WHERE DO U.S. PROPERTY VALUES GO FROM HERE?

SCENARIOS & IMPLICATIONS FOR CRE

AUGUST 2022

CUSHMAN & WAKEFIELD

Overview

Economic prospects have worsened, and the outlook is becoming increasingly uncertain. Numerous headwinds have emerged–rising inflation, persistent labor shortages, continued supply-chain challenges, the war in Ukraine and risks of a Fed policy mistake. The economic outlook for 2022 and 2023 have been revised down sharply and recession risks are rising fast.

To help our investor clients think through the implications of the shifting macro environment, we modeled how property values will perform under four unique economic scenarios:

- Scenario 1: Soft Landing (30%)
- Scenario 2: Upside Scenario (5%)
- Scenario 3: Mild Recession (50%)
- Scenario 4 Stagflation (5%)

For each scenario, we model and present forecasted values for the following: net operating income (NOI) capitalization rates (cap rates), as well as implications those have for futures returns and thus property values for various sectors.

Note: Scenario probabilities do not add to 100% because there are a variety of other scenarios that could unfold outside of the four presented in this report.

CONTENTS

Before we get to the forecasts, we remind you that property tends to be a long-term investment.

Hard to Beat These Returns

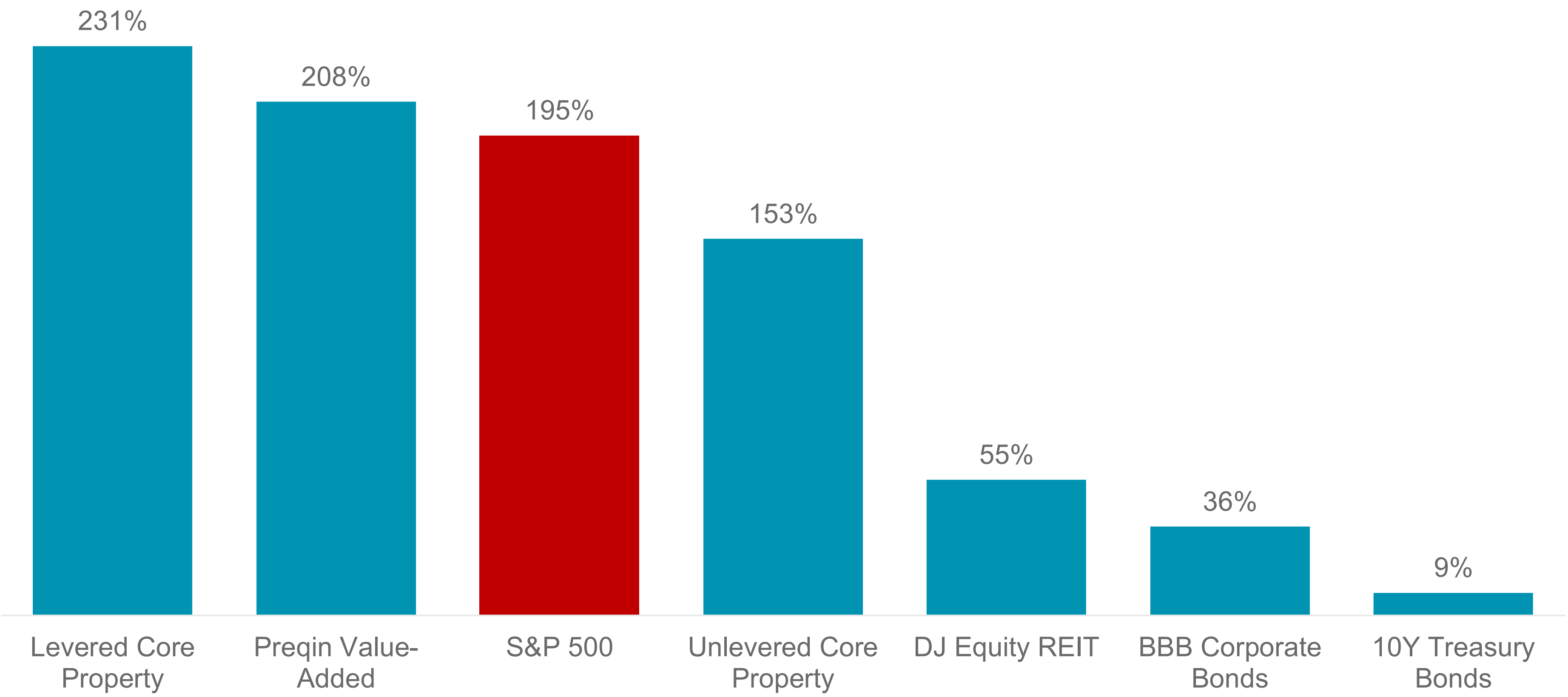
Cumulative Total Unlevered Returns* On Real Estate Investment

	3-Yr Hold (bought in 2020)	5-Yr Hold (bought in 2018)	7-Yr Hold (bought in 2016)	10-Yr Hold (bought in 2012)
Office	14%	27%	39%	81%
Multifamily	41%	53%	66%	108%
Industrial	93%	119%	144%	193%
Retail	6%	10%	24%	74%
All Property Types	**40%**	**52%**	**67%**	**112%**

Source: NCREIF, calculations by Cushman & Wakefield Research; *income + capital returns = total return

CRE Returns Outpace Alternative Investment Options

Total Returns, H1 2012 to H1 2022



Property investment has broadly outpaced both corporate and government debt investments over the last 10 years.

While property has underperformed the S&P 500 in gross terms, it has arguably outperformed given the lower volatility of property investment.

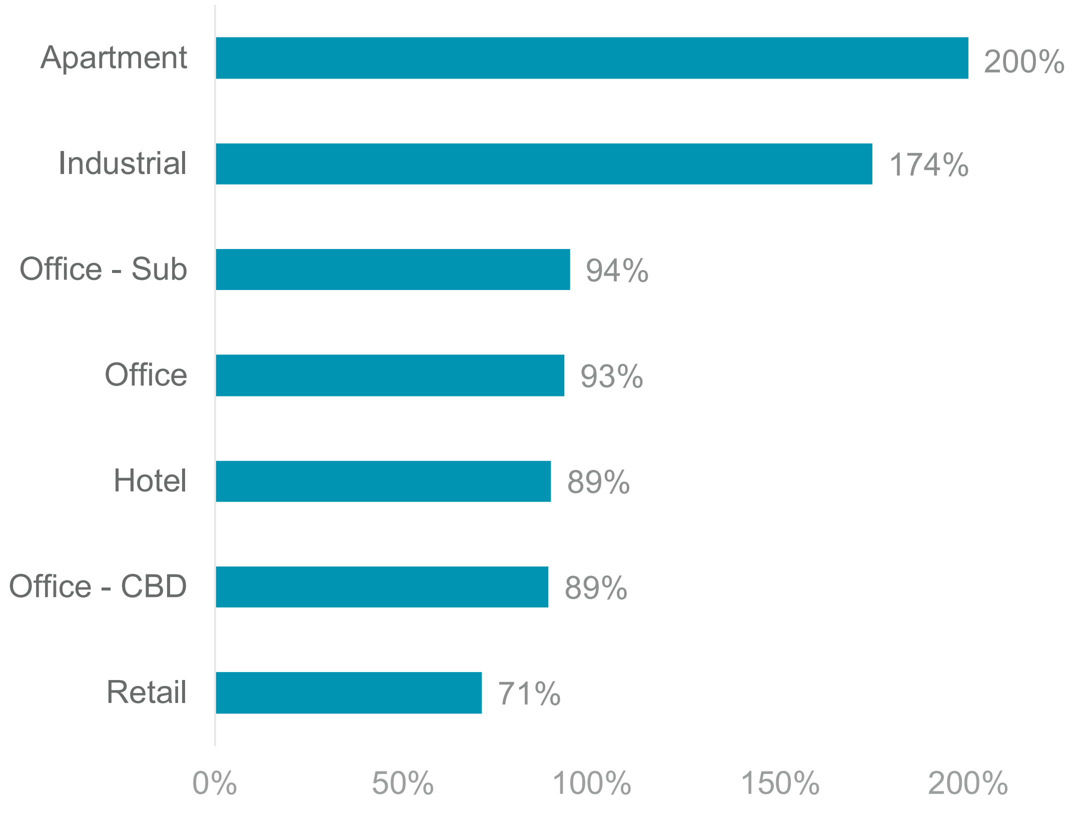
Private property investment has broadly outperformed the REIT market. Levered core property investment has modestly outperformed value-added and opportunistic strategies.

