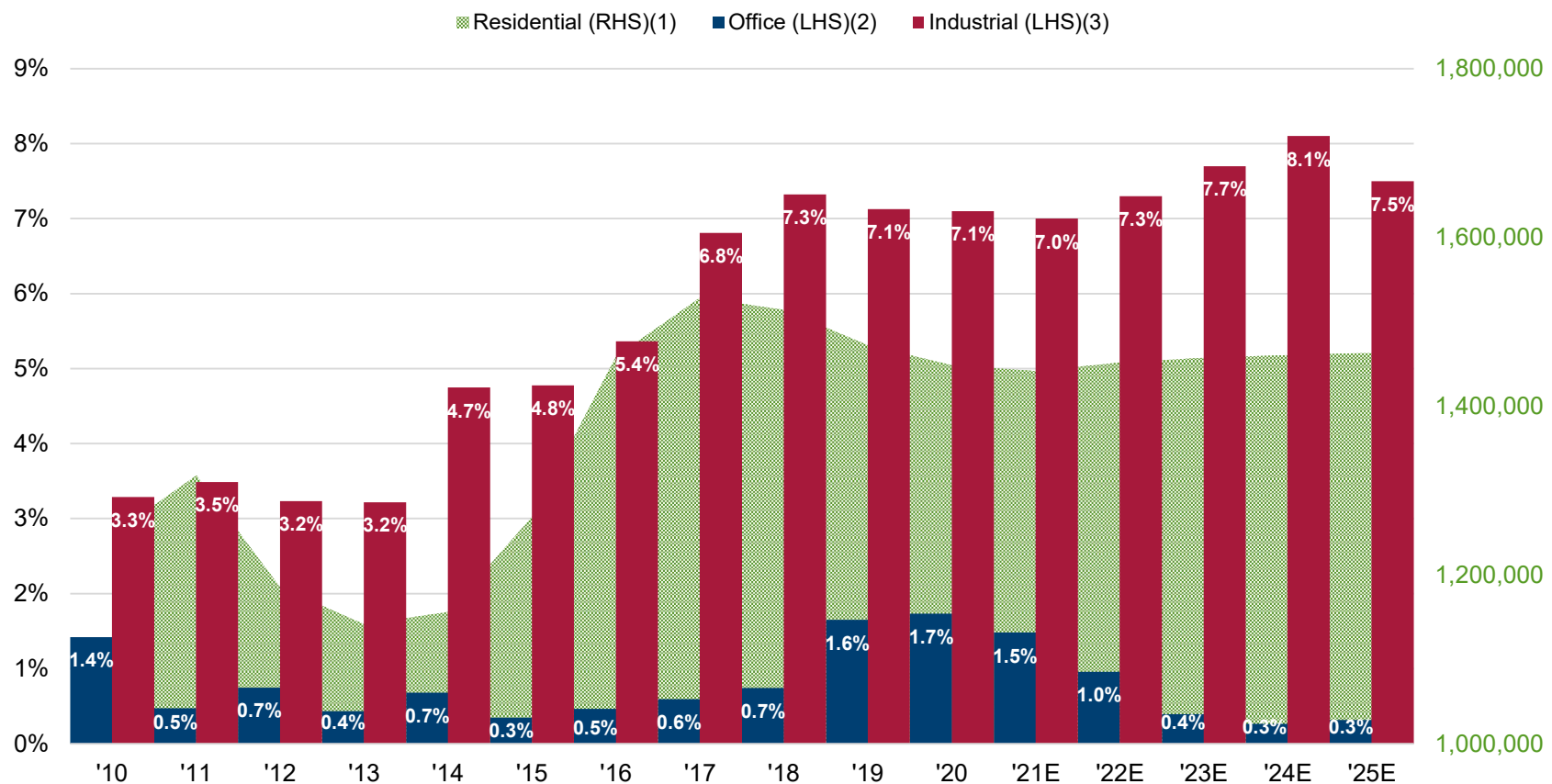
Sources: Oxford Economics, OECD, and Green Street. Forecasts are Oxford Economics'.

Average HHI CAGR ('21E – '25E)



Expanding Sensibly: Industrial supply growth will likely continue at a rate close to 8% p.a. While optically high, much of Europe's existing stock is functionally obsolete for ecommerce demand. Residential deliveries are likely to remain high compared to recent history but are nonetheless sensible relative to household formations. The delivery of Class-A office space is low and not overly concerning in most markets as tenants rotate out of obsolete stock.

Pan-European Inventory Growth



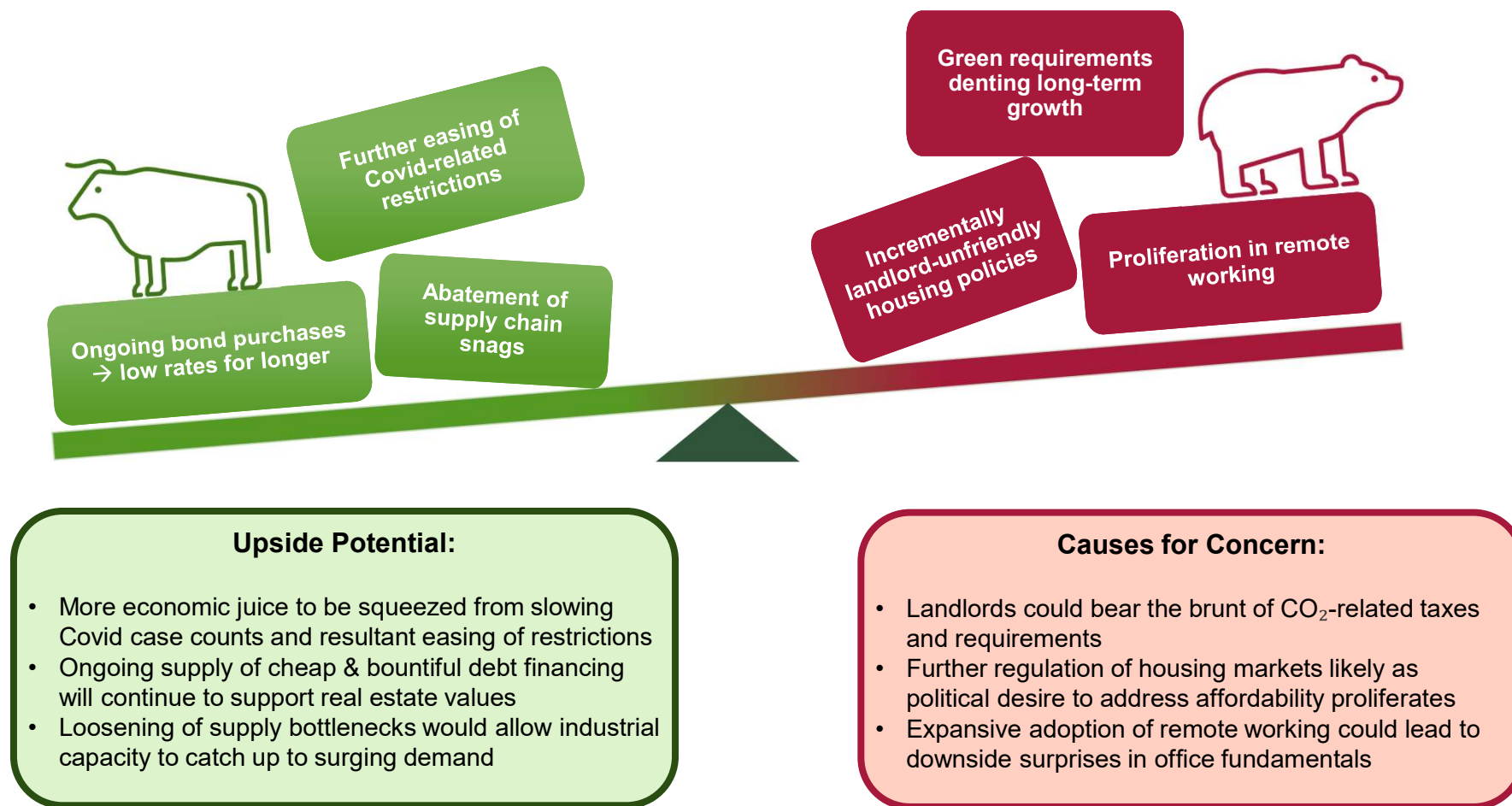
(1) Total new permits filed. Based on Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Spain, Sweden, Norway & the UK.

(2) Based on the top 25 markets in Green Street's Pan-European Real Estate Analytics coverage

(3) Based on Belgium, Czech Republic, France, Germany, Italy, The Netherlands, Poland, Spain and United Kingdom industrial logistics markets.

Sources: CBRE, European Mortgage Federation, National Statistics Offices, and Green Street.

Moving Parts: After a slow start, a relatively successful continental vaccination campaign has helped energize economies across Europe, but risks remain. Incremental regulation in the realms of both housing and emissions (i.e., net zero) could further dent property fundamentals. Furthermore, secular Covid-induced shifts such as remote working are still playing out. On the flip side, faster-than-expected easing of supply chain bottlenecks would stimulate economies brimming with demand, and ongoing “easy money” monetary policy will support asset values.



