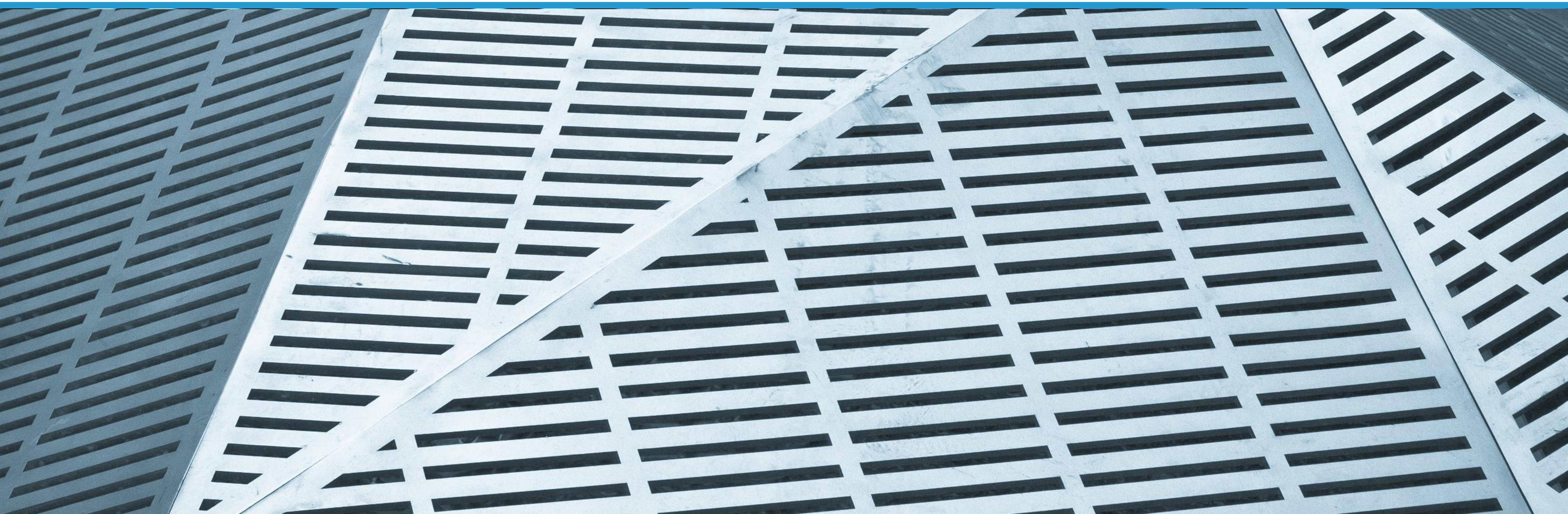
3Q22

The National Industrial Market: Conditions & Trends



Market Observations

1. Economic Landscape Dominated by Uncertainty

– Tightening financial conditions and persistently high inflation have impacted consumer purchasing power and confidence.

– Forecasts for future economic growth have been successively revised downward as the year progresses, and consensus indicates a recession is likely unavoidable.

– The Federal Reserve's systematic interest rate increases are cooling parts of the economy, but labor markets remain tighter than anticipated.

2. Indicators Signal Industrial Demand Will Surprise to the Upside in the Short-Term

– Warehouses are still at max capacity as inventories have ballooned. Imports remain historically high, and supply chain woes have not fully evaporated. Many firms will need space to store the volume of goods still working their way through the system.

– Inflation-adjusted consumer spending on goods remains resilient, while gradually correcting down to a pre-pandemic growth trend.

– Investment in new manufacturing facilities is on the rise despite a lowered outlook for finished goods in the mid-term.

3. Leasing Market Fundamentals Remained Historically Strong in 3Q22

– Net absorption and construction deliveries were in near-equilibrium as vacancy stayed stable at the all-time low of 3.7%, with numerous markets effectively out of space.

– The construction pipeline has risen to nearly 700 million square feet. The bulk of this space will deliver over the next four quarters; lease-up performance for speculative space will vary market-to-market.

– Annual industrial rent growth posted its highest gain yet (15.1%), but rent forecast scenarios show sharply decelerating, albeit still-strong, rent growth throughout 2023.

4. Capital Markets Materially Impacted by Economic Volatility

– Investment sales volume in the third quarter of 2022 dropped 18.0% from the same period last year, while still boasting the third highest third-quarter sales volume on record.

– Dry powder has hit a record $253.3 billion, with around a third targeting industrial assets.

– Rising debt costs are placing upward pressure on cap rates with negative leverage widespread. Transaction cap rates have yet to react while REIT implied cap rates have widened sharply, driving industrial REIT values down 31% YTD. Further increases in yields are likely which will weigh on returns in both public and private markets.