Source: NCREIF, Preqin, S&P Dow Jones Indices, BofA Merrill Lynch, FRED, Moody's Analytics, Cushman & Wakefield Research

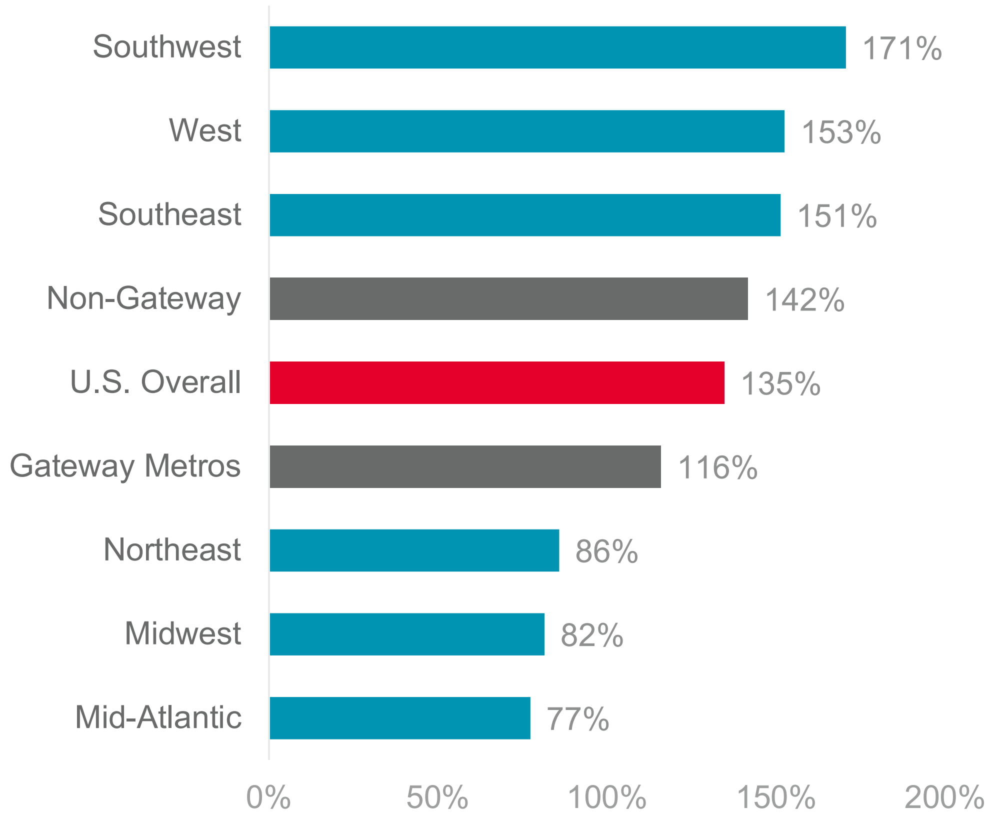
Nuances Like Sector, Geography, Quality and Risk Tolerance All Matter

Commercial Property Price Index, Q2 2012 to Q2 2022, % Change

By Sector



By Geography



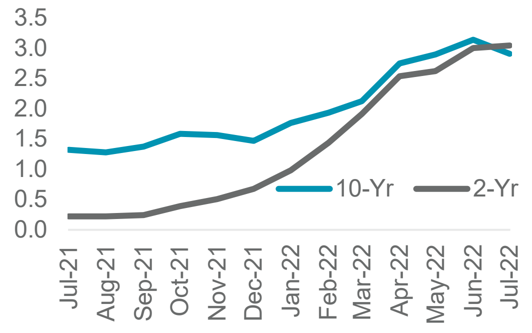
Source: Real Capital Analytics, calculations by Cushman & Wakefield Research

Now, the forecasts…

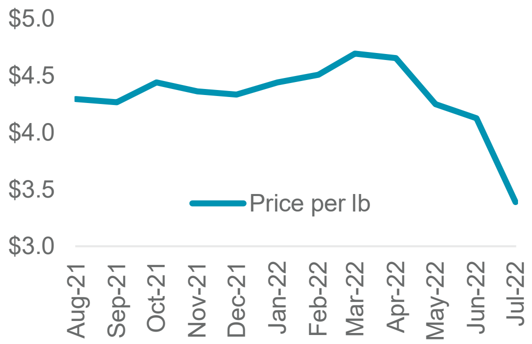
Economic Indicators Point to Weakness

United States

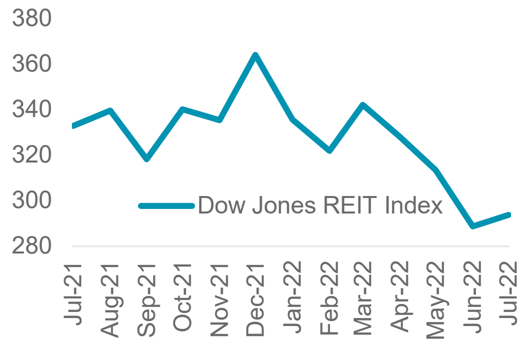
Yield Curve Inverts in July, %



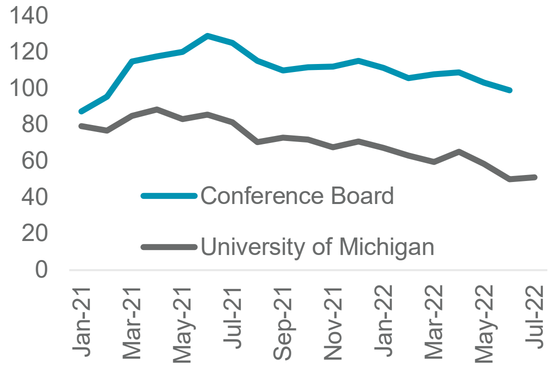
Copper Prices Falling



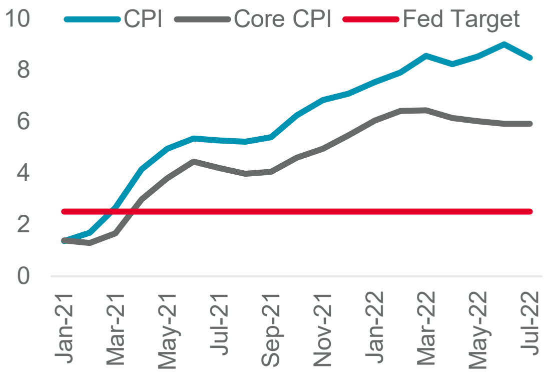
REITs Point to Price Correction



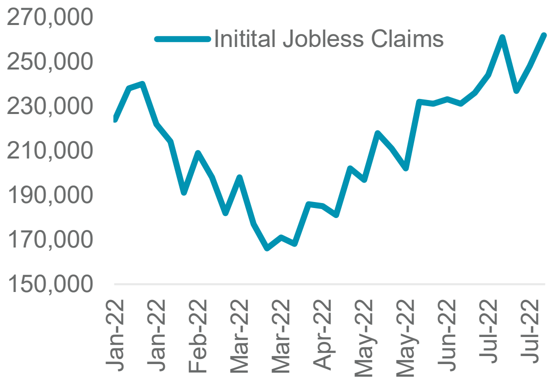
Consumers Losing Confidence



Inflation Remains a Problem, %



Labor Markets – Early Cracks?