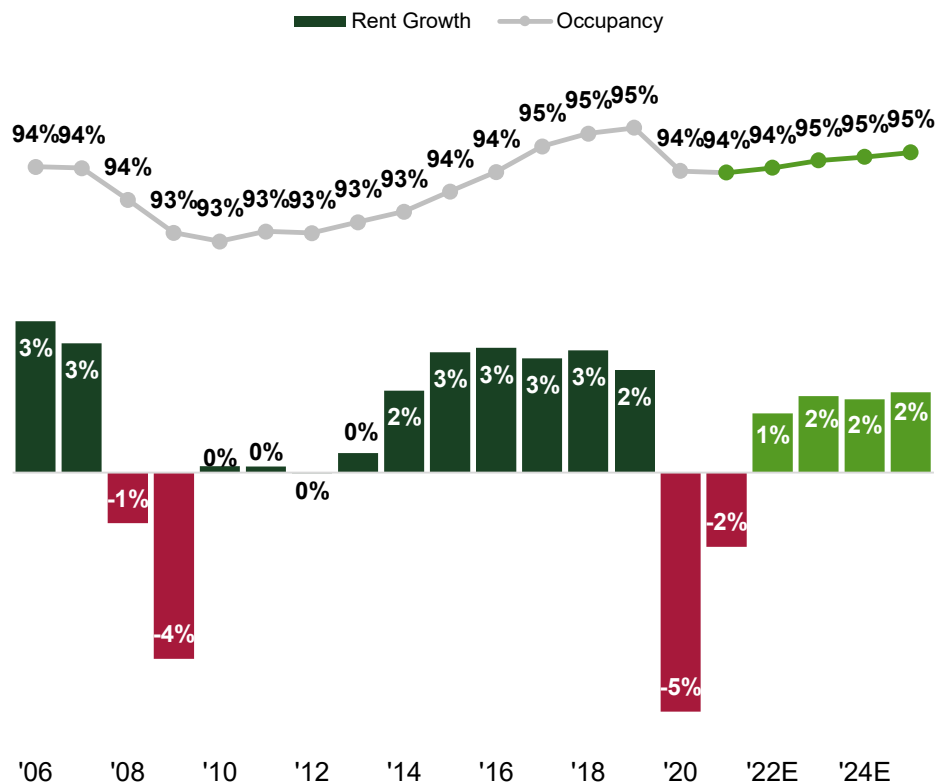
Sources: Green Street.

Fundamentals: Occupancy, Rent, and RevPAM*

Commercial Property Outlook – October '21

Up From Here: Market-RevPAM (effective rent + occupancy changes) has continued to struggle in 2021, though a rebound in 2022 is expected. On a 5-yr CAGR basis, the office and industrial sectors experienced the most positive revisions versus this July (+60bps and +50bps, respectively), driven largely by improved occupancy estimates. At a market level, London's residential and industrial forecasts were tweaked notably upwards, while Paris and Madrid were meaningful contributors to the office sector's positive revision.

Occupancy & Rent Growth
Top-25 Wtd. Avg

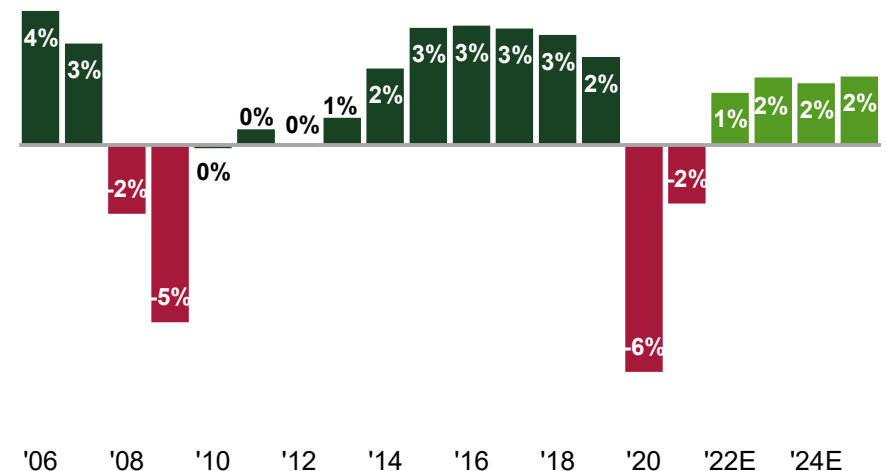


Market RevPAM Growth*
Top-25 Wtd Avg**

See Appendix A for year-by-year
M-RevPAM & NOI growth
estimates by sector.

**M-RevPAM 5-Year
CAGR**

1.1%	0.7%
Current	Previous (July '21)



* Market RevPAM Growth: A single measure that combines changes in market-level occupancy and rent.

**Top-25 Wtd. Avg is a simple average of the four property types analyzed in this report. Each sector average is based on a GDP-weighted scale of the 25 markets covered.

Source: Green Street.

Fundamentals: M-RevPAM Growth By Sector

Commercial Property Outlook – October '21

More of the Same: Industrial M-RevPAM growth is expected to outpace other major sectors in the coming years as tenant demand in population centers is leading to impressive rent growth. The residential sector benefits from steady demand and inflation-like growth. Work from home remains a concern for the office sector – with B/B+ quality assets at risk of obsolescence. Poor tenant health and a dearth of new tenants continue to weigh on the retail sector.

Recent Anecdotes Influencing M-RevPAM Growth Changes

Industrial:

- “Just in case” logistics driving demand
- Backlog of strong consumer demand for goods bodes well

Office:

- Office-using employment is rebounding, helping to ease rental pain
- Ongoing WFH entrenchment a real concern

Residential:

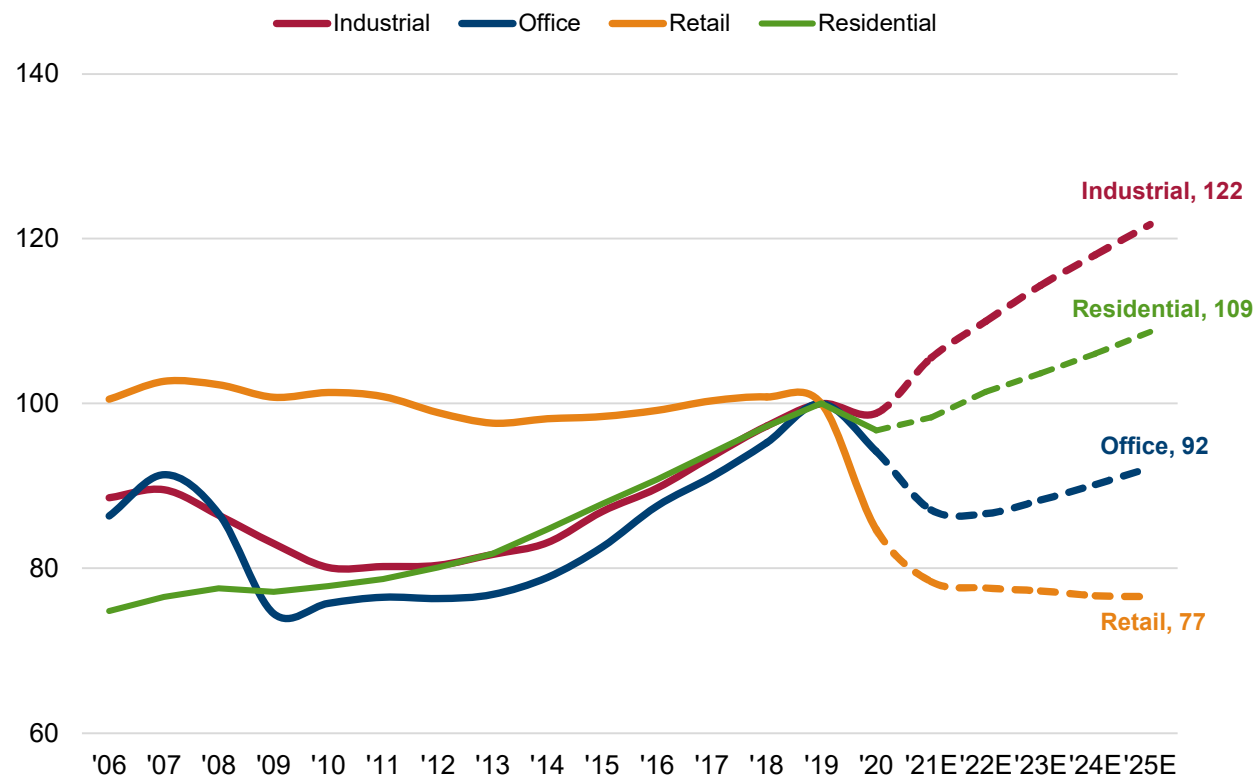
- Supply trailed demand for many years
- Markets that suffered occupational losses during Covid are bouncing back

Retail:

- Tenant sales and footfall rebounded this summer from deep troughs
- Short-term rent “relief” morphing into permanently lower levels

See Appendix A for year-by-year estimates.
Sources: Green Street.





Top 25 Indexed M-RevPAM: '19 = 100



Market Selection: Though inter-sector fundamentals exhibit wider divergences, thoughtful market selection can nonetheless generate meaningful alpha. Nordic markets are poised to outperform most of their Continental peers across the four major sectors. Meanwhile, global gateway markets (i.e., London and Paris) may struggle to return to '19 levels in the office and retail sectors, though their dense & high-cost nature lends itself to strong industrial growth.