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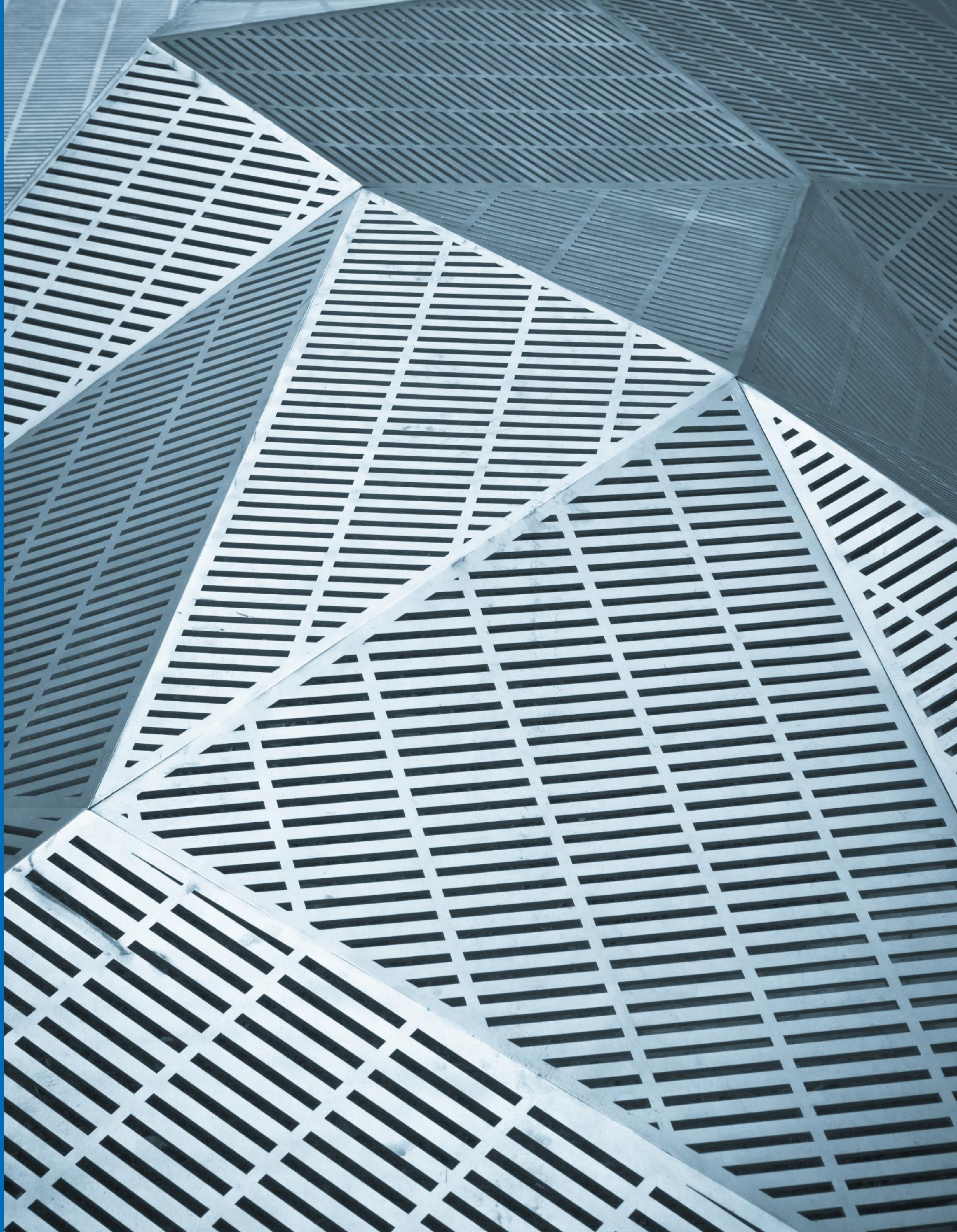
3Q22 NATIONAL INDUSTRIAL MARKET CONDITIONS & TRENDS REPORT

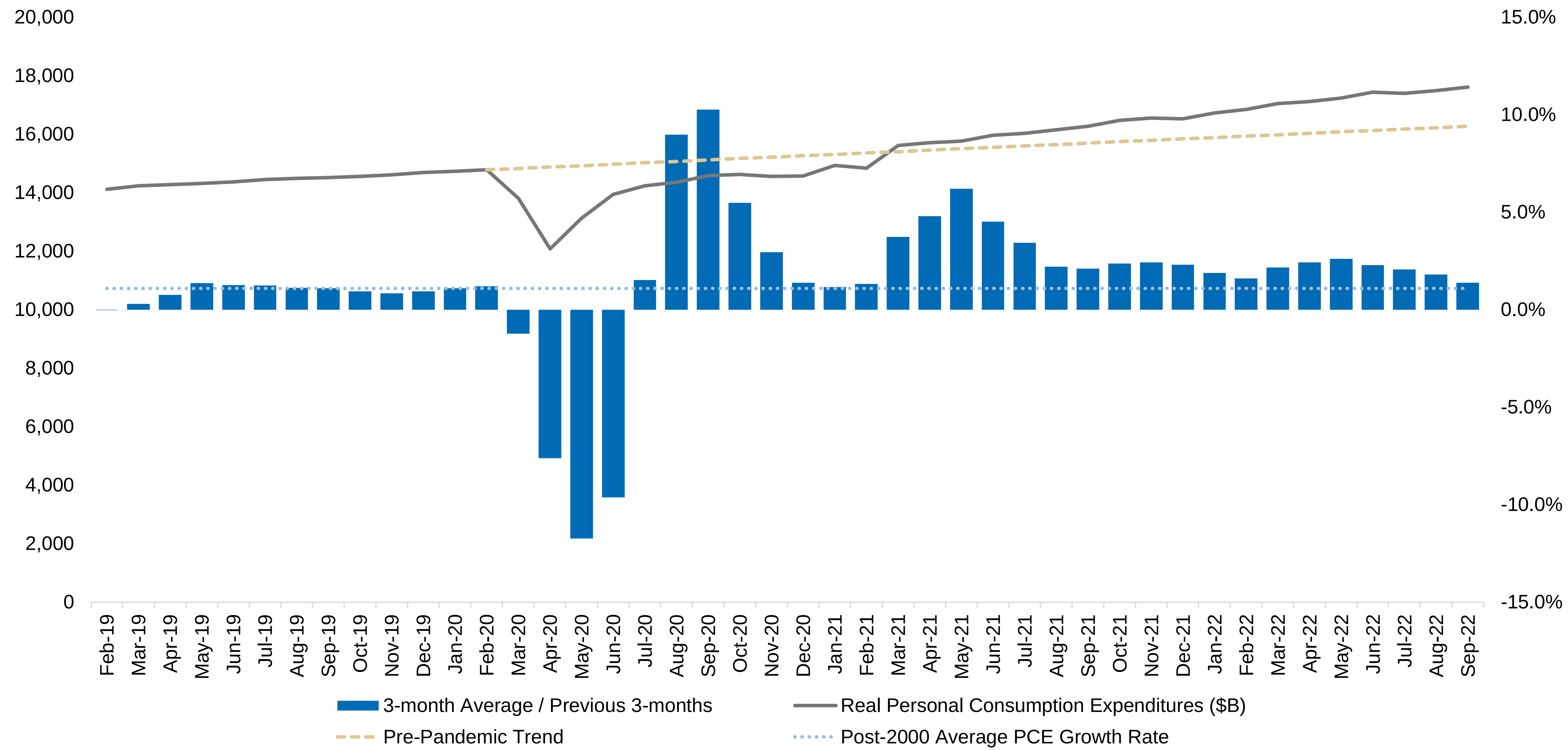
Economy



The Economy Is Not in A Recession (Yet)

Consumer spending is still above the pre-pandemic trend, though the rate of growth is rapidly decelerating.