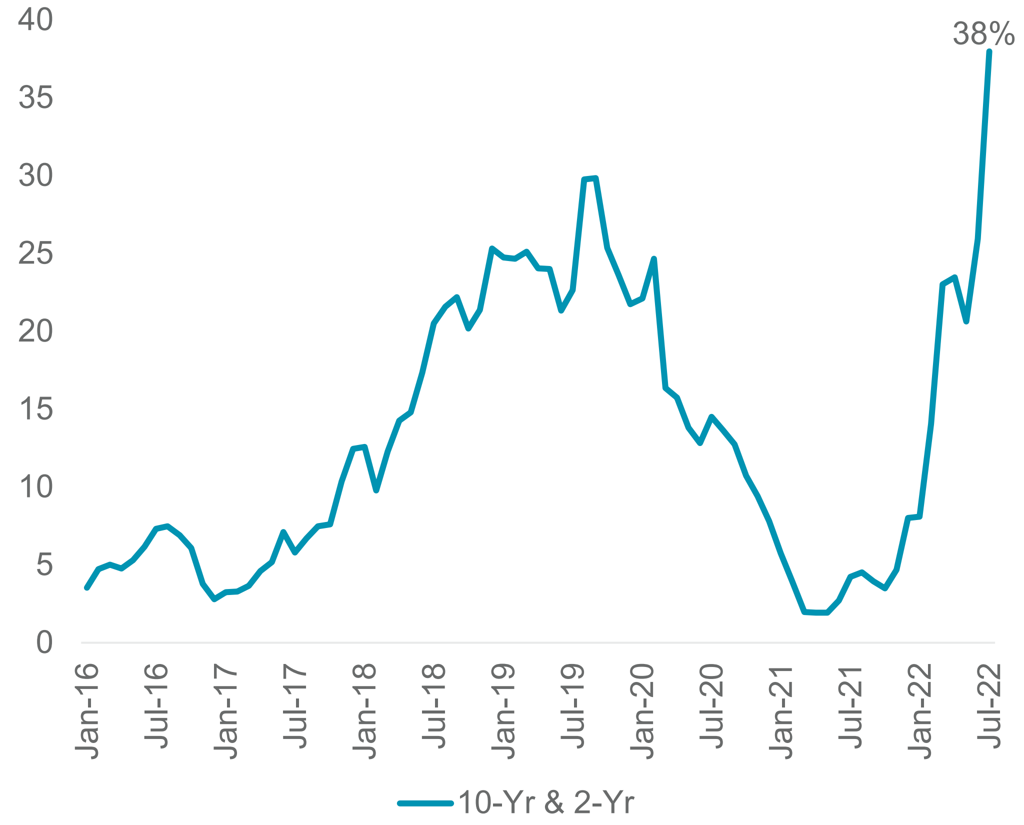


Sources: Various; update 7-31-2022

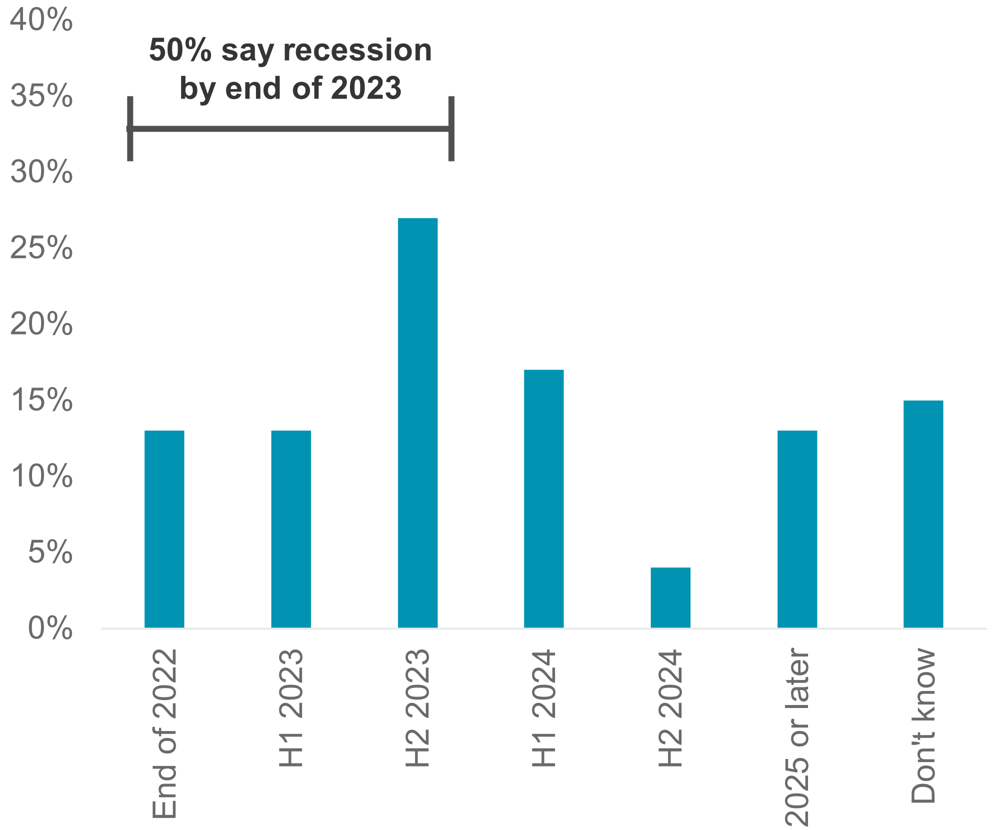
Odds of a Recession Rising Fast

United States

Implied Probability Based On Interest Rate Spreads



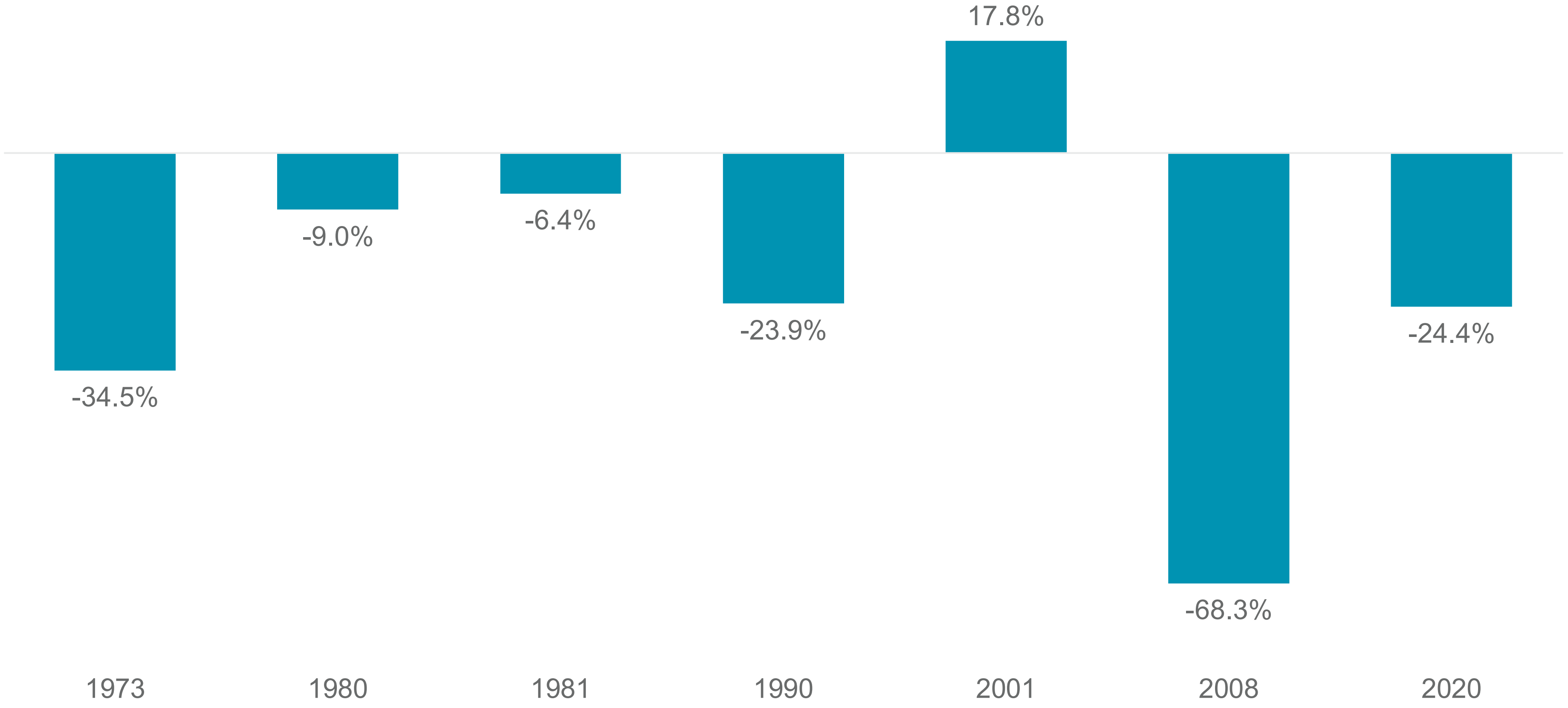
***Economist Survey: When do you estimate the next recession?**



Source: Federal Reserve, NABE Panelist of Economists Survey (May 2022)

Property Values Fall in (Almost) Every Recession

Peak-to-Trough REIT Total Return During U.S. Recessions



In the periods leading up to recessions, REITs have tended to experience variable but significant losses in value.

Private market return indices tend to show much more muted losses in value if they show any at all. This, however, is largely a result of the smoothing effect of private valuations. Public markets meanwhile can often be overreactive. The truth is somewhere in the middle but still shows that property usually loses value in recessions.

Source: NAREIT (All Equity Index), NBER, Cushman & Wakefield Research

Note: The one exception to this is the 2001 recession during which REIT values rose even as broader equity indices sold off. It is worth noting however that the REIT market was at the time recovering from a market sell-off that had begun in 1997, during which time values fell by 22.8%, and it's also worth noting that real GDP grew for the year in 2001, despite a recession happening that year.

But the outlook could still go in many different directions, so we model four economic scenarios that cover a wide range of possible outcomes.