M-RevPAM*: '25E vs '19

2019 = 100

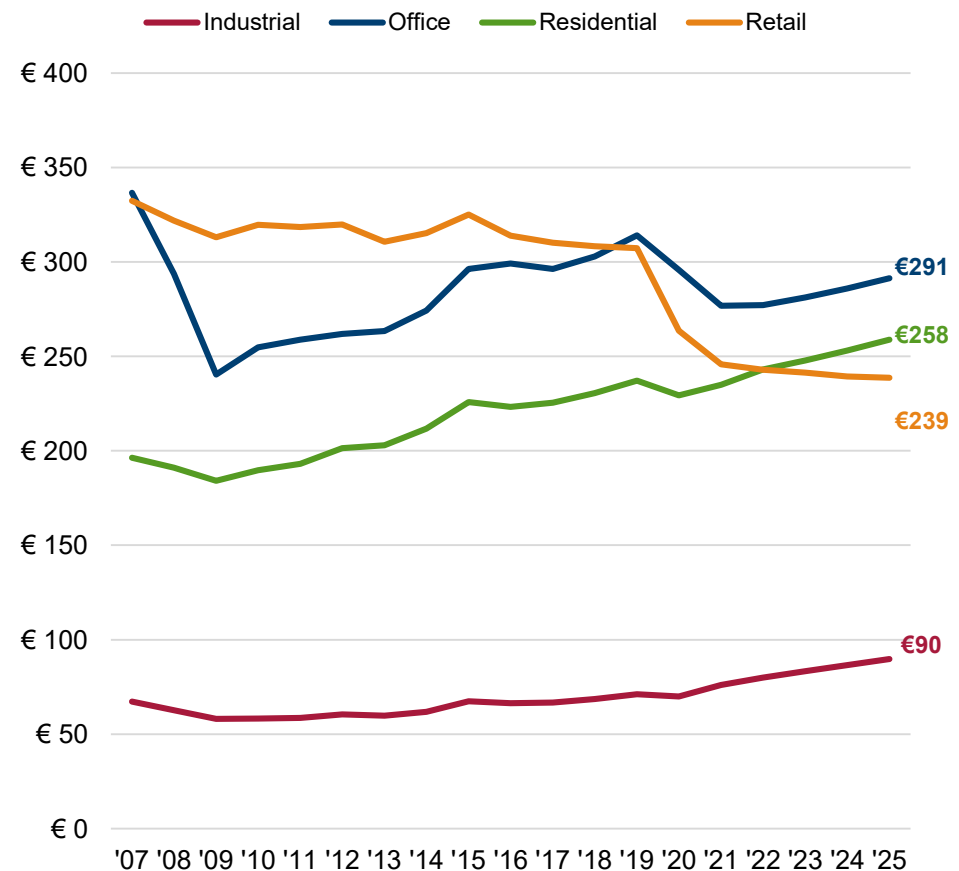
					Average
Stockholm	127	116	91	92	107
Oslo	118	114	97	90	105
Berlin	121	117	100	80	105
Copenhagen	125	111	93	88	104
Brussels	128	109	94	84	104
Dublin	119	114	92	86	103
Gothenburg	117	114	93	87	103
Hamburg	121	113	98	77	102
Helsinki	117	113	91	87	102
Munich	115	114	104	73	101
Dusseldorf	113	114	97	80	101
Cologne	114	114	95	82	101
Lyon	123	112	94	73	101
Vienna	116	108	95	83	100
Amsterdam	120	110	95	73	100
Birmingham	122	110	92	72	99
Frankfurt	113	114	91	77	99
Zurich	116	104	100	76	99
Barcelona	115	106	97	77	99
London	144	105	72	74	99
Milan	115	102	100	75	98
Madrid	113	105	99	72	97
Manchester	113	109	92	74	97
Paris	121	105	91	67	96
Rome	112	104	89	80	96
Top 25	122	109	92	77	100

*Calculated using local currency.

**Headline rent less straightlined TIs and LCs. TIs range from ~0-11% of headline rent and LCs range from ~1-4% of headline rent.

Sources: Green Street.

Top 25 Wtd. Avg. Effective Rent (€ / SqM)**

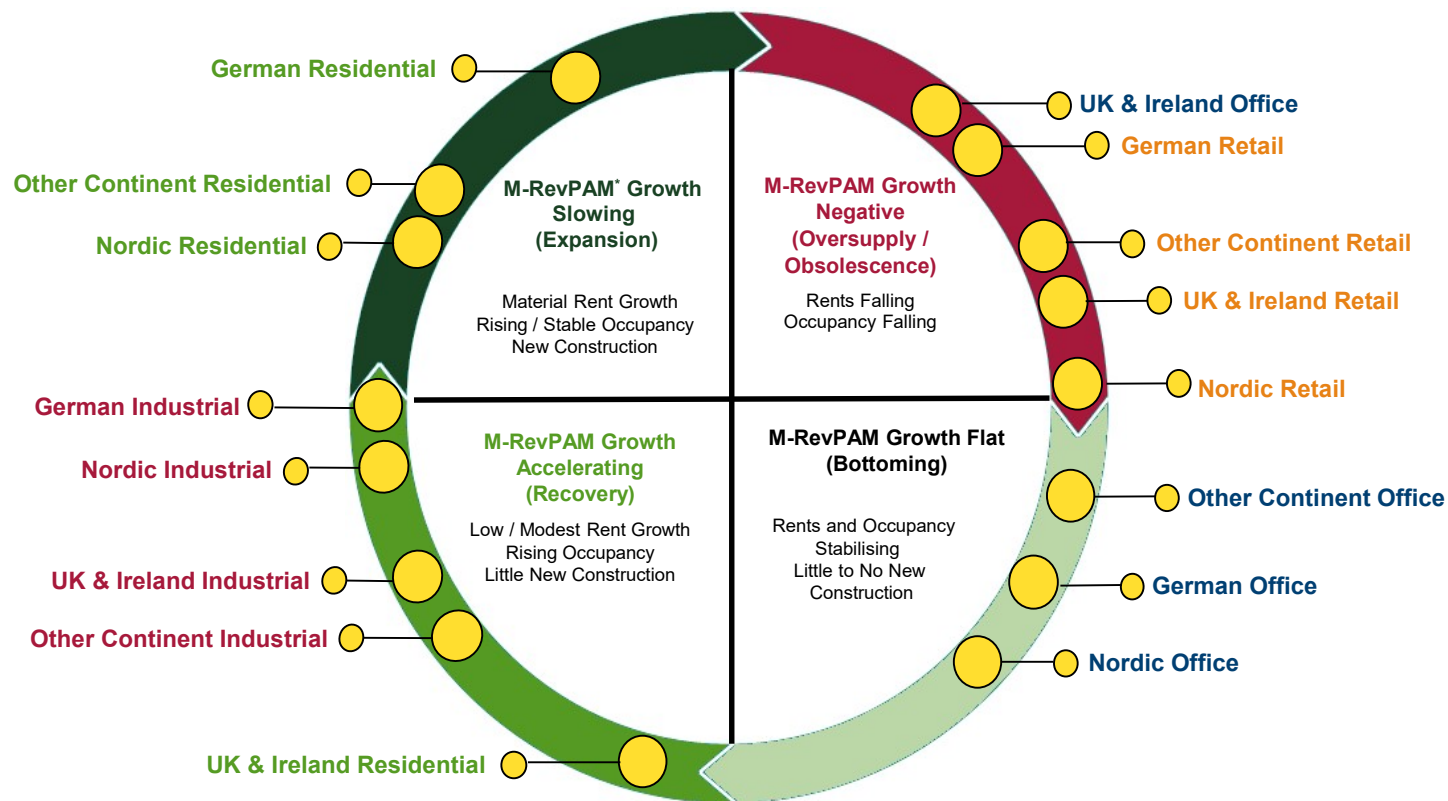


Fundamentals: Where Are We In The Cycle?

Commercial Property Outlook – October '21

Industrial Booming: Infill industrial/logistics sites (i.e., London and Paris) are expected to outperform big box sites in the intermediate term. Residential rental growth is slowing towards inflation. UK office rents are expected to drop more than most Continental markets near term due to a higher propensity for remote working to sap space demand.

5-Year Fundamentals Expectations



*Market RevPAM Growth: A single measure that combines changes in market-level occupancy and rent.

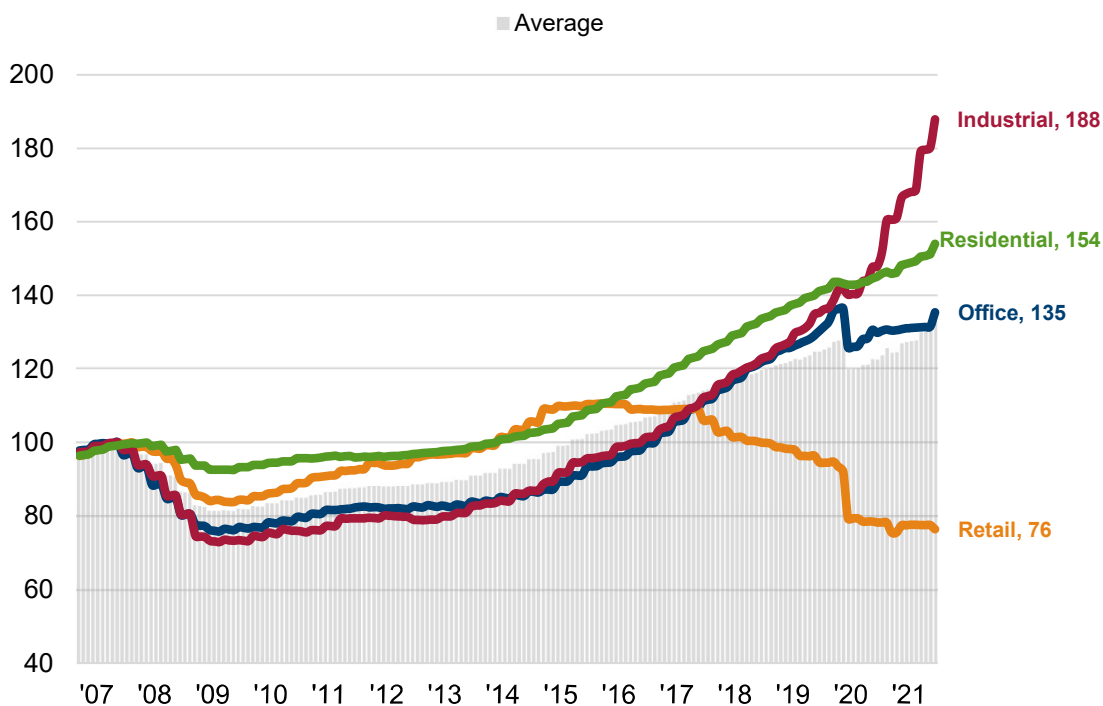
Sources: Green Street.