Real Personal Consumption Expenditures

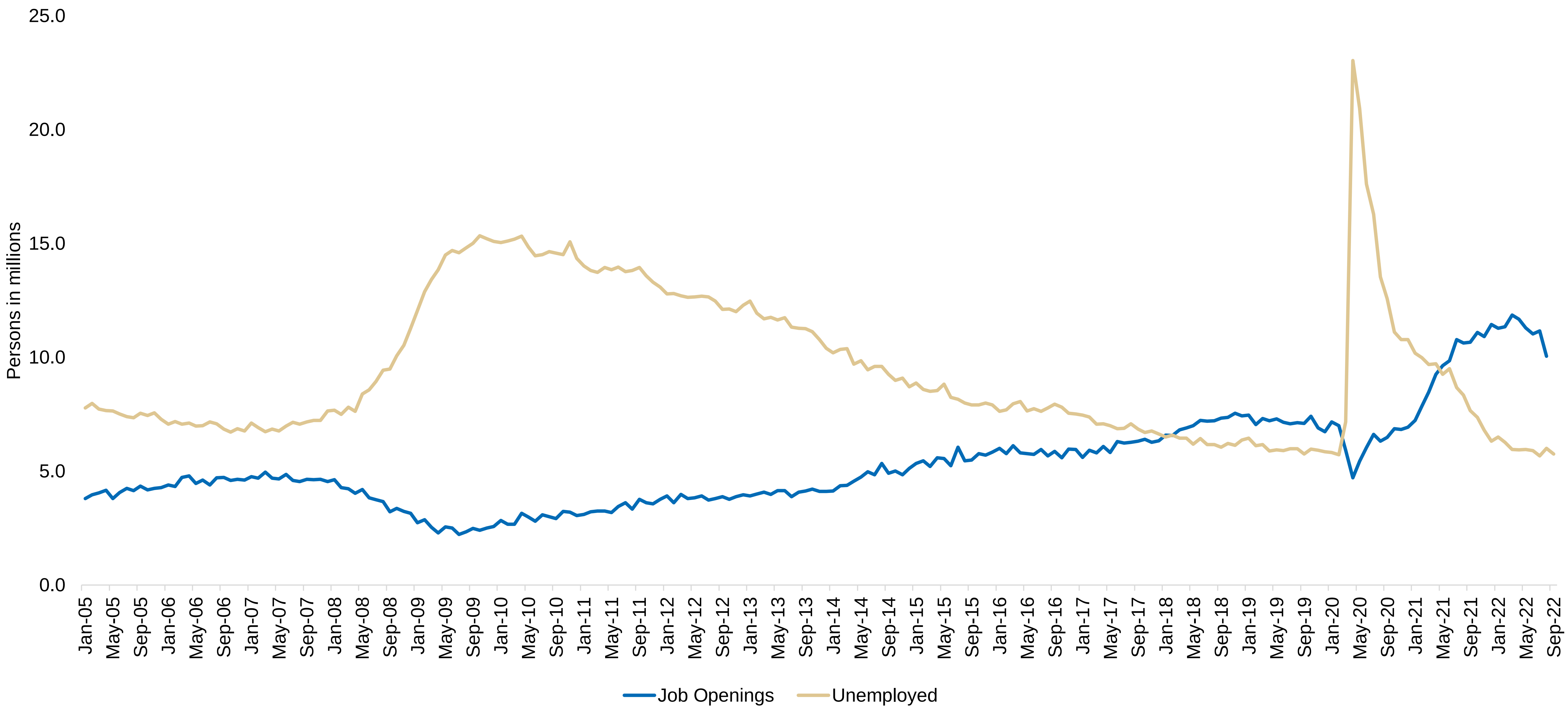


Source: U.S. Bureau of Economic Analysis, Newmark Research

The Economy Is Not in A Recession (Yet)

Jobs aren't scarce, but labor is with around 1.7 open positions for every unemployed worker.