Economic Scenarios

United States

Scenario 1: *Soft Landing (30% probability)

- Worst of economic fallout from Russian invasion is over
- Oil markets rebalance in 2023, allowing oil prices to drop
- Supply chain issues continue to resolve as pandemic fades
- Fed successfully calibrates monetary policy without causing recession
- GDP growth slows to around 2% in 2022 & 2023

Scenario 2: Upside Growth (5% probability)

- Faster resolution of the Russia-Ukraine war mitigates impact on energy markets
- Supply chain conditions ease quickly, allowing inflation to decelerate sooner than expected
- Fed raises interest rates less aggressively as inflation threat recedes. Long-term rates also remain lower.
- Strong rally in equity markets, improved business and consumer confidence
- Stronger GDP growth and lower unemployment over the next couple years

Scenario 3: Mild Recession (50% probability)

- Russian invasion lasts longer, larger loss of oil supply
- Oil prices stay elevated for several more quarters
- Higher oil prices keep pressure on inflation longer
- High inflation cuts into disposable income – impacts spending
- U.S. economy falls into recession in late 2022/early 2023
- Underlying strength of consumer/business keeps recession shallow and short

Scenario 4: Stagflation (5% probability)

- Russian invasion worsens, fear aggression may spread beyond Ukraine
- Oil prices remain above $100 barrel through end of 2023, weighing on consumer spending
- Supply chain issues also persist, boosting inflation and reducing manufacturing
- Fed does not respond aggressively enough, wage-price spiral ensues
- U.S. economy decelerates to weak growth in 2022 and 2023
- Fed hits the brakes hard in late 2023, deep recession in 2024

Source: Moody's Analytics adjusted by Cushman & Wakefield Research; *Soft landing generally remains the consensus forecast as of July 2022.

Note: Probabilities do not add to 100% because there are chances of other scenarios occurring, such a recession that is not mild, but also not consistent with stagflation.

The Scenarios

C&W Baseline

Scenario 1: *Soft Landing (30% probability)

	2021	2022	2023	2024	2025
U.S. Economy					
Real GDP	5.7	2.0	1.7	1.8	1.8
Job Growth, mils	6.2	5.4	1.3	0.9	1.0
CPI Inflation	4.7	7.8	3.8	2.2	2.1
10-year Gov't Bond	1.5	2.7	2.9	2.6	2.5
Corporate Bond (Baa)	2.4	4.2	4.7	3.9	3.8

Scenario 2: Upside Growth (5% probability)

	2021	2022	2023	2024	2025
U.S. Economy					
Real GDP	5.7	3.2	4.7	2.2	2.0
Job Growth, mils	6.2	5.2	2.7	1.6	0.3
CPI Inflation	4.7	7.2	2.5	2.0	2.3
10-year Gov't Bond	1.5	3.0	3.1	2.5	2.5
Corporate Bond (Baa)	2.4	4.5	4.8	3.6	3.5

Scenario 3: Mild Recession (50% probability)

	2021	2022	2023	2024	2025
U.S. Economy					
Real GDP	5.7	1.4	0.0	3.5	3.1
Job Growth, mils	6.2	3.4	(1.4)	0.2	1.7
CPI Inflation	4.7	7.4	3.9	2.6	2.1
10-year Gov't Bond	1.5	3.2	2.9	2.9	2.9
Corporate Bond (Baa)	2.4	5.0	5.0	4.3	4.2

Scenario 4: Stagflation (5% probability)

	2021	2022	2023	2024	2025
U.S. Economy					
Real GDP	5.7	1.6	0.7	-1.8	0.8
Job Growth, mils	6.2	4.8	(1.1)	(4.4)	(1.1)
CPI Inflation	4.7	7.7	4.7	3.3	2.1
10-year Gov't Bond	1.5	3.0	3.4	4.0	4.4
Corporate Bond (Baa)	2.4	4.5	5.2	5.3	5.7

Source: Moody's Analytics adjusted by Cushman & Wakefield Research; *Soft landing generally remains the consensus forecast as of July 2022

Note: Probabilities do not add to 100% because there are chances of other scenarios occurring, such a recession that is not mild, but also not consistent with stagflation.

We then take each economic scenario and correlate it to property values through econometric modeling.

We illustrate our approach on the next slide…

Ultimately the goal of our study was to predict the impact that each economic scenario would have on property values. The industry formula for determining the value of a property: Value = NOI/Cap Rate.

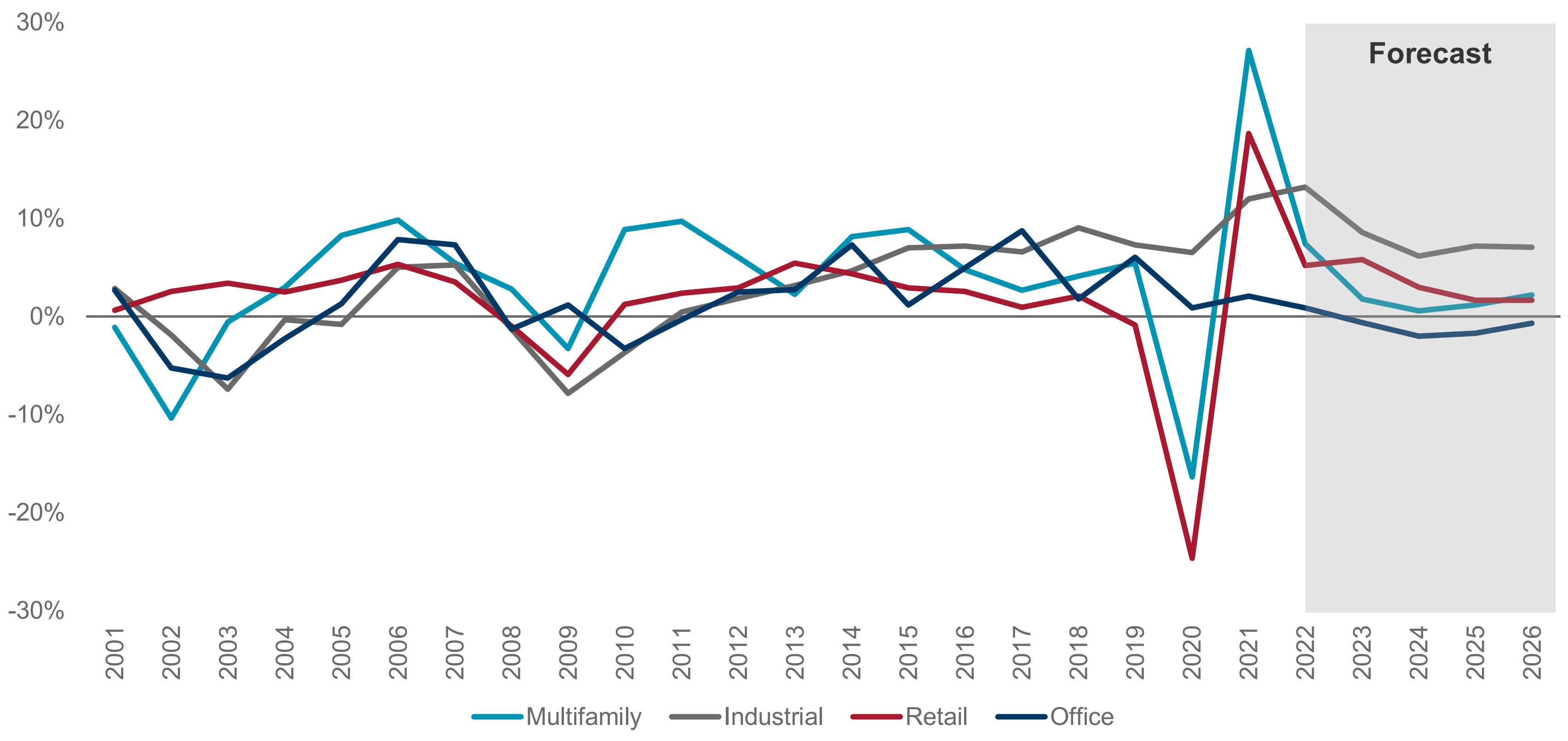
So, we need to predict NOI and cap rates to predict values.

We start with NOI…

Slowdown in NOI Growth, But Mostly Remains Positive

Mild Recession

NCREIF NOI Growth: Historical and Projected



The mild recession scenario (C&W baseline) shows that NOI decelerates across all product types but remains positive in all cases except for office.

Also, it is worth noting although NOI slows, it remains far more resilient relative to past recessions, such as 2001, 2009, and 2020.

The resilience is a function of relatively strong leasing fundamentals entering into the potential recession.