Valuation: Asset Values and Cap Rates

Commercial Property Outlook – October '21

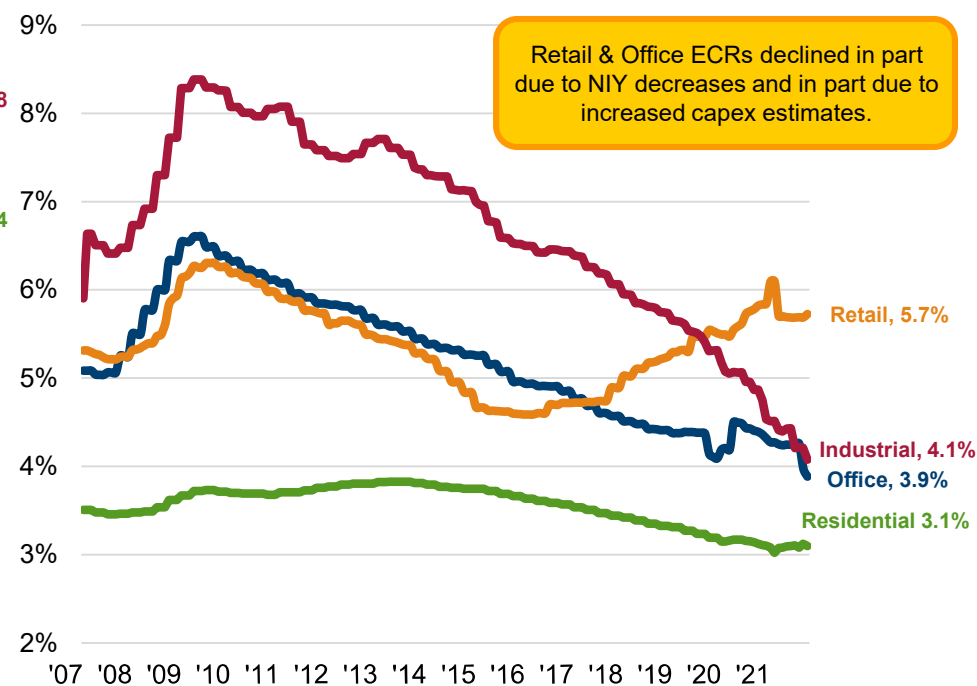
Most Sectors Moving Higher: Green Street's Commercial Property Price Index is a time series of unleveraged Pan-European commercial property values at which transactions are currently being negotiated and contracted. Features that differentiate this index are its timeliness, emphasis on average quality properties, and ability to capture changes in the aggregate value of the commercial property sector. Asset values in the third quarter of this year increased 4.9% for industrial, 3.2% for office, 2.4% for residential and decreased 1.4% for retail, on average.

Green Street Commercial Property Price Index*



*Asset values in local currencies, GDP-weighted by market.
Sources: Green Street.

Economic Cap Rates by Sector



Retail & Office ECRs declined in part due to NIY decreases and in part due to increased capex estimates.

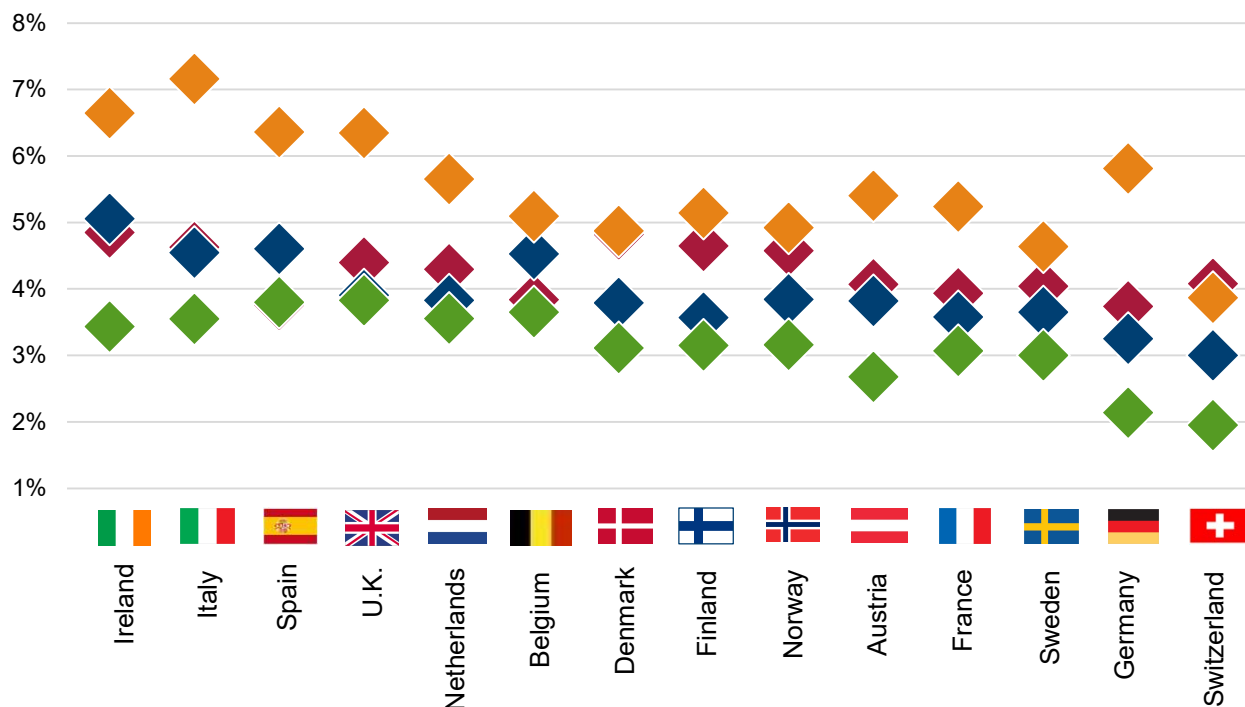
Valuation: Cap Rates by Country and Sector

Commercial Property Outlook – October '21

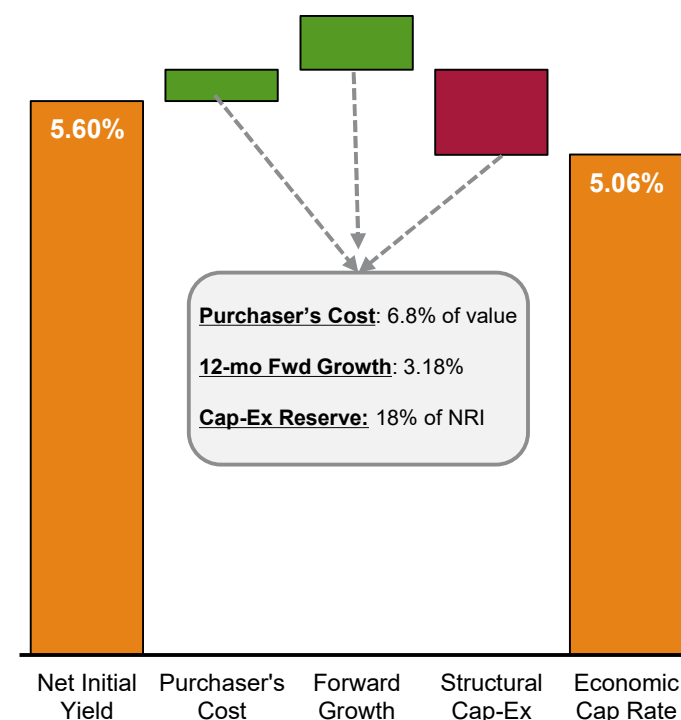
A Global Valuation Tool: Economic cap rate – a Green Street proprietary metric – is based on systematically adjusting local yield conventions into a standardised, after-capex income return metric. Economic cap rates are the best way to compare global real estate in-place income returns. The cash flow stability in the residential sector has investors paying the lowest starting yields in every country under coverage in Europe.

Economic Cap Rates by Country and Sector

◆ Industrial ◆ Office ◆ Retail ◆ Residential



Economic Cap Rate Build-Up
Dublin Office

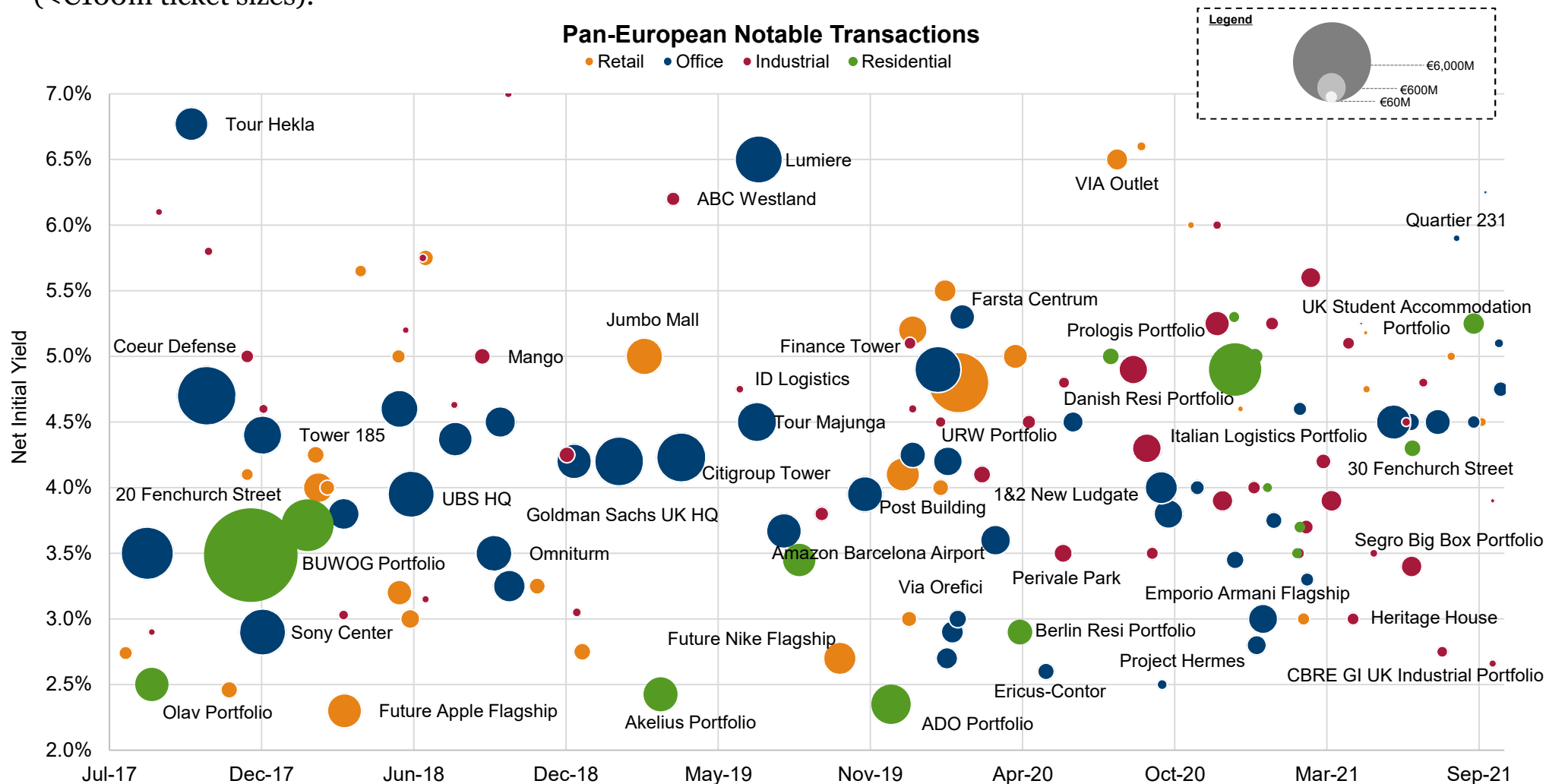


*GDP weighted average roll-up from the city level when needed. Cap rates as of 01 October 2021.
Sources: Green Street.