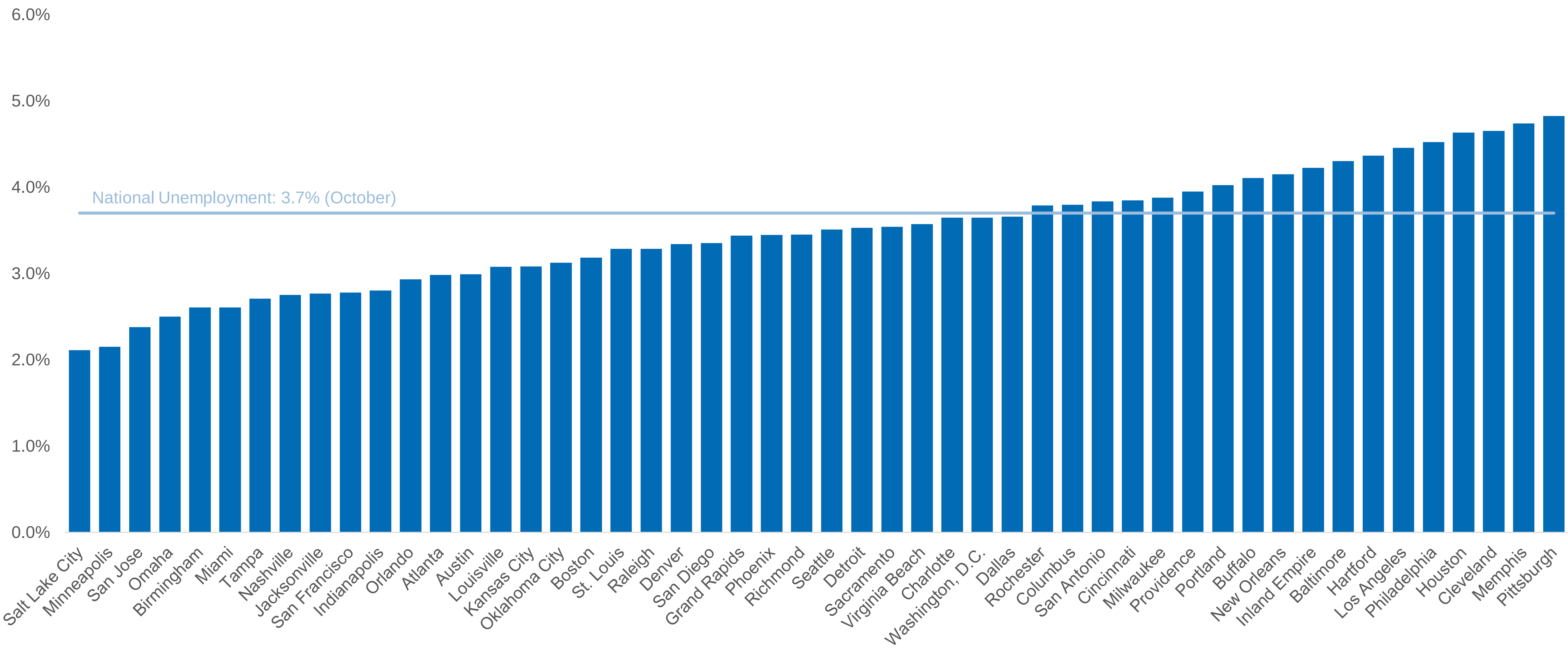
U.S. Labor Market Dynamics



Source: Bureau of Labor Statistics, Newmark Research

Labor Tight across Markets

Metro Area Unemployment Rate: August 2022

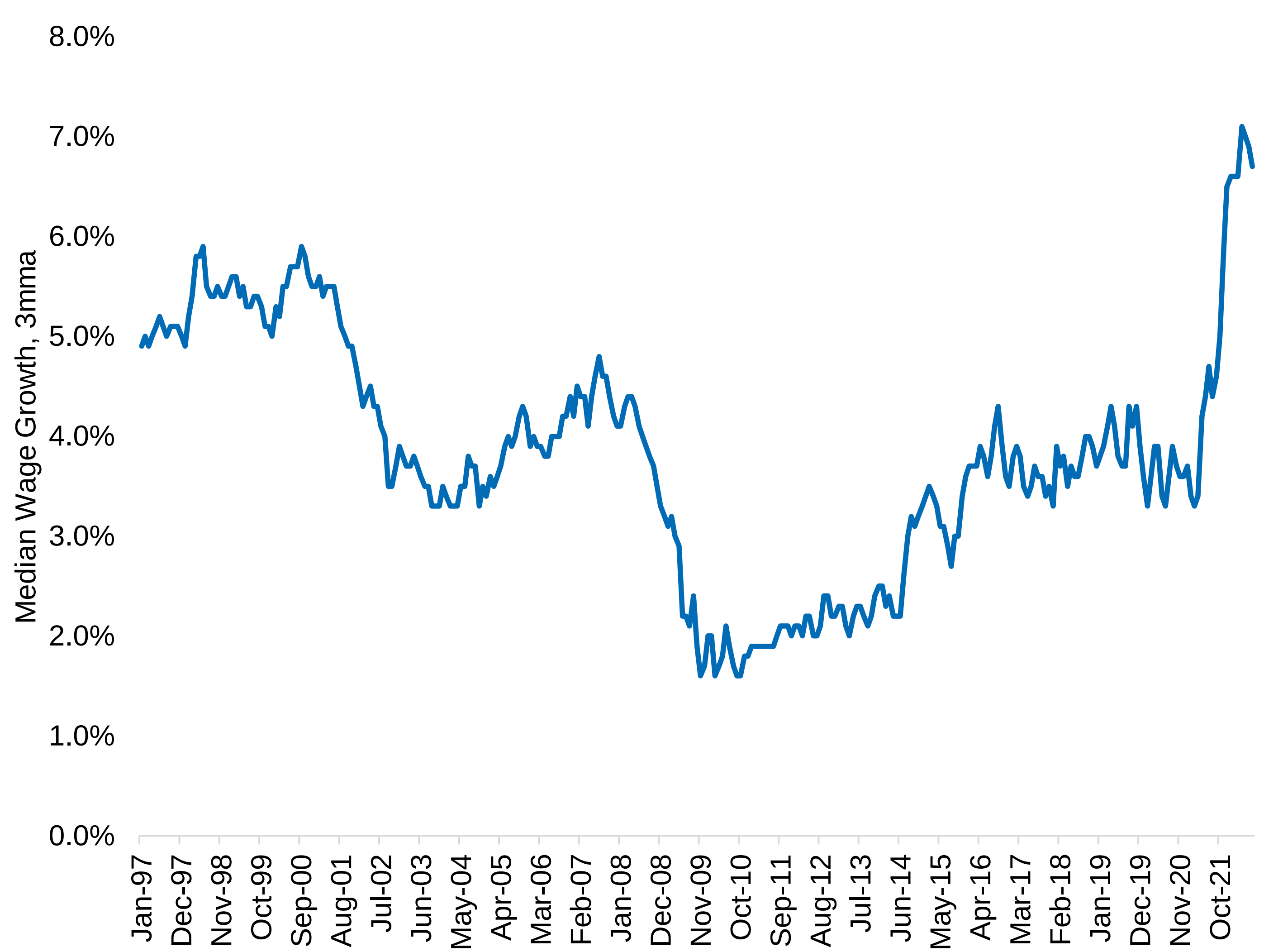


Source: Bureau of Labor Statistics, Newmark Research
Metros over 500,000 civilian labor force