Source: NCREIF, Cushman & Wakefield Research

NOI Scenarios

NOI Growth (Year-end)

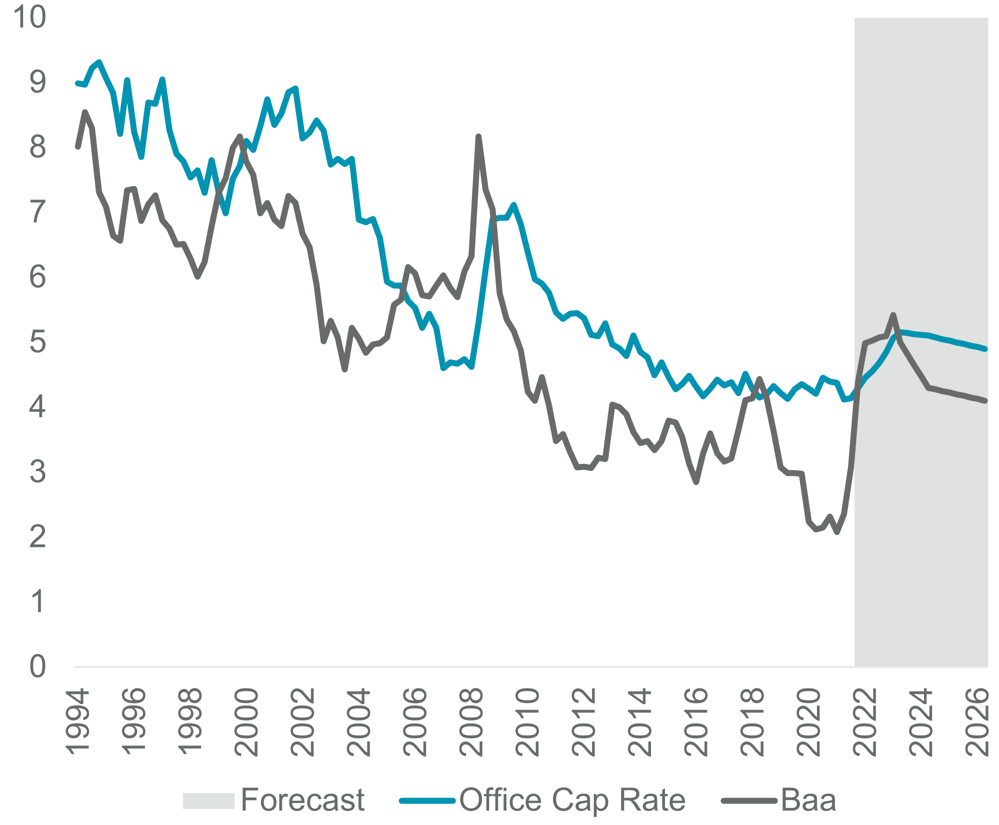
	2020	2021	2022	2023	2024	2025	2026
Office							
S1: Soft Landing	0.9%	2.1%	1.0%	0.6%	0.4%	0.8%	1.2%
S2: Upside Growth	0.9%	2.1%	1.5%	2.2%	2.5%	2.7%	2.9%
S3: Mild Recession	0.9%	2.1%	0.9%	-0.6%	-2.0%	-1.7%	-0.7%
S4: Stagflation	0.9%	2.1%	0.2%	-1.6%	-6.3%	-7.5%	-6.2%
Industrial							
S1: Soft Landing	6.5%	12.0%	13.2%	8.5%	6.4%	7.7%	7.5%
S2: Upside Growth	6.5%	12.0%	13.1%	10.1%	8.8%	9.4%	9.3%
S3: Mild Recession	6.5%	12.0%	13.2%	8.6%	6.2%	7.2%	7.1%
S4: Stagflation	6.5%	12.0%	11.2%	5.0%	3.9%	4.1%	3.3%
Multifamily							
S1: Soft Landing	-16.4%	27.1%	7.6%	2.3%	2.0%	1.7%	1.8%
S2: Upside Growth	-16.4%	27.1%	7.7%	2.3%	2.1%	2.1%	1.8%
S3: Mild Recession	-16.4%	27.1%	7.4%	1.8%	0.6%	1.2%	2.2%
S4: Stagflation	-16.4%	27.1%	7.0%	0.5%	-0.5%	-1.4%	2.1%
Retail							
S1: Soft Landing	-24.6%	18.7%	5.2%	6.2%	4.2%	2.4%	1.7%
S2: Upside Growth	-24.6%	18.7%	5.2%	7.6%	5.6%	3.3%	2.4%
S3: Mild Recession	-24.6%	18.7%	5.2%	5.8%	3.0%	1.6%	1.7%
S4: Stagflation	-24.6%	18.7%	5.2%	5.3%	2.2%	-0.5%	0.8%

Source: NCREIF, Cushman & Wakefield Research

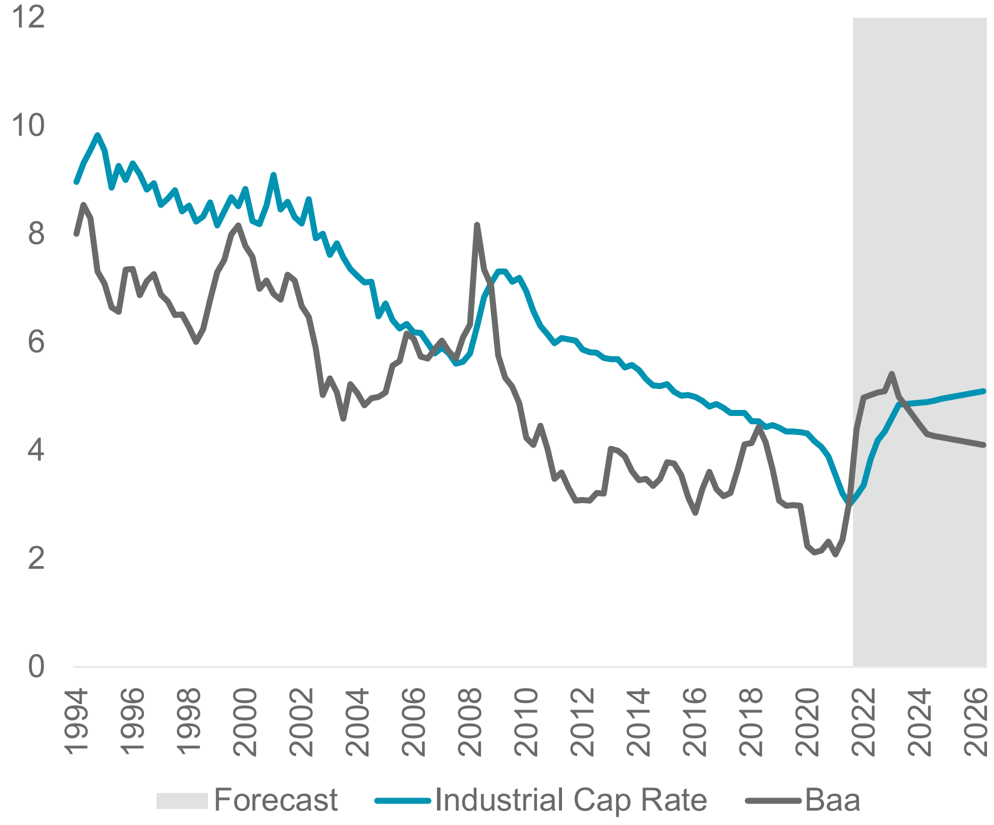
Now, cap rates…

Key Assumption: Spreads Will Normalize

Office Cap Rates vs Baa (Avg 110 bps)



Industrial Cap Rates vs Baa (Avg 150 bps)