Valuation: Notable Transactions

Commercial Property Outlook – October '21

Paying up for Quality: Investor appetite for industrial and residential assets remains full and unabated. Both sectors display income resilience and strong growth expectations making them easy to get through investment committee. The office sector is seeing strong bids for high-quality, well-let assets. Even well-located food-anchored retail is liquid (<€100m ticket sizes).



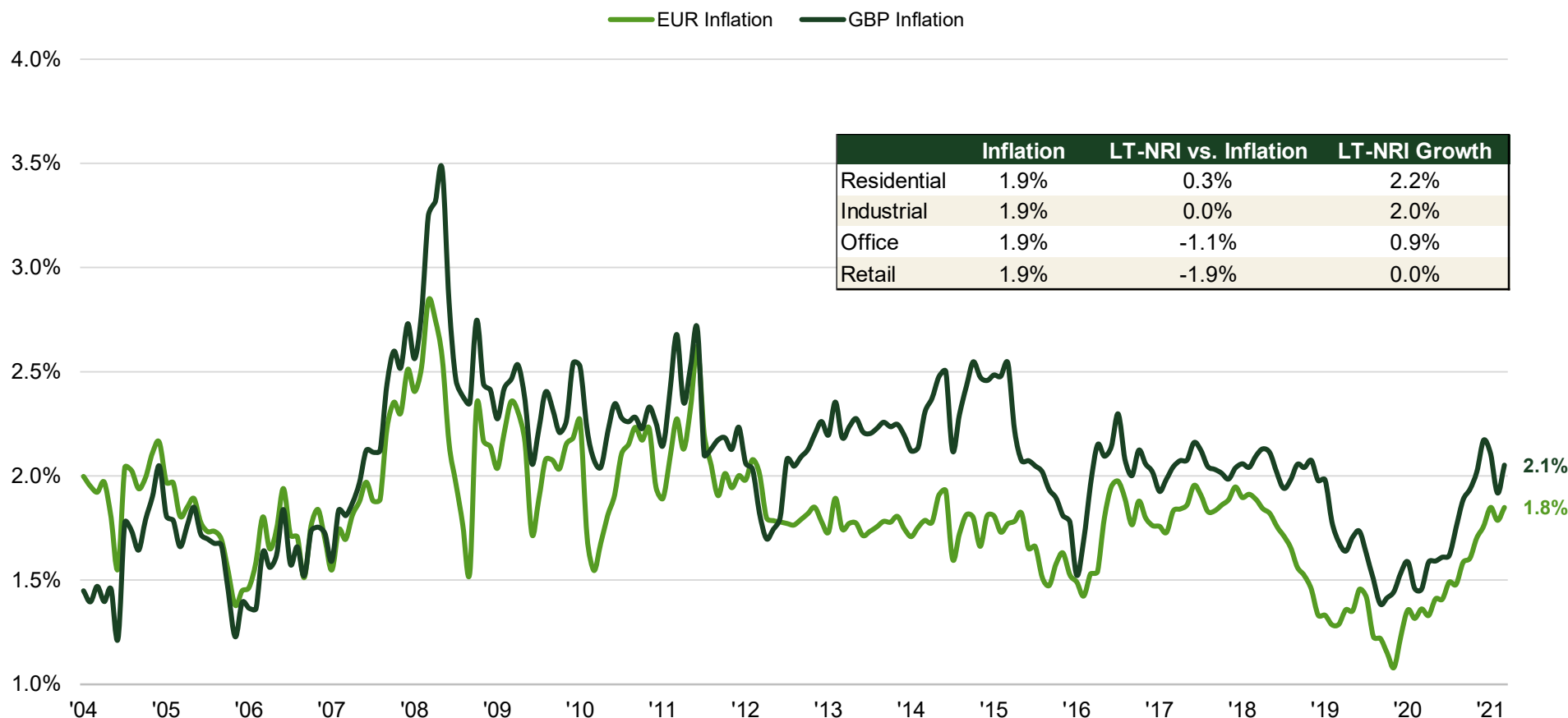
Sources: Green Street.

Valuation: Inflation Expectations

Commercial Property Outlook – October '21

Moving on Up: Inflation expectations are a critical input when projecting expected long-term returns on real estate because, over the long run, rent growth should be highly influenced by inflation. Long-term inflation expectations are off the pandemic lows albeit still within a trading range and certainly not running away as the media likes to portray.

Inflation Expectations Embedded in 30-Year Swaps



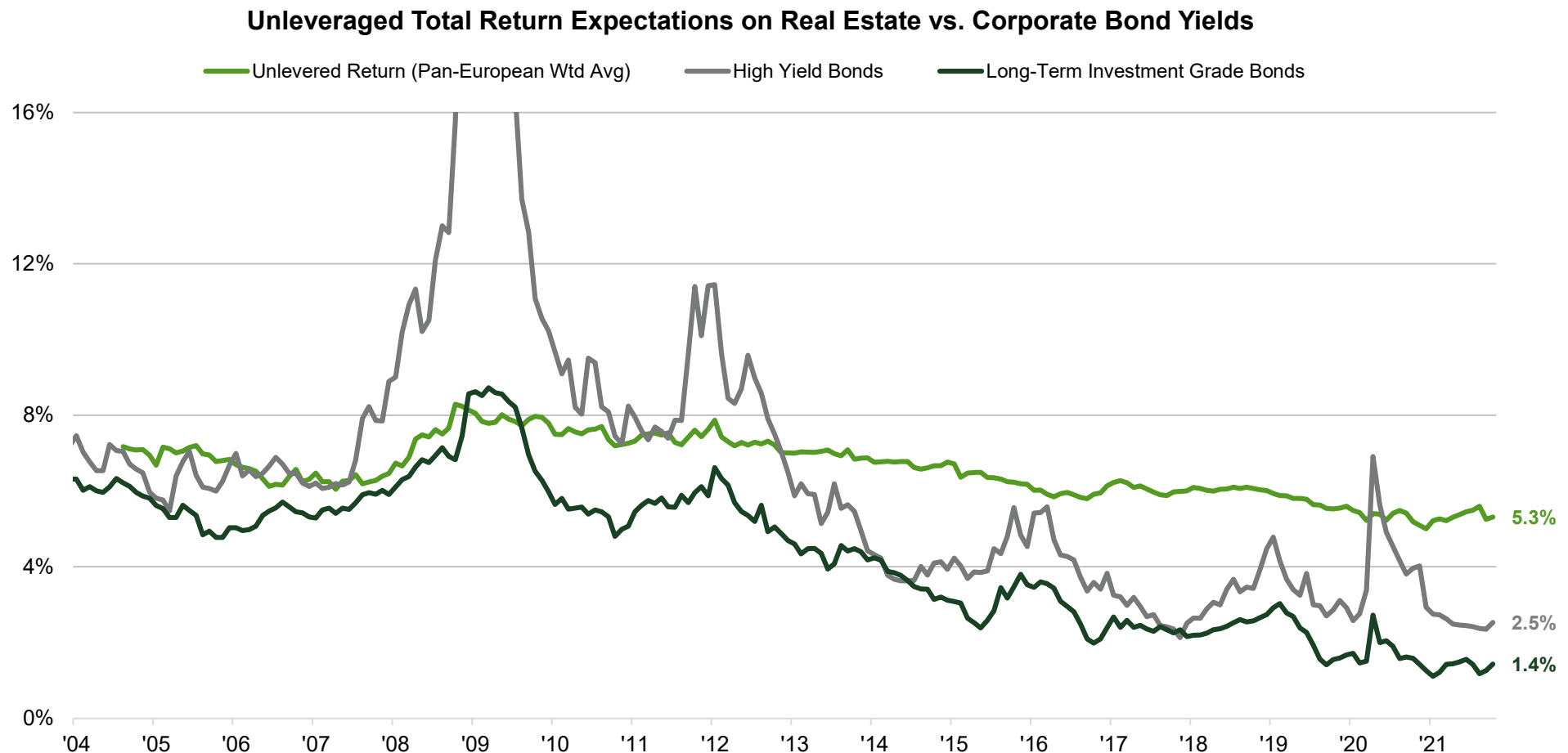
Expected inflation is the spread between 30-YR Zero Coupon Inflation-linked Swaps and 5-YR Zero Coupon Inflation-linked swaps which backs out the expectation for inflation over the next five years.

Sources: Bloomberg and Green Street.

Valuation: Expected Returns vs. Bonds

Commercial Property Outlook – October '21

Historic Perspective: Real estate is normally priced to deliver unlevered buy-and-hold returns that: 1) exceed yields on long-term, investment grade corporate bonds (by ~320 bps); and 2) approximate yields available on high-yield bonds. Bond yields have recently edged higher but remain near historic lows.



Proxy for historic return expectations = economic cap rates + expected intermediate-term growth + expected long-term growth.