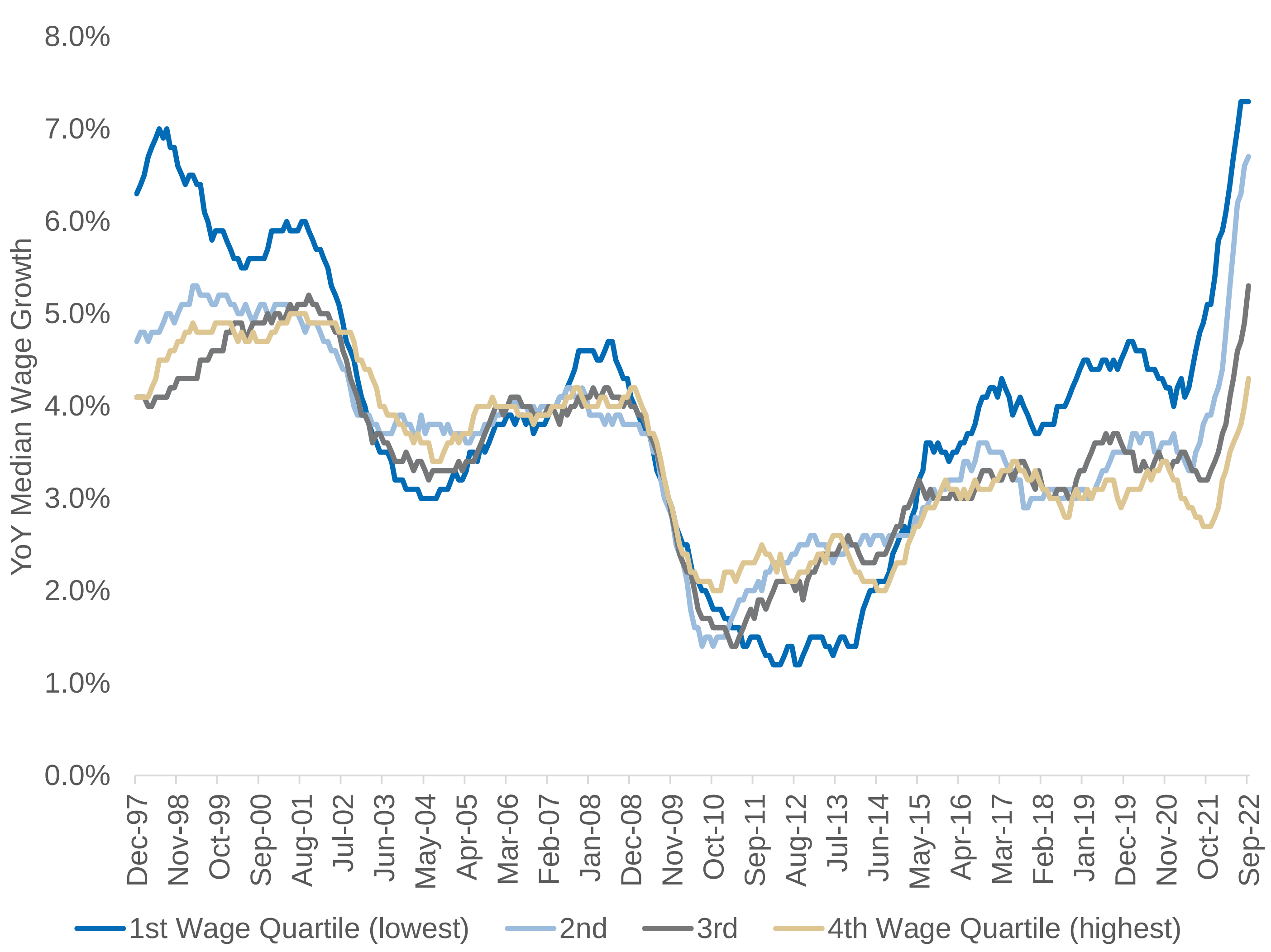
Fastest Wage Growth in Decades

Wage growth is broad-based, but lower income workers, service workers and those without a college degree are seeing the greatest wage growth. Even so, prices are rising faster, resulting in negative real wage growth.