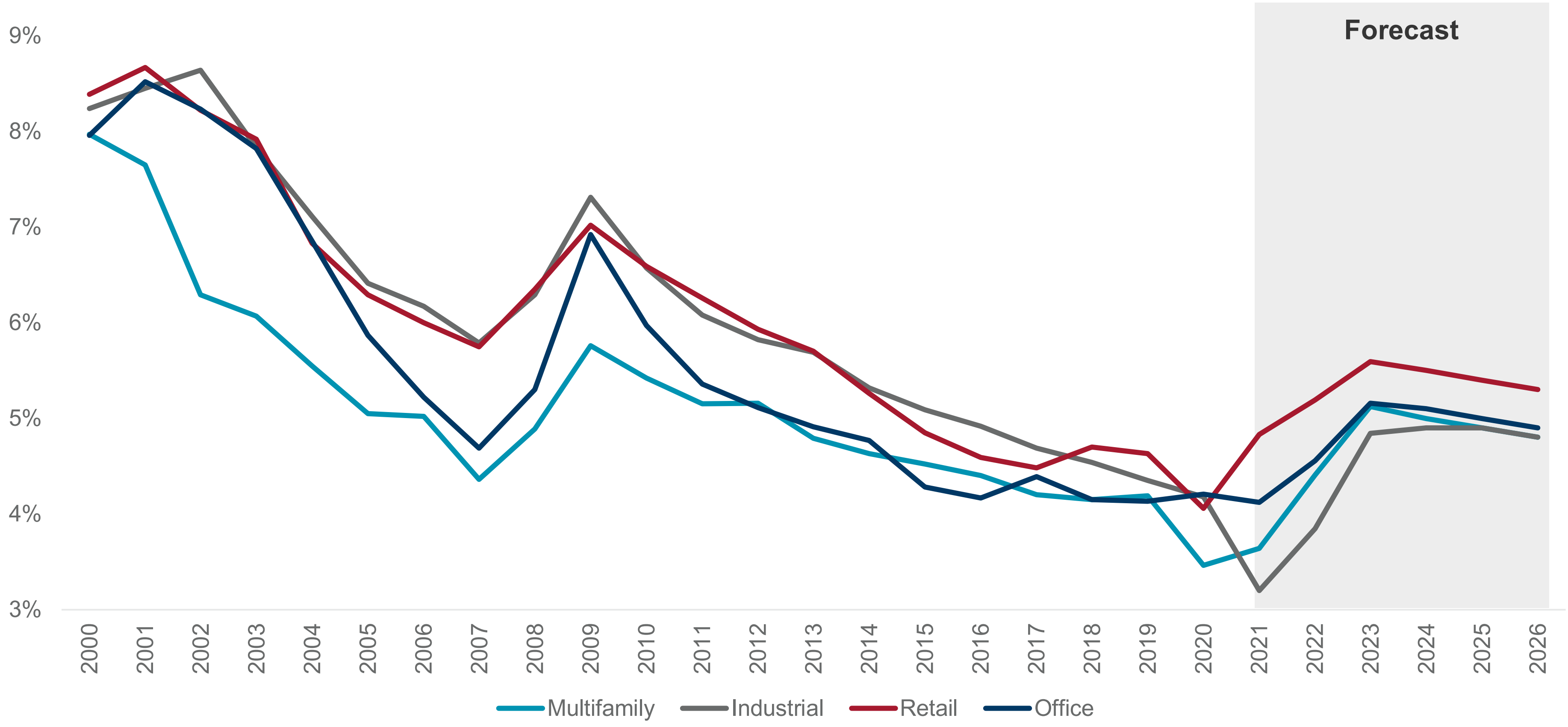


Source: NCREIF, Moody's Investor Services, Cushman & Wakefield Research

Significant Increases in Cap Rates

Mild Recession

NCREIF Cap Rates: Historical and Projected



In the mild recession scenario (C&W baseline), cap rates increase across property types in the forecast period, most acutely in the 2022-2023 period.

Cap rates are expected to trend lower in the outer years (starting in 2024) as Treasuries stabilize and risk premia decline.

Industrial and multifamily should see the largest increase in cap rates symmetric to the extreme compression they experienced in 2020-2021.

Source: NCREIF, Cushman & Wakefield Research

Cap Rate Scenarios

Cap Rate (Year-end)

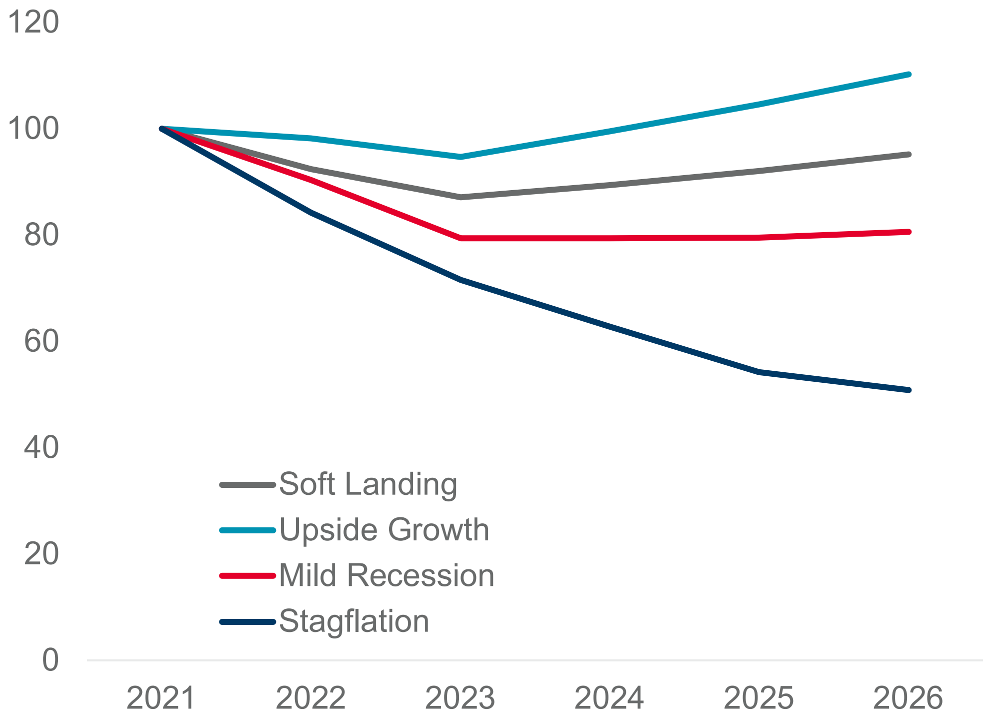
	2020	2021	2022	2023	2024	2025	2026
Office							
S1: Soft Landing	4.2%	4.1%	4.5%	4.8%	4.7%	4.6%	4.5%
S2: Upside Growth	4.2%	4.1%	4.3%	4.5%	4.4%	4.3%	4.2%
S3: Mild Recession	4.2%	4.1%	4.6%	5.2%	5.1%	5.0%	4.9%
S4: Stagflation	4.2%	4.1%	4.9%	5.7%	6.1%	6.5%	6.5%
Industrial							
S1: Soft Landing	4.2%	3.2%	3.8%	4.7%	4.7%	4.6%	4.6%
S2: Upside Growth	4.2%	3.2%	3.5%	4.2%	4.2%	4.1%	4.1%
S3: Mild Recession	4.2%	3.2%	3.8%	4.8%	4.9%	4.9%	4.8%
S4: Stagflation	4.2%	3.2%	4.0%	5.5%	6.2%	6.4%	6.7%
Multifamily							
S1: Soft Landing	3.5%	3.6%	4.4%	4.7%	4.7%	4.6%	4.5%
S2: Upside Growth	3.5%	3.6%	4.0%	4.3%	4.2%	4.1%	4.0%
S3: Mild Recession	3.5%	3.6%	4.4%	5.1%	5.0%	4.9%	4.8%
S4: Stagflation	3.5%	3.6%	4.4%	5.2%	5.7%	6.0%	6.1%
Retail							
S1: Soft Landing	4.1%	4.8%	4.9%	5.2%	5.1%	5.0%	4.9%
S2: Upside Growth	4.1%	4.8%	4.9%	5.0%	4.9%	4.9%	4.7%
S3: Mild Recession	4.1%	4.8%	5.2%	5.6%	5.5%	5.4%	5.3%
S4: Stagflation	4.1%	4.8%	5.6%	6.4%	7.3%	7.6%	7.7%

Source: NCREIF, Cushman & Wakefield Research

Now that we have NOI and cap rate forecasts, we put it together to estimate the implied impact on property values…