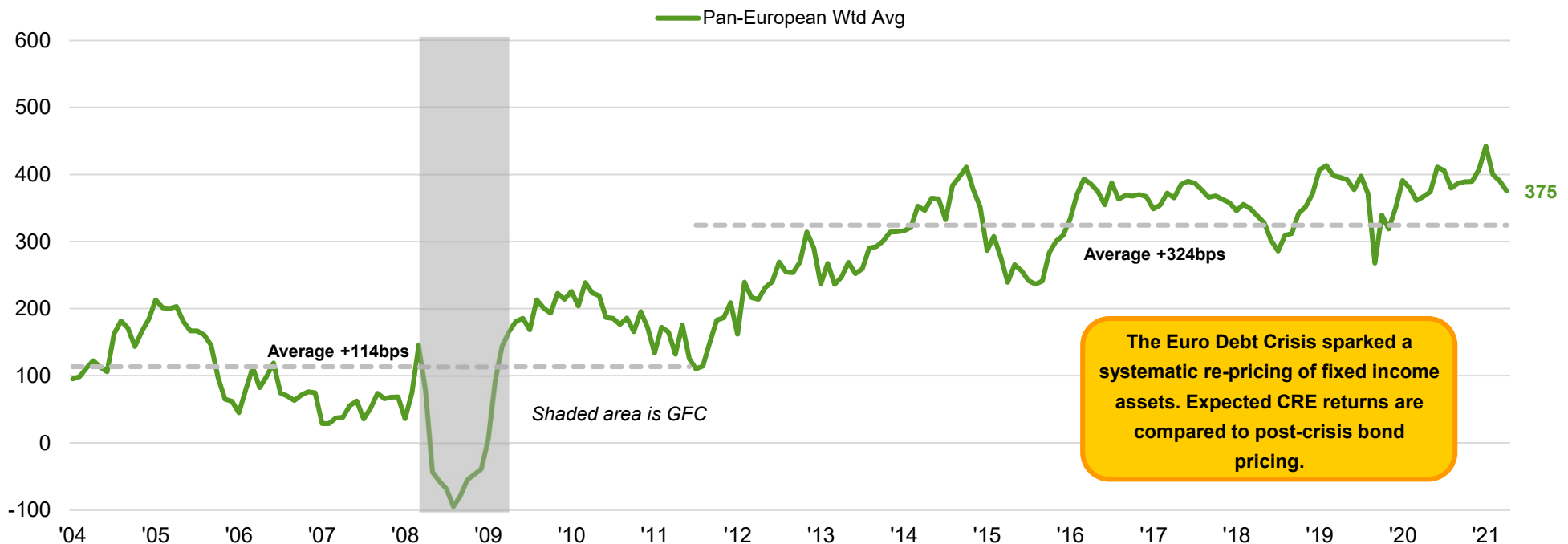
Sources: Bloomberg, BAML (High-Yield), IHS Markit (Investment Grade), and Green Street.

Valuation: Expected Returns vs. Bonds (cont'd)

Commercial Property Outlook – October '21

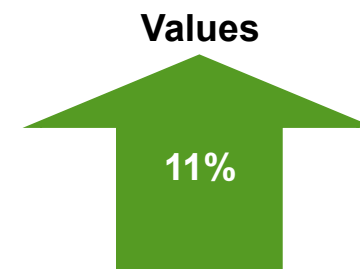
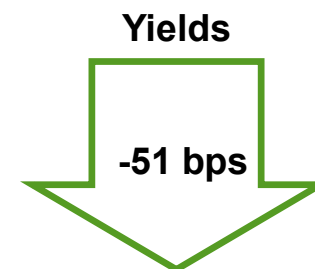
Still Cheap: Real estate has traded outside its historic norm since the ECB started the bond buying program in 2015. Relative to investment grade bonds, European commercial real estate is “cheap.”

Unleveraged Return Expectations on Private Market Real Estate Minus Yields on Investment-Grade Bonds



The Euro Debt Crisis sparked a systematic re-pricing of fixed income assets. Expected CRE returns are compared to post-crisis bond pricing.

Assuming investment-grade bond yields **stay constant**, a reversion of return premiums on real estate to long-term norms will involve a change in...



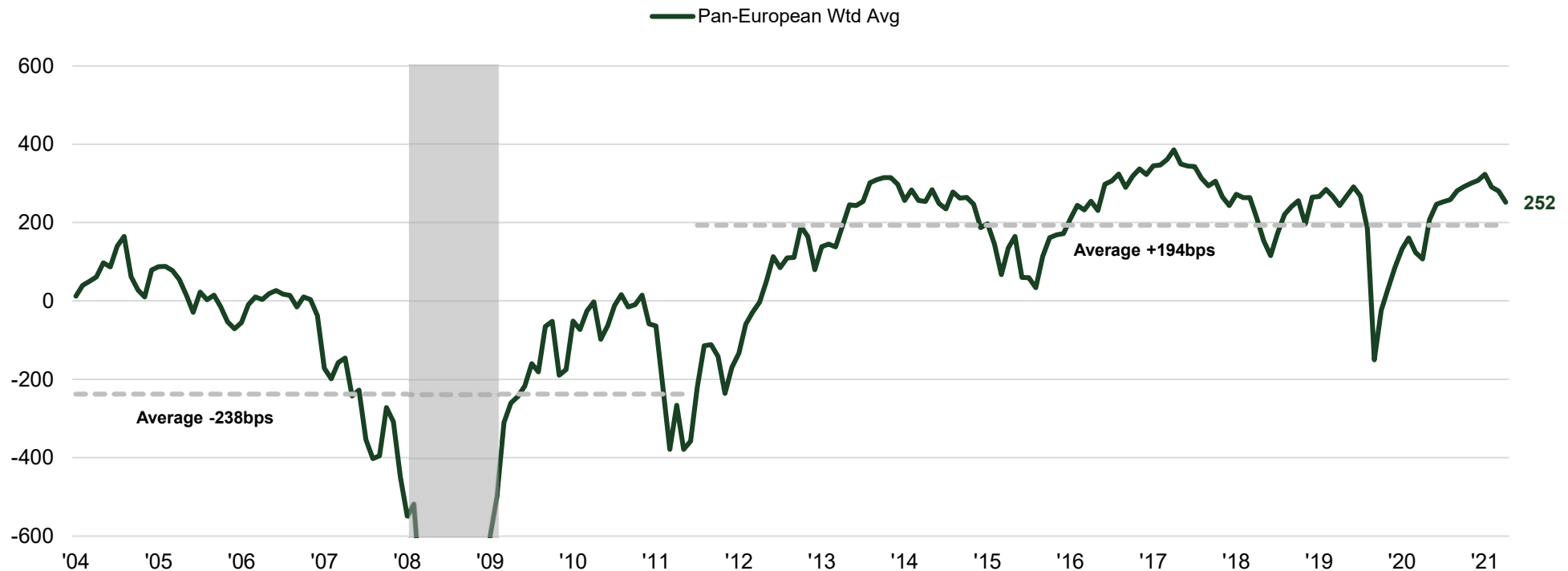
Sources: Bloomberg, IHS Markit, and Green Street.

Valuation: Expected Returns vs. Bonds (cont'd)

Commercial Property Outlook – October '21

Cheap Again: High yield bonds also signal commercial real estate is “cheap.” Wide-open debt markets make financing inexpensive and easy for lower quality sponsors.

Unleveraged Return Expectations on Private Market Real Estate Minus Yields on High Yield Bonds



Assuming pricing of high-yield bonds **stays constant**, a reversion of return premiums on real estate to long-term norms will involve a change in...

* Because the high-yield market is volatile, we use an adjustment that is smaller than the difference between today's return premium and the historic norm.

Sources: BAML, Bloomberg, and Green Street.