Median Wage Growth Highest on Record



Wage Growth Highest For Lower End of Income Spectrum

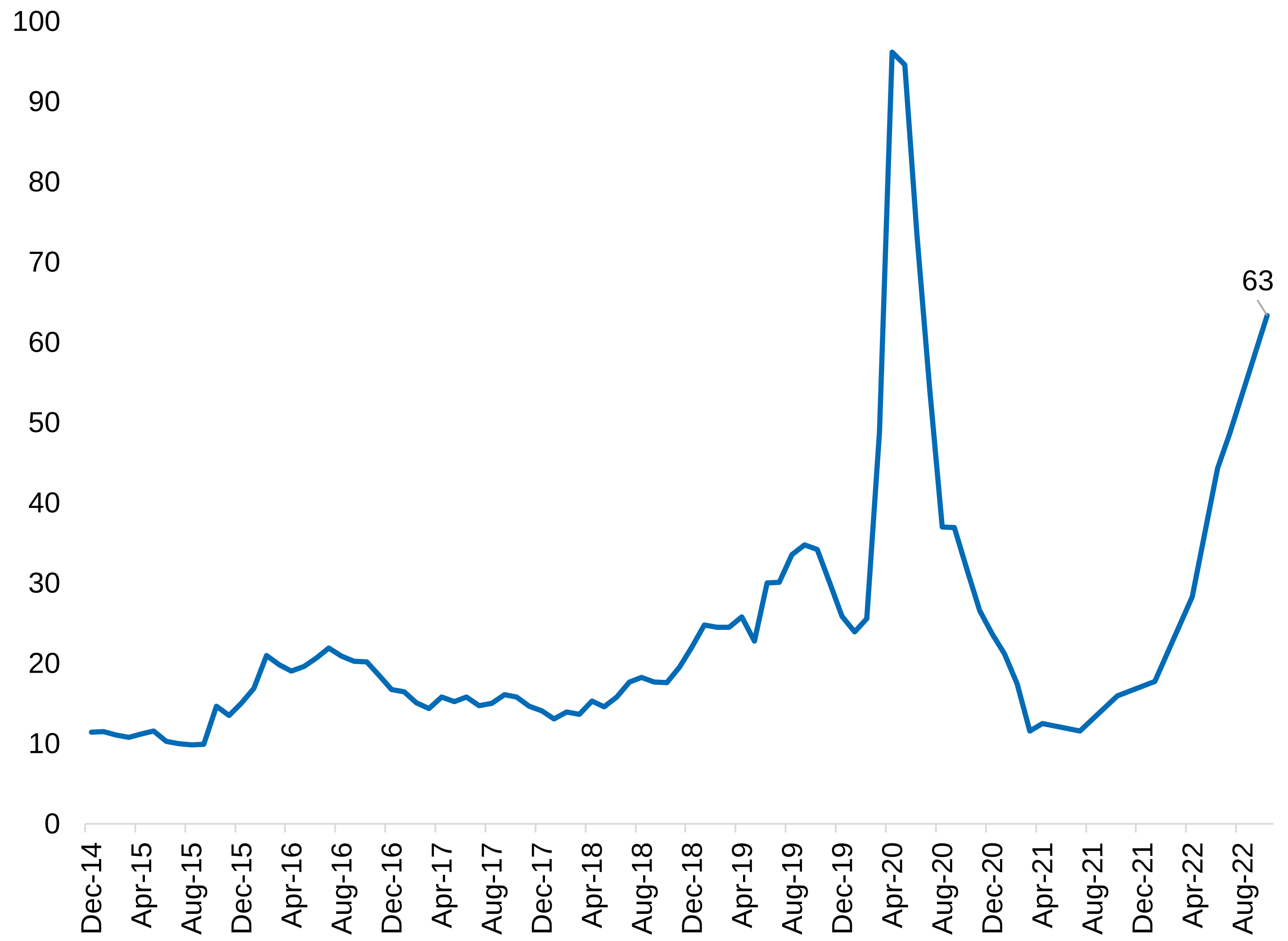


Source: Atlanta Fed Wage Tracker, Newmark Research

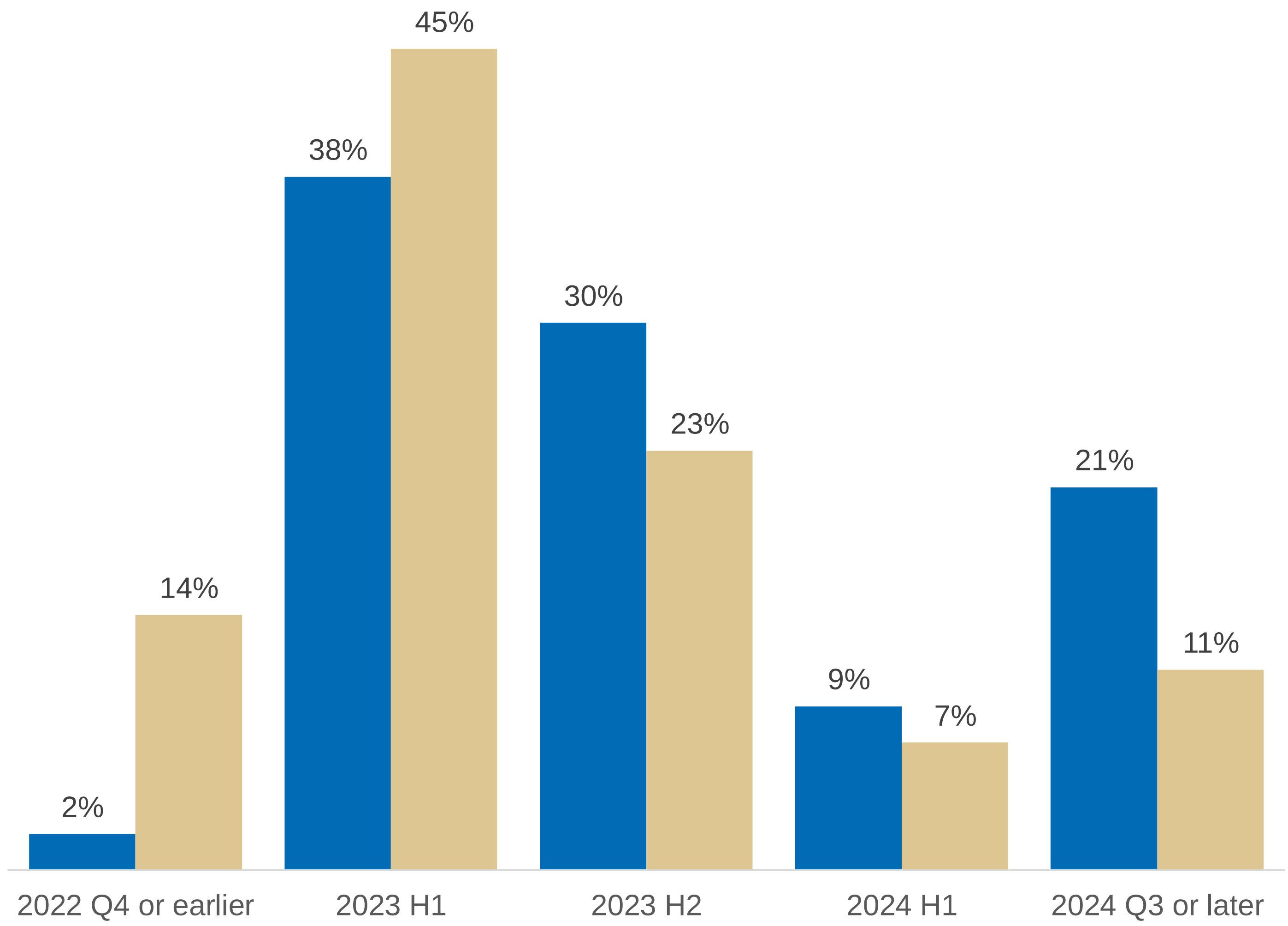
But A Recession Is Widely Anticipated

Conference Board estimates a 96% chance of recession in the next 12 months. Moreover, a wide range of yield curve measures are inverted, including the three-month/10-year spread, which has predicted every recession within a year, going back to the 1960s, *with no false positives*.

Probability of Recession in Next 12 Months Over 60%



With Most Expecting Recession in Early 2023

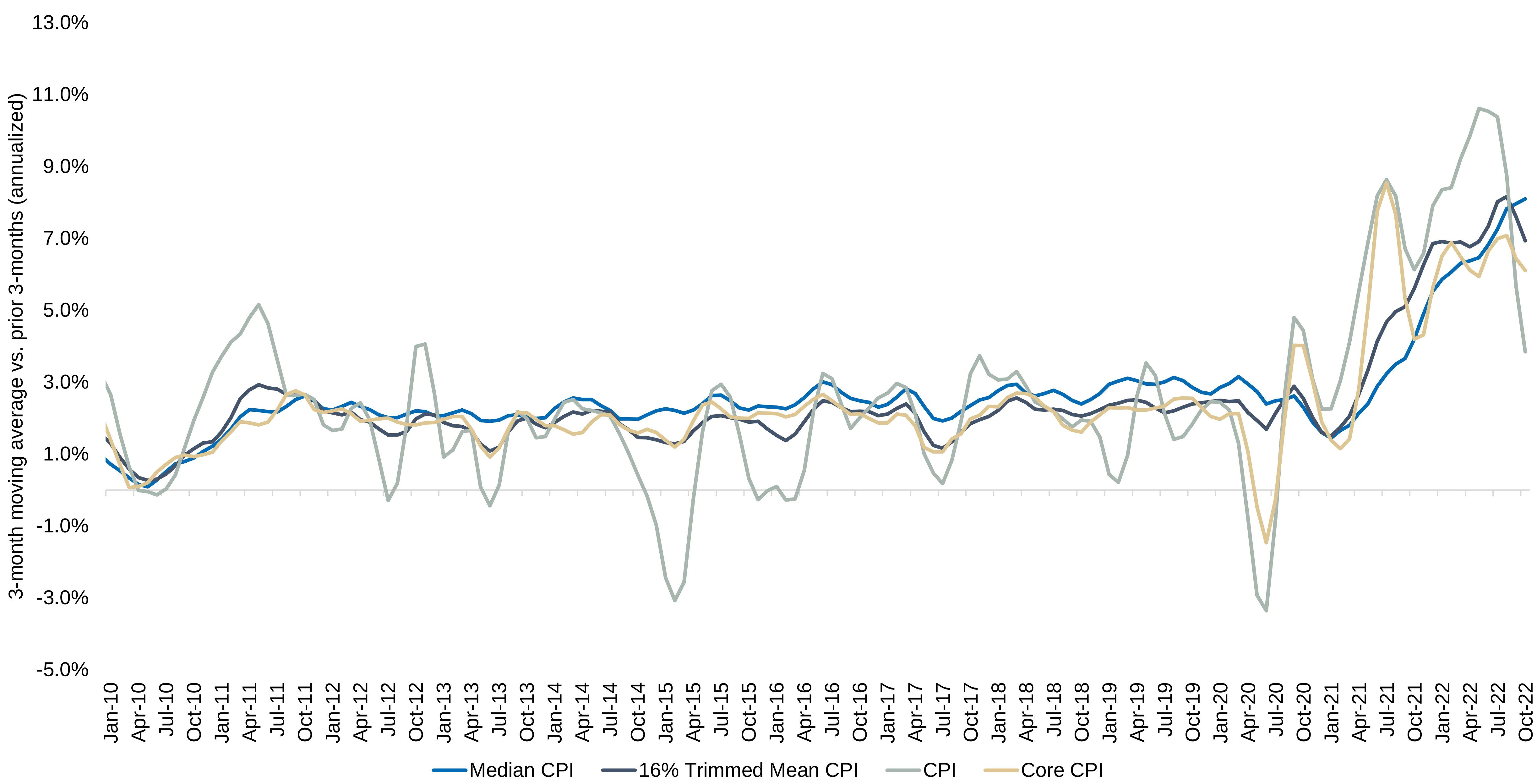


Source: WSJ Economic Forecasting Survey, Financial Times – Chicago Booth Initiative on Global Markets June 2022 Survey, Newmark Research

Because Inflation Is Far From Where The Fed Wants It

The October inflation print was a large positive surprise, with headline and core CPI dropping sharply. Median and trimmed mean CPI strip out effects of strong outliers and are therefore better indicators of underlying inflation pressure. These too appear to have inflected downwards in October—good news—but they remain a long way from target.