U.S. Office Sector

Property Value Index*



Year-over-Year Percentage Change

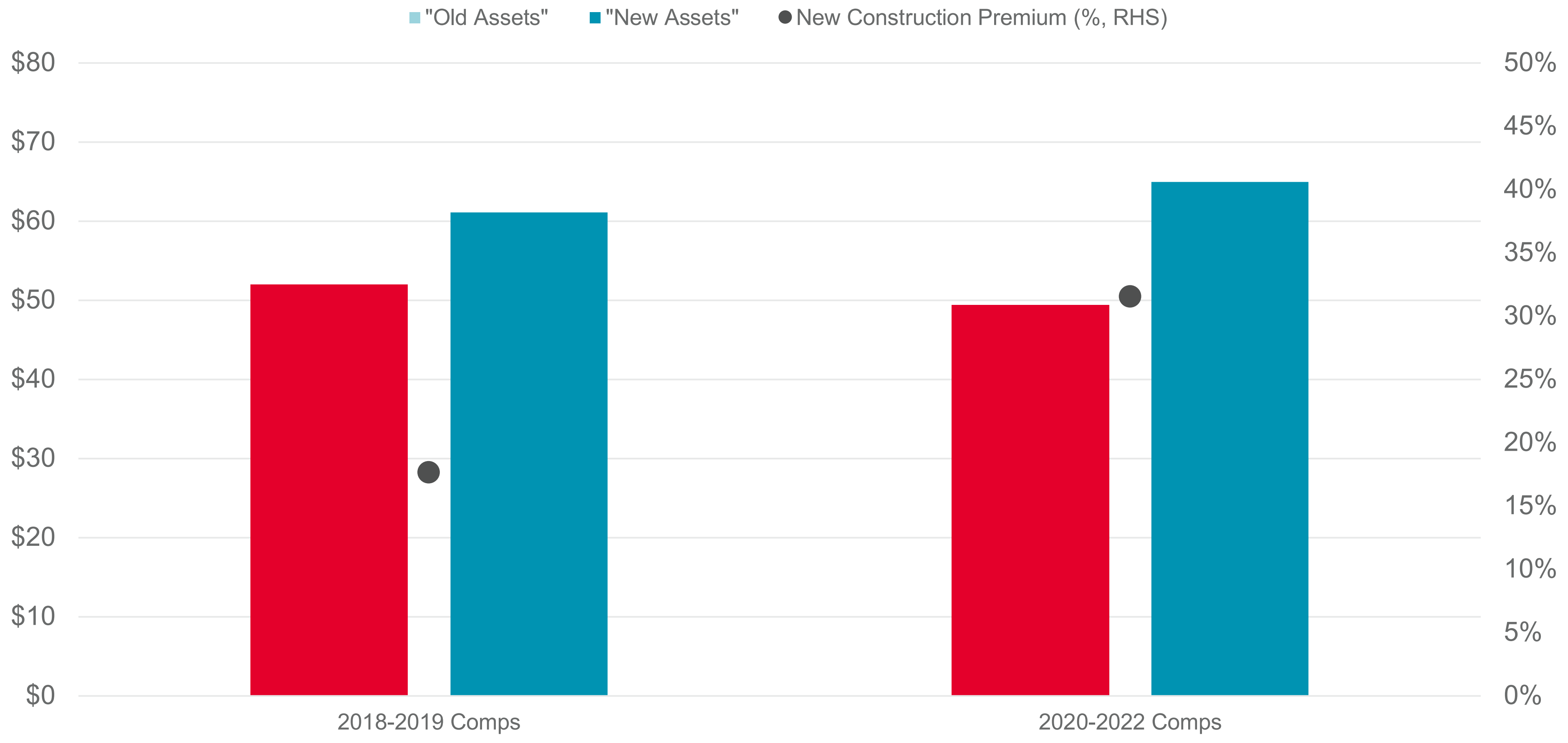
	S1: Soft Landing	S2: Upside Growth	S3: Mild Recession	S4: Stagflation
2022	-7.5%	-1.8%	-9.6%	-15.7%
2023	-5.7%	-3.5%	-12.1%	-15.0%
2024	2.6%	5.1%	-0.1%	-12.3%
2025	3.0%	5.1%	0.3%	-13.6%
2026	3.5%	5.3%	1.3%	-6.2%

Source: Cushman & Wakefield Research

Note: *Price index = 100 in year 2021 and imputed based on total returns.

Office Will Increasingly Bifurcate

Class A Direct New Leases with 7+ Years of Term



Source: Cushman & Wakefield Research

Note: Rent data are gross base rents.

[The pandemic accelerated the flight to quality trend that was already well-underway]().

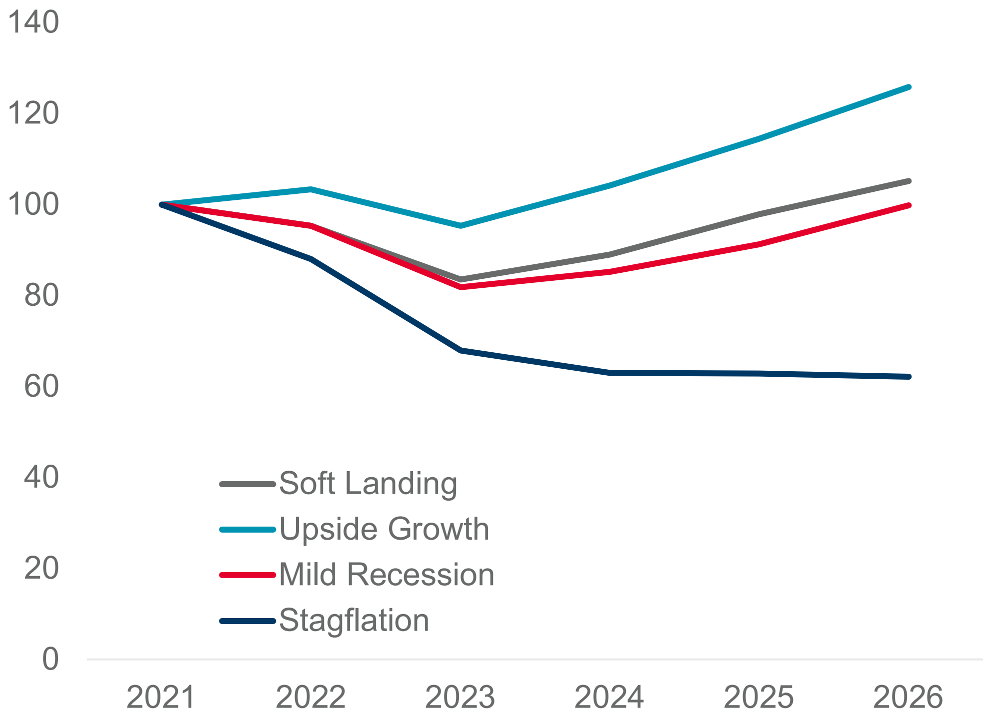
New leasing is concentrated in the newest, highest quality Class A assets and rent premiums for this space have widened from pre-COVID levels.

Newer Class A assets are fetching rent premiums that exceed 30% from other Class A counterparts—a widening from the pre-pandemic premium of just under 20%.

Conversely, weakness in office is concentrated: nationally, 15% of buildings contain 80% of the nation’s vacancy.

U.S. Industrial Sector

Property Value Index*



Year-over-Year Percentage Change

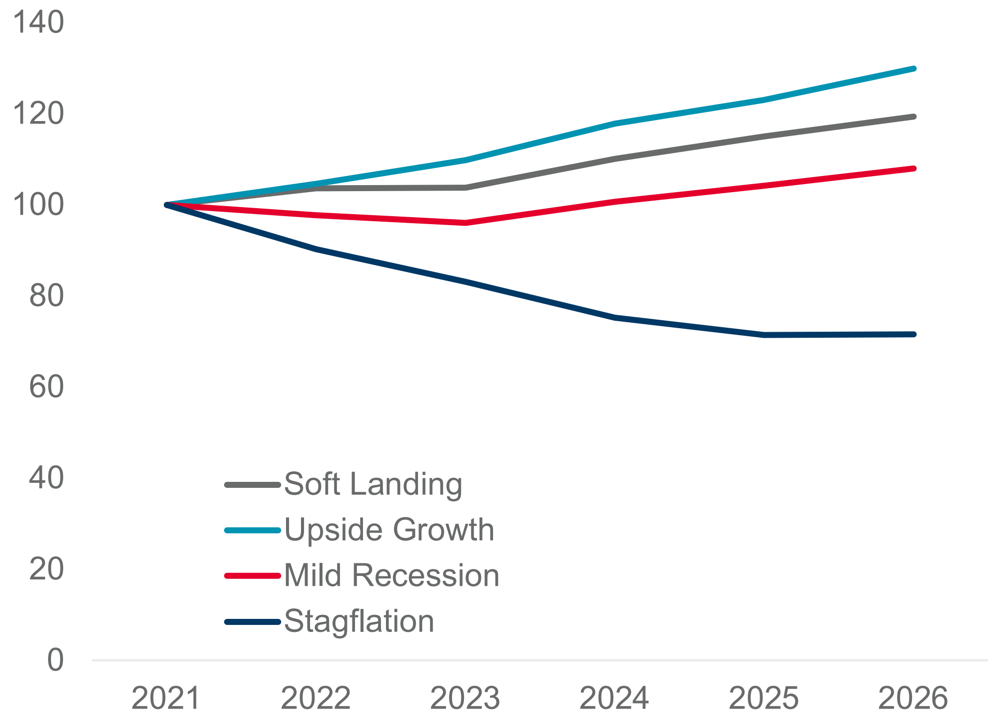
	S1: Soft Landing	S2: Upside Growth	S3: Mild Recession	S4: Stagflation
2022	-4.7%	3.4%	-4.7%	-11.9%
2023	-12.3%	-7.8%	-14.1%	-22.9%
2024	6.4%	9.3%	4.0%	-7.2%
2025	10.0%	9.9%	7.2%	-0.3%
2026	7.5%	9.8%	9.3%	-1.0%

Source: Cushman & Wakefield Research

Note: *Price index = 100 in year 2021 and imputed based on total returns.