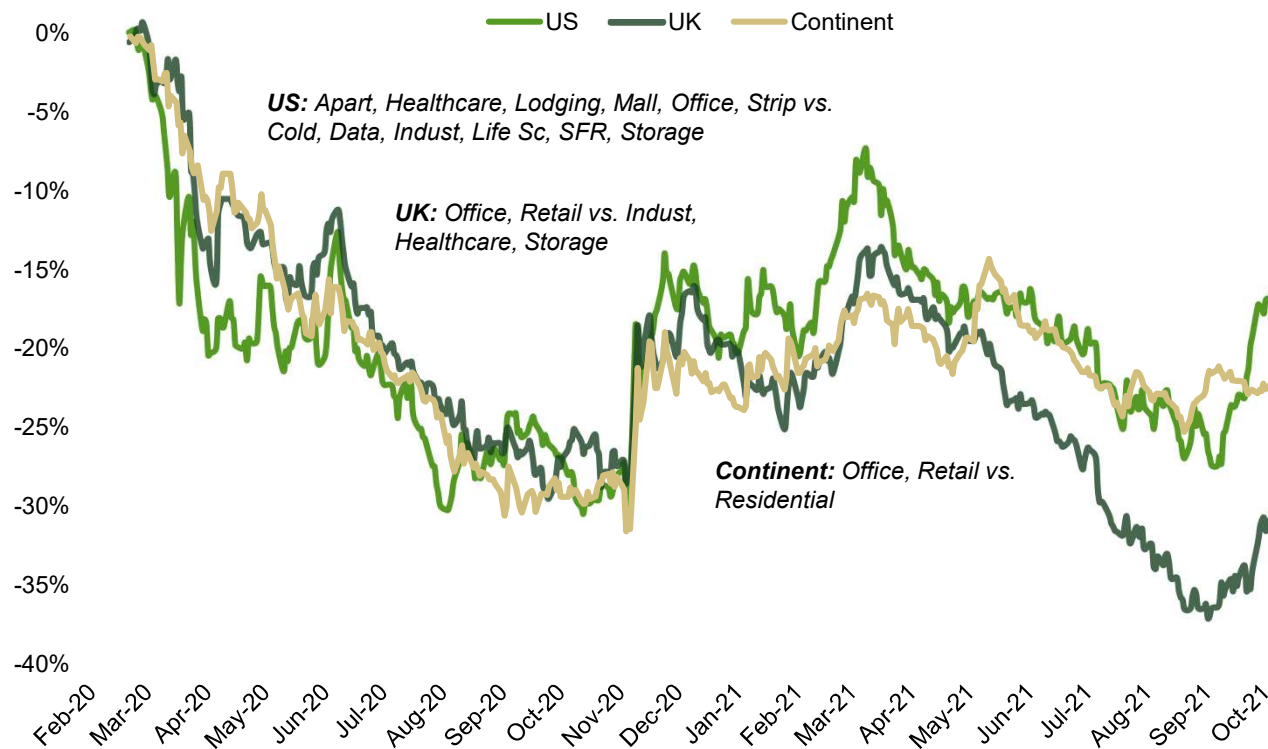


Valuation: Signals from the Public Market

Commercial Property Outlook – October '21

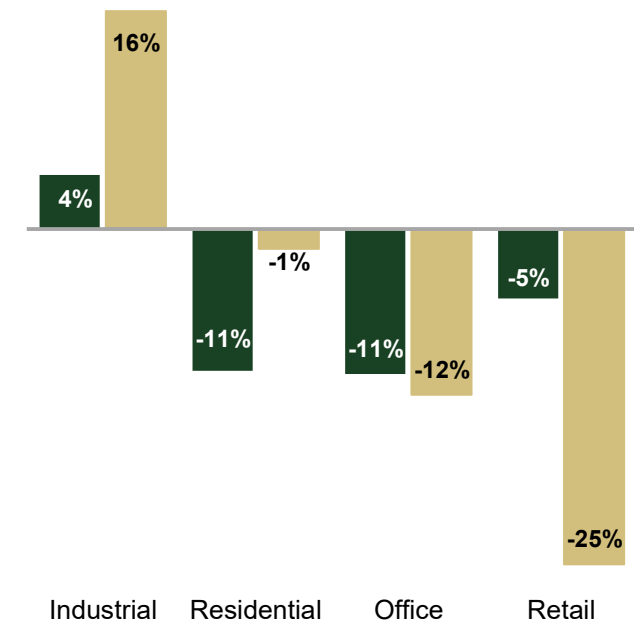
The Public Market View: Strong performance from “winning” sectors this summer slightly reinvigorated the Covid trade. Long-term trends that emanated from the pandemic (e.g., higher work from home adoption rates, increased ecommerce penetration) may still hurt values. Premiums/discounts in the public market tend to be leading indicators for future price movements in the private market and point to further outperformance of the industrial sector.

Change in EV since Pre-Covid: Losing Property Sectors vs. Winners



Current Observed Prem. / (Disc.) to Gross Asset Value

■ Green Street Spot Estimates ■ Latest Company Reported



Premium to gross asset value is a weighted average of the major public prop. co. sectors (Office, Industrial, Residential and Retail). Industrial co. reported prem./(disc.) to GAV excludes VGP and WDP given notably low BV of land banks (would be +49% including these two). Gross asset value premiums reflect how much above or below public property companies are trading relative to the private-market value of their properties. Unlike NAV premiums, they back out the effect of financial leverage.

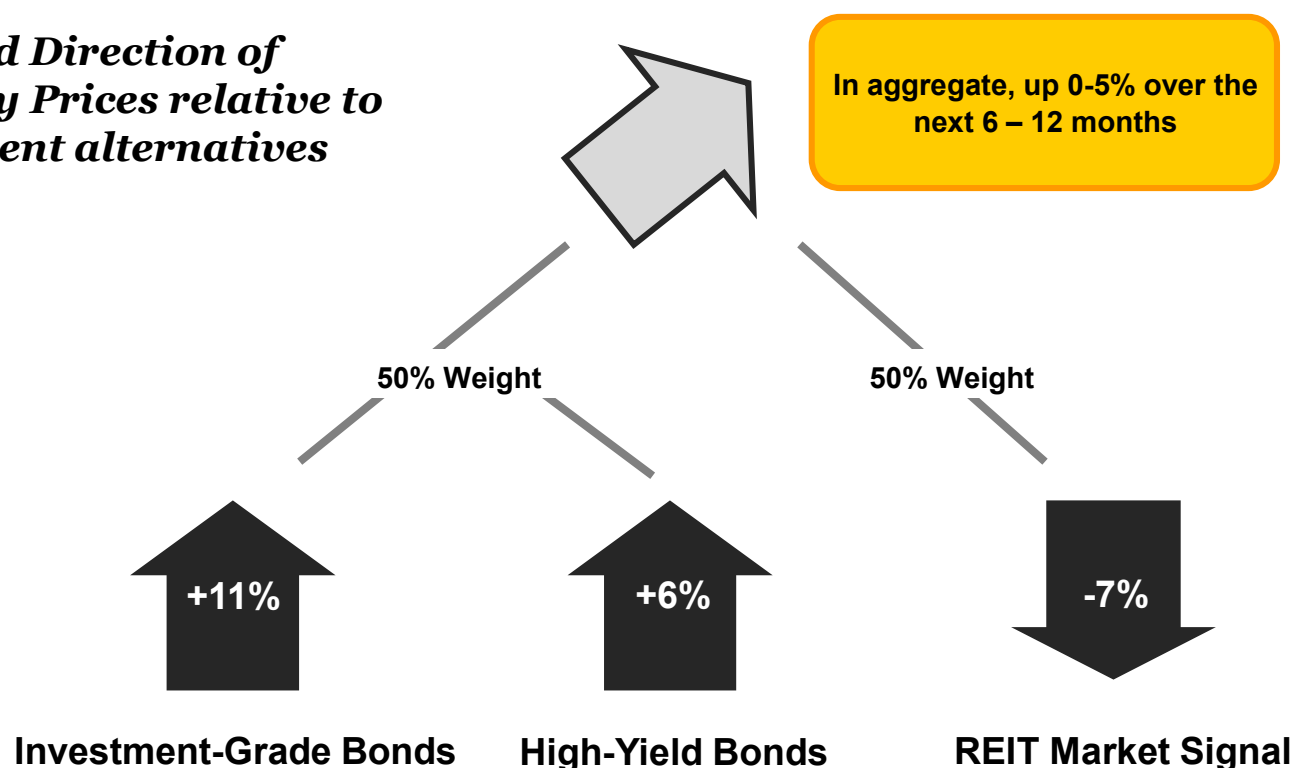
Sources: Bloomberg, Company Reports, and Green Street.

Valuation: Commercial Property Price Forecast

Commercial Property Outlook – October '21

Modest Upside: Commercial real estate screens attractively versus fixed-income securities. However, discounts to underlying asset value for public PropCos suggest commercial real estate values are too high. In aggregate, accounting for dueling signals, Pan-European commercial real estate values should increase 0-5% over the next 6 to 12 months.

*Expected Direction of
Property Prices relative to
investment alternatives*



Sources: Green Street.

Valuation: Long-Term & Five-Year Returns

Commercial Property Outlook – October '21

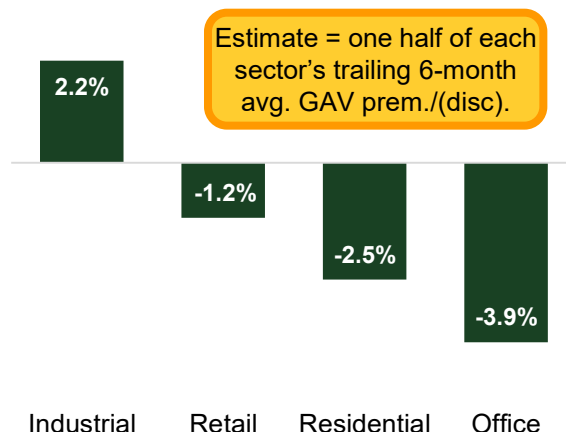
Yield + Growth = Return: Proprietary economic cap rates, in conjunction with thoughtful long-term growth estimates, provide the framework to compare property sectors relative to each other. Combining expectations of near-term pricing changes (using public market signals) with the long-term outlook based on unlevered private market returns allows an assessment of returns over a typical holding period. Industrial screens even more favorably under this framework, while office starting yields are possibly ~100 bps too sharp in the direct market versus other sectors.

Unlevered Property-Level Returns								
Property Type	Net Initial Yield	Cap-Ex Reserve*	Economic Cap Rate	Estimated Inflation	LFL NRI '21-'25	Long Term Growth	Risk Adjustment**	Risk-Adjusted Expected Return
Industrial	4.2%	11%	4.1%	1.9%	2.9%	2.0%	-0.1%	6.1%
Residential	3.2%	10%	3.1%	1.9%	2.3%	2.2%	0.3%	5.6%
Retail	6.6%	20%	5.7%	1.9%	-1.8%	0.0%	-0.1%	5.1%
Office	4.5%	18%	3.9%	1.9%	0.0%	0.9%	0.0%	4.5%

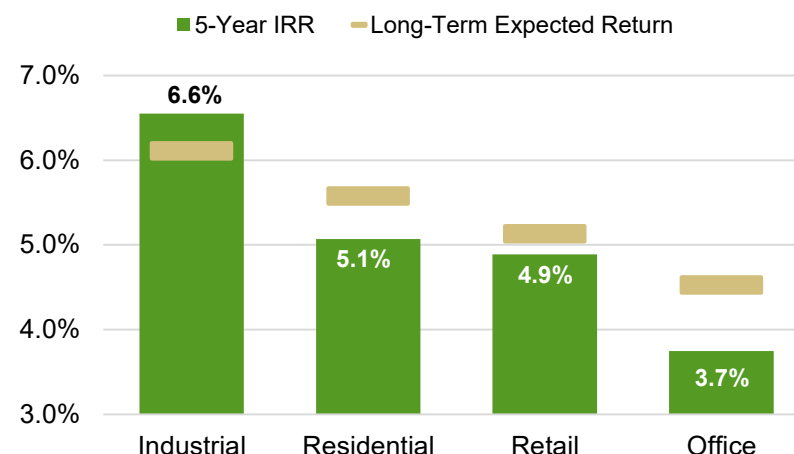
Better Than Pythia

Laying public market pricing signals (i.e., prem./disc. to gross asset value) onto Green Street's private market risk-adjusted returns allows us to derive 5-yr IRR estimates. Sectors priced at a premium (discount) to GAV signals a high likelihood that private market values are headed higher (lower). Adding these near-term value change expectations to expected returns renders industrial more attractive on a 5-yr basis, and dings the other 3 sectors.

Expected Cumulative 5-Year Appreciation



5-Year IRRs & Long-Term Expected Return



*Capex reserve is a maintenance reserve only (exclude TI's and LCs) as a percentage of net rental income.

**Industrial, residential, and retail have a -10bps risk adj to account for potential obsolescence risk from a shift to zero emissions; office's cap-ex reserve accounts for this.