Consumer Price Inflation

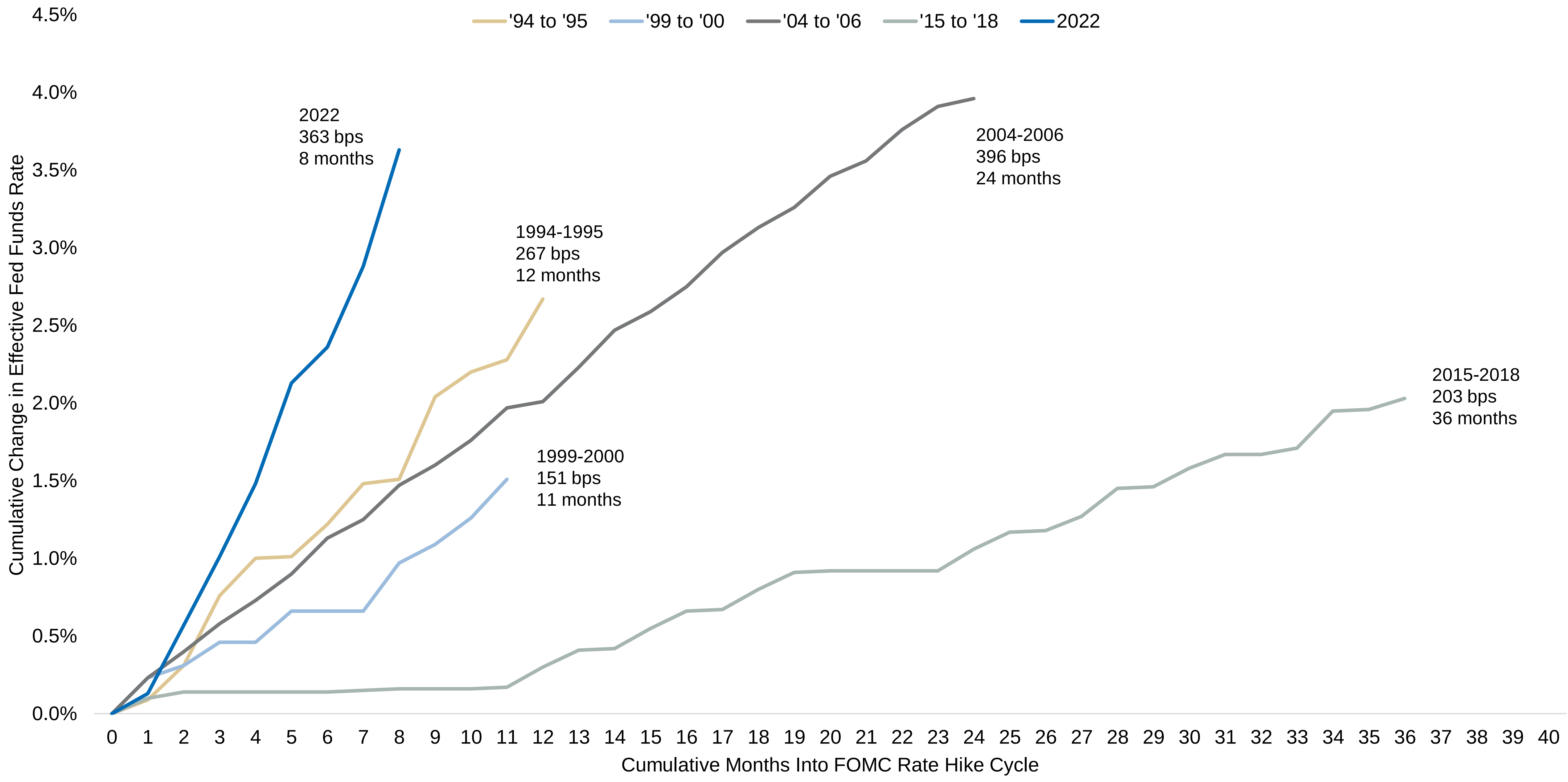


Source: Federal Reserve Bank of Cleveland, U.S. Bureau of Labor Statistics, Newmark Research

FOMC Hiking Rates Faster than Any Time in Modern History

FOMC being caught flat-footed by inflation earlier in the year now means “all gas, no brakes.”