U.S. Retail Sector

Property Value Index*



Year-over-Year Percentage Change

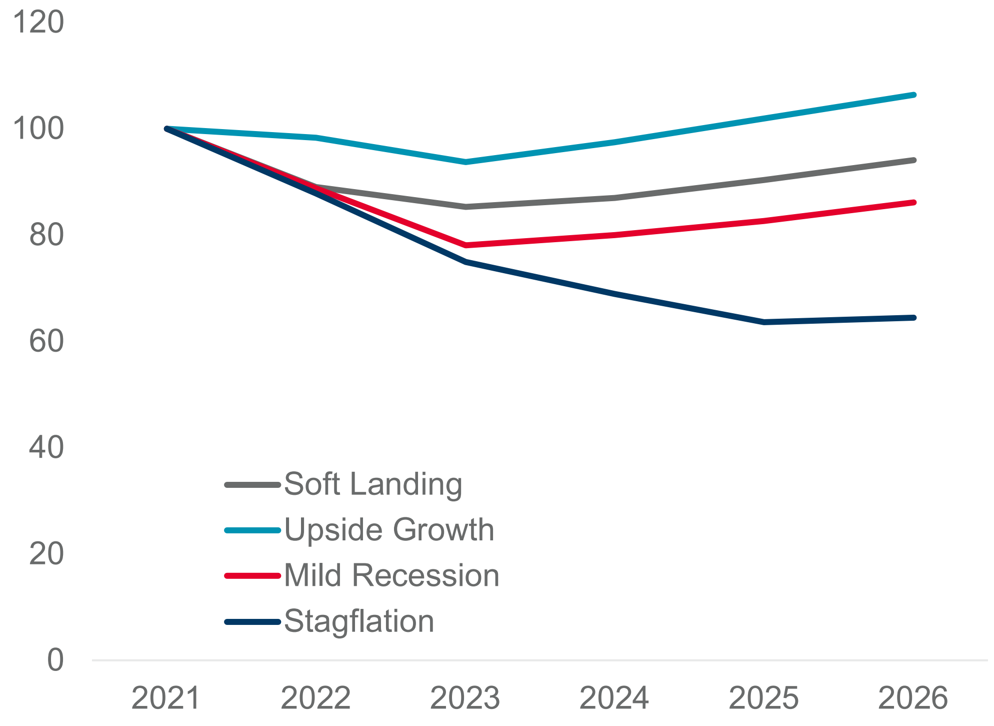
	S1: Soft Landing	S2: Upside Growth	S3: Mild Recession	S4: Stagflation
2022	3.7%	4.5%	-2.3%	-9.8%
2023	0.0%	5.0%	-1.8%	-8.0%
2024	6.2%	7.3%	4.9%	-9.3%
2025	4.4%	4.4%	3.5%	-5.1%
2026	3.8%	5.7%	3.6%	0.1%

Source: Cushman & Wakefield Research

Note: *Price index = 100 in year 2021 and imputed based on total returns.

U.S. Multifamily Sector

Property Value Index*



Year-over-Year Percentage Change

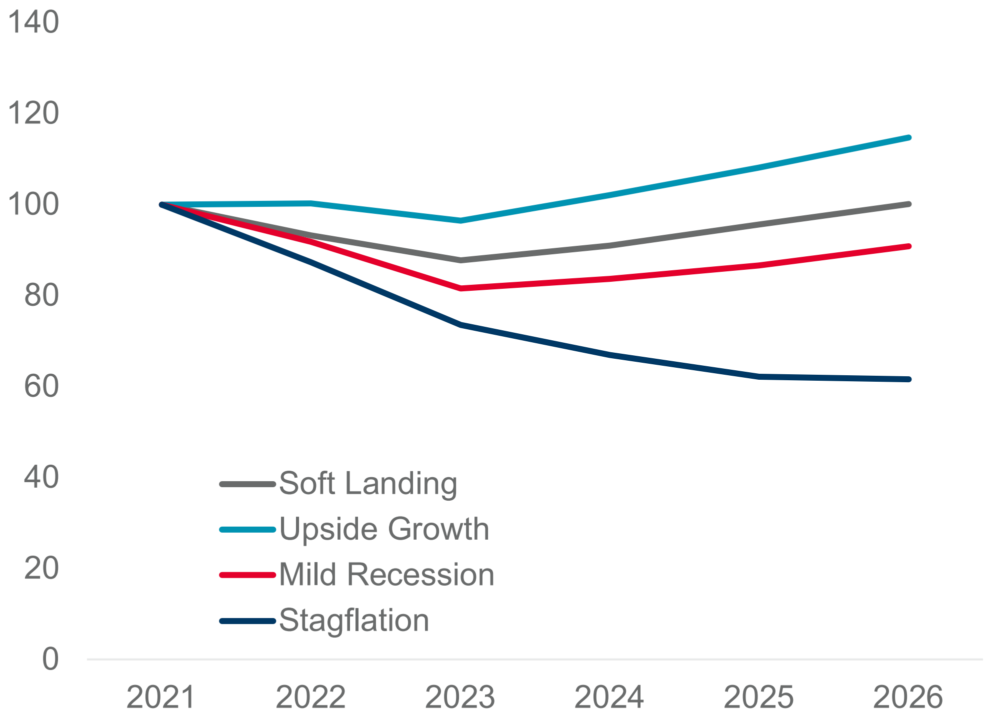
	S1: Soft Landing	S2: Upside Growth	S3: Mild Recession	S4: Stagflation
2022	-11.0%	-1.7%	-11.1%	-12.1%
2023	-4.2%	-4.6%	-12.2%	-14.7%
2024	2.0%	4.0%	2.6%	-8.1%
2025	3.9%	4.6%	3.2%	-7.8%
2026	4.1%	4.3%	4.3%	1.4%

Source: Cushman & Wakefield Research

Note: *Price index = 100 in year 2021 and imputed based on total returns.

U.S. All Property Types*

Property Value Index**



Year-over-Year Percentage Change

	S1: Soft Landing	S2: Upside Growth	S3: Mild Recession	S4: Stagflation
2022	-6.8%	0.2%	-8.2%	-12.6%
2023	-5.9%	-3.8%	-11.2%	-15.8%
2024	3.7%	6.0%	2.6%	-9.1%
2025	5.2%	5.9%	3.5%	-7.1%
2026	4.7%	6.1%	4.8%	-0.9%

Source: Cushman & Wakefield Research

Note: **Price index = 100 in year 2021 and imputed based on total returns; *Weighted average, includes office, industrial, retail, and multifamily

Investment Ideas & Opportunities

Investment Ideas for 2022/23

Idea	Soft Landing	Upside Growth	Mild Recession	Stagflation	Comment
High-quality office	Somewhat attractive investment	Very attractive investment	Somewhat attractive investment	Strongly consider reducing your position	Trading at a discount but with tight supply for the best and favorable demand as return-to-work gathers pace. However, scenarios that undermine demand and corporate buying power will blunt near-term performance.
Low-quality office	Strongly consider reducing your position	Caution	Consider reducing your position	Strongly consider reducing your position	Quadruple whammy of higher standards demanded by ESG and remote work as well as cost of living and rising interest rates. Distress however may bring opportunities to sell/repurpose/reimagine.
The right retail	Very attractive investment	Very attractive investment	Somewhat attractive investment	Caution	With supply and interest rate risks lower than other sectors, food-centric/grocery-anchored retail, followed by necessity retail and then experiential in top consumer locations could outperform. Key aspects include F&B, health & fitness, and medical retail.
E-commerce/ logistics	Caution	Very attractive investment	Caution	Consider reducing your position	Demand is well underpinned, but the sector is the most exposed to the rising cost of capital, meaning investors may want to monetize some low yielding core assets and keep their capital dry awaiting recap opportunities as debt maturities increase.
Multifamily	Somewhat attractive investment	Very attractive investment	Somewhat attractive investment	Somewhat attractive investment	The sector is sensitive to interest rates, but the U.S. is still underbuilding homes relative to population growth. Many years of strong fundamentals still lie ahead with rental accommodation particularly attractive for defensive reasons.

Very attractive investment · Somewhat attractive investment · Caution · Consider reducing your position · Strongly consider reducing your position

Key Takeaways

- Economic indicators point to weakness, a recession is looking more likely than not.
- Property values almost always decline during recessions, this one won't be different.
- In our baseline scenario (mild recession), we estimate property values will decline by ~20% over the next two years, ranging from 4% to 23% depending product type.
- However, real estate is a long-term investment. Most will reap healthy cumulative returns even if we go into recession.
- All real estate is intensely local. Not every product type/geography will follow the national glide path; many assets will outperform.
- Market volatility creates opportunity. Now is precisely the time to revisit real estate portfolio strategies to diversify and maximize returns.

ABOUT CUSHMAN & WAKEFIELD

Cushman & Wakefield (NYSE: CWK) is a leading global real estate services firm that delivers exceptional value for real estate occupiers and owners. Cushman & Wakefield is among the largest real estate services firms with approximately 50,000 employees in over 400 offices and approximately 60 countries. In 2021, the firm had revenue of $9.4 billion across core services of property, facilities and project management, leasing, capital markets, and valuation and other services. To learn more, visit www.cushmanwakefield.com or follow @CushWake on Twitter.

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