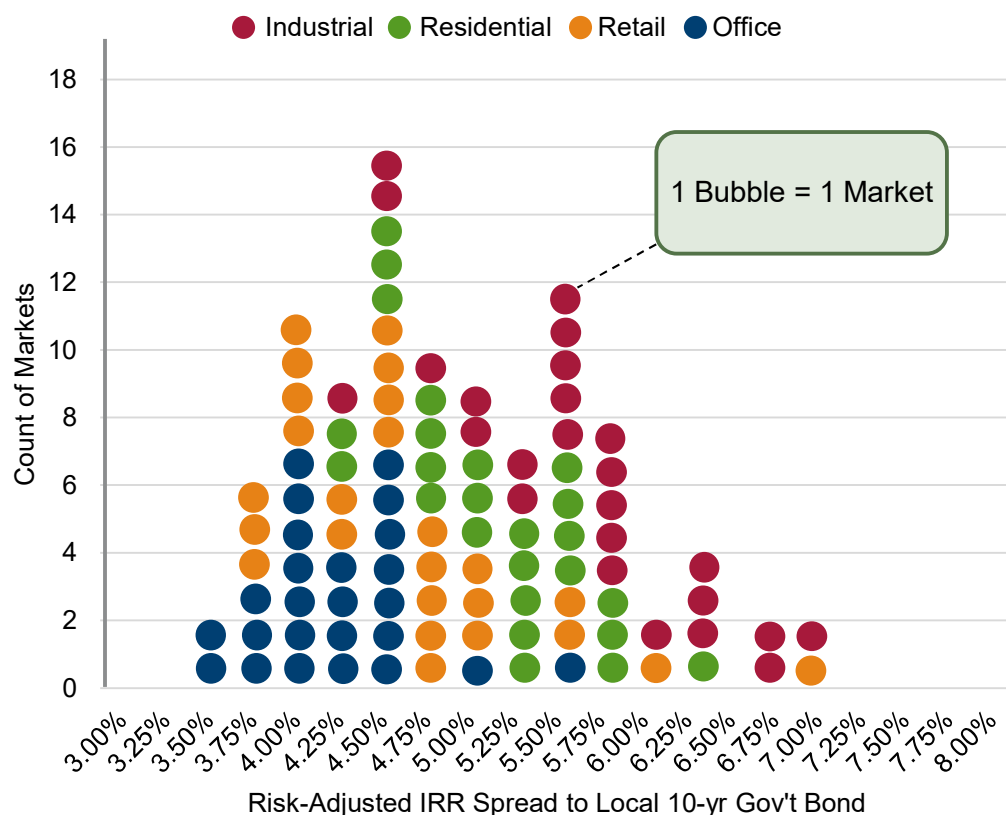
Sources: Bloomberg and Green Street.

Valuation: Picking the Right Markets

Commercial Property Outlook – October '21

Market Selection: While sector allocation generally leads to more alpha than market selection, there's also plenty of outperformance available from picking the right market within a sector. Dublin tends to be a top market, with fair initial yields, decent long-term demand drivers, and relatively low 10-year government bonds.

Market-Level IRR Distribution



Market IRR Spread to Local 10-Year Government Bond

Outperform



Copenhagen	7.1%
Dublin	6.7%
Stockholm	6.6%



Amsterdam	6.1%
Manchester	5.8%
Stockholm	5.8%



Dublin	7.1%
Munich	6.0%
Berlin	5.5%



Dublin	5.4%
Gothenburg	5.0%
Berlin	4.6%

Underperform

Madrid	4.6%
Milan	4.5%
Manchester	4.3%

Frankfurt	4.4%
Rome	4.3%
Milan	4.3%

Zurich	3.8%
Birmingham	3.8%
Gothenburg	3.7%

Frankfurt	3.7%
London	3.6%
Oslo	3.5%

Sources: Bloomberg and Green Street.

Appendix A: Market RevPAM and NOI Estimates

Commercial Property Outlook – October '21



Market RevPAM Growth

	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21E	'22E	'23E	'24E	'25E
Office	5.8%	-5.2%	-13.9%	1.7%	1.0%	-0.2%	0.6%	2.7%	4.7%	6.0%	4.1%	4.5%	5.0%	-5.8%	-7.5%	-0.5%	1.9%	2.1%	2.3%
Industrial	1.1%	-3.5%	-4.0%	-3.5%	0.1%	0.2%	1.7%	1.7%	4.6%	3.2%	4.3%	3.9%	2.8%	-1.2%	6.8%	4.2%	3.9%	3.3%	3.1%
Retail	2.2%	-0.4%	-1.5%	0.6%	-0.5%	-1.9%	-1.3%	0.5%	0.3%	0.8%	1.2%	0.5%	-0.8%	-15.3%	-7.5%	-1.0%	-0.5%	-0.7%	-0.2%
Residential	2.3%	1.4%	-0.6%	0.9%	1.1%	1.8%	2.0%	3.6%	3.7%	3.4%	3.6%	3.4%	2.9%	-3.3%	1.6%	3.2%	2.2%	2.3%	2.5%
Wtd. Avg	3.0%	-3.0%	-6.5%	-0.4%	0.2%	-0.7%	0.3%	1.7%	3.2%	3.3%	3.2%	3.0%	2.3%	-7.4%	-2.7%	0.9%	1.8%	1.6%	1.7%

LFL Economic NOI Growth

	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21E	'22E	'23E	'24E	'25E
Office	1.0%	2.7%	-0.8%	-2.1%	-0.3%	-2.3%	-4.7%	-3.6%	0.3%	1.2%	4.1%	4.8%	5.4%	2.6%	2.2%	0.2%	-0.3%	-0.7%	-1.3%
Industrial	1.1%	-0.2%	-2.7%	-3.3%	-0.2%	-1.4%	0.2%	-0.9%	0.9%	1.9%	4.8%	4.7%	3.8%	1.9%	3.5%	3.9%	4.1%	3.5%	3.8%
Retail	2.7%	2.9%	-0.1%	0.5%	1.1%	-0.1%	-1.1%	-1.4%	-1.6%	-0.7%	0.2%	1.0%	0.6%	-17.8%	6.4%	1.6%	-1.3%	-5.0%	-4.7%
Residential	2.5%	2.5%	-0.1%	0.1%	1.4%	1.5%	1.0%	1.0%	1.8%	2.6%	3.5%	3.6%	3.2%	0.0%	1.3%	3.1%	2.4%	2.3%	2.5%
Wtd. Avg	1.6%	1.8%	-1.2%	-1.6%	0.2%	-1.3%	-1.9%	-1.9%	-0.1%	0.8%	3.0%	3.5%	3.3%	-4.4%	4.0%	1.9%	0.8%	-0.7%	-0.7%

Actionable Commercial Real Estate Intelligence for Better Decision Making

Core Sector Coverage



Key Details

Average Physical Quality: Green Street's Real Estate Analytics platform operating fundamentals and valuation estimates are based on average physical quality real estate (i.e., non prime) that is investable for most real estate market participants.

Standardised Metrics: Operating fundamentals and valuation metrics for four core property sectors across 25 European markets located in 14 countries using six different currencies are standardised by Green Street for easy comparability.

Pan-European Focus: Green Street covers the same four core sectors in the same 25 markets.

Broad Market Coverage



Useful Definitions

CPPI: Time series of unleveraged Pan-European commercial property values that captures the prices at which commercial real estate transactions are being negotiated and contracted.

Economic Cap Rate: Expected unleveraged first-year yield after deducting a normalized capex reserve a property buyer expects to realize on its investment.

Net Initial Yield: Expected unleveraged spot property yield after deducting tenant incentives, property operating expenditures, and purchaser's cost.

Market-RevPAM: A measure of the health of a market (or sector) that combines two key operating metrics (effective market rents and occupancy) into a single value.

Market Risk-Adjusted IRR: The unlevered risk-adjusted return that real estate investors should expect to achieve by combining current yields, a cap-ex reserve, intermediate cash flow growth, and inflation expectations for average quality real estate.

Defining Retail: The retail sector's operating fundamentals and valuation estimates are based on average physical quality shopping centres.

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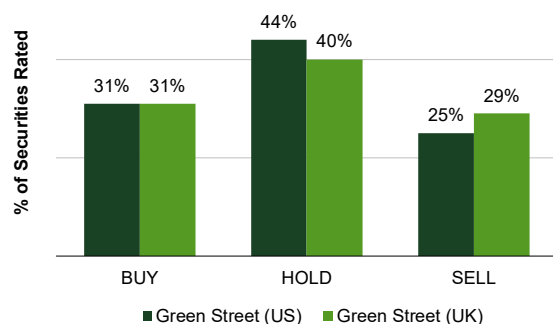
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Total Return of Green Street's Recommendations^{1,2}

Year ³	Buy	Hold	Sell	Universe
2021 YTD	22.5%	10.5%	4.0%	11.8%
2020	5.2%	-26.6%	-16.4%	-14.4%
2019	40.8%	26.1%	23.5%	29.0%
2018	1.8%	-6.9%	-20.9%	-8.5%
2017	30.9%	19.2%	11.1%	19.9%
2016	5.4%	2.1%	-2.3%	1.9%
2015	22.8%	14.4%	10.5%	16.1%
2014	35.6%	28.3%	24.1%	29.8%
2013	16.3%	7.6%	9.4%	11.2%
2012	39.8%	29.3%	17.0%	29.8%
2011	-7.6%	-8.2%	-12.7%	-9.2%
2010	13.1%	0.3%	7.9%	9.2%
2009	10.0%	5.5%	1.6%	7.0%
Cumulative Total Return	693.8%	129.8%	54.9%	218.7%
Annualized	18.8%	7.2%	3.7%	10.1%

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- (2) Beginning 5 July 2017, all companies in Green Street's European coverage universe are included in the performance calculation. Previously, inclusion in the calculation of total return had been based on whether the companies were listed in the primary exhibit of Green Street's RESM.
- (3) From 1993 until 3 July 2017, the returns for each year cover the period following the first RESM issued in the respective year through the first RESM issued in the following year and are not based on a calendar year. Subsequent to 5 July 2017, returns are based on calendar months.
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