Effective Federal Funds Rate

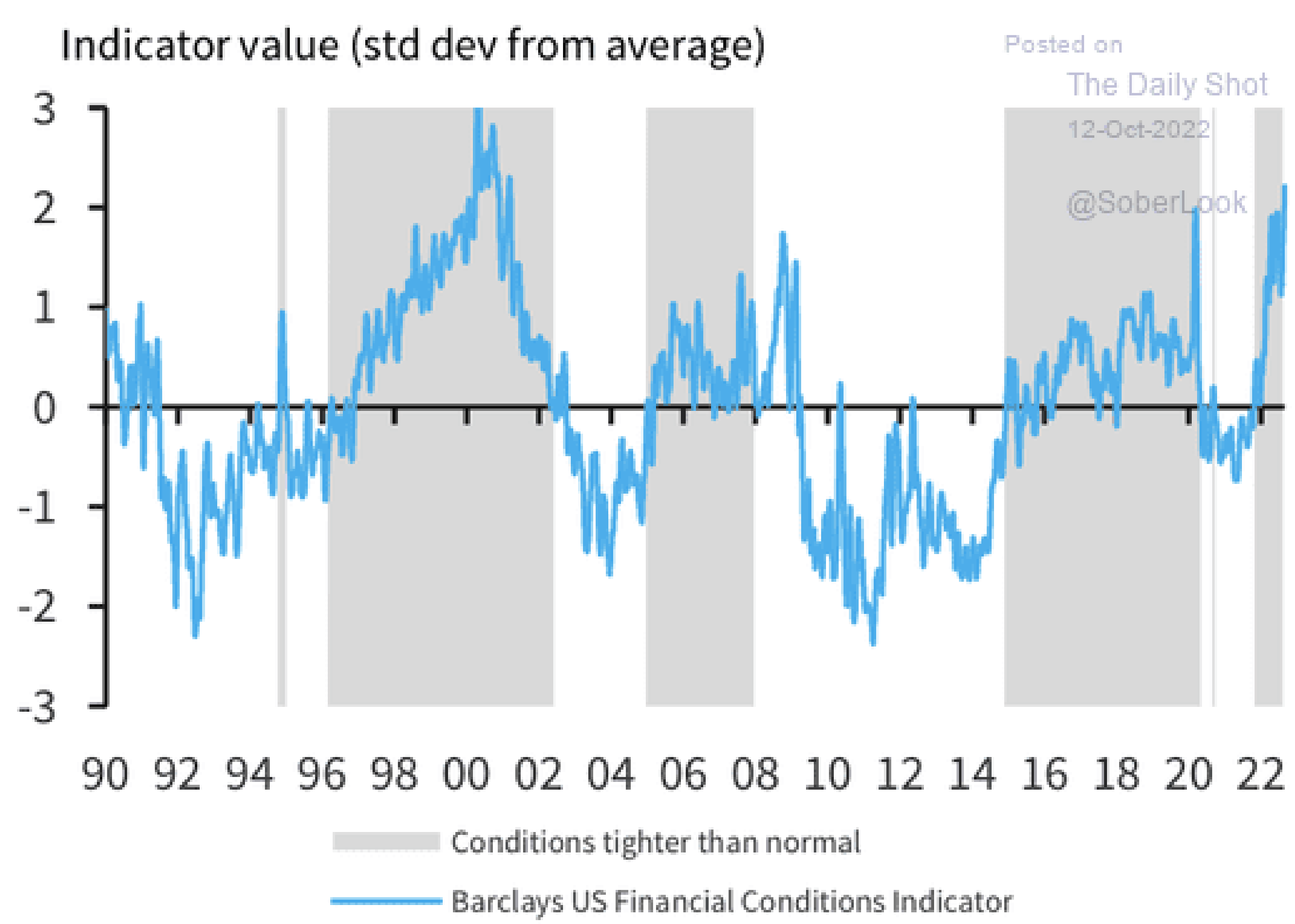


Sources: Newmark Research, Federal Reserve

Tightening Financial Conditions

Meanwhile, 10-year real yields, while the highest they have been in more than a decade, would have been considered normal in the mid 2000s. Similarly, the term premium on a 10-year bond, a measure of compensation for rate uncertainty, has increased sharply since bottoming at negative 0.9% in 2020 but now sits at only 0.2%, well below the pre-financial crisis average. All of which is to say that financial conditions, while tight, could reasonably become tighter.

Barclays Says Tighter Than During the Financial Crisis



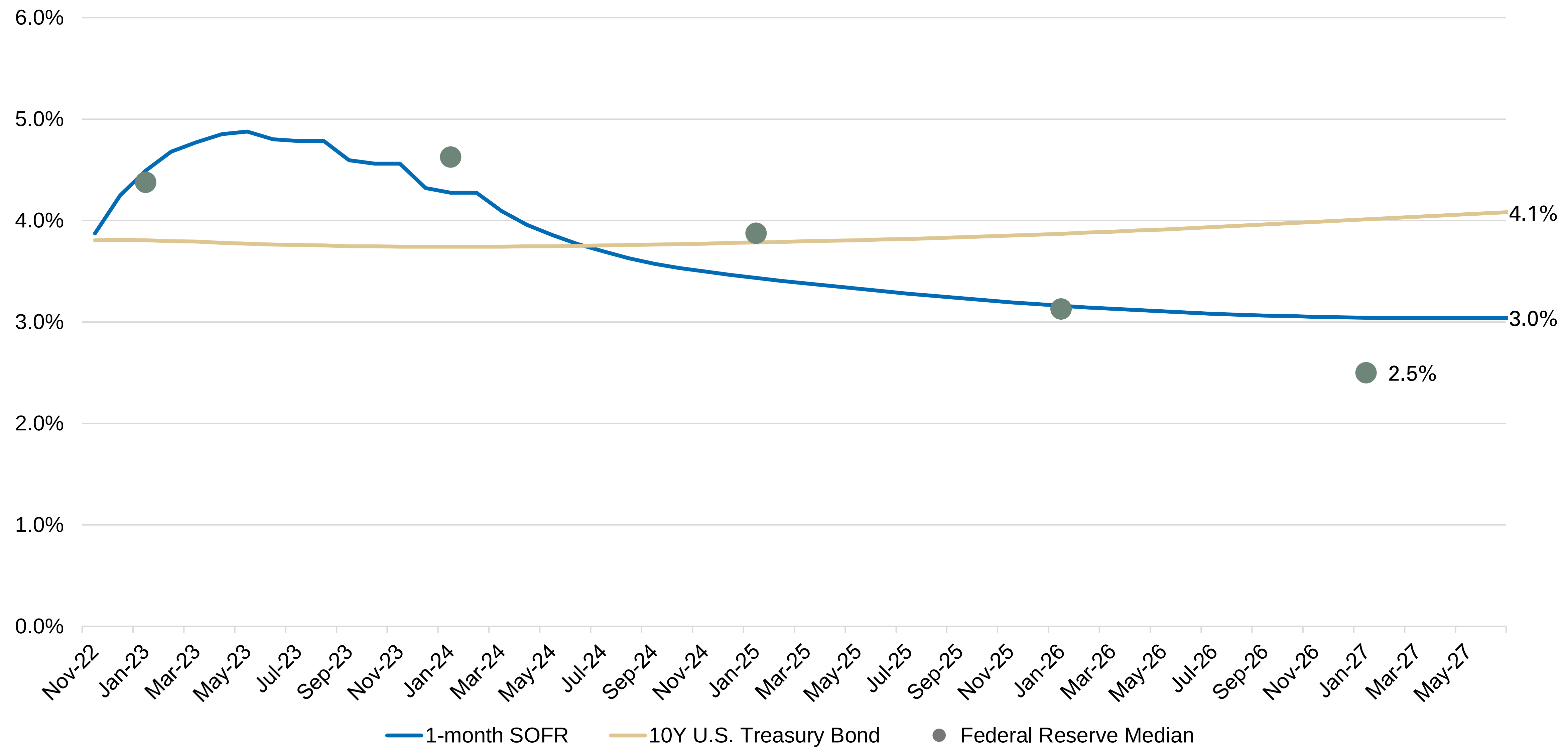
Goldman Says Since Tightest Since HY Debt Implosion of 2015

Source: Barclays and Goldman Sachs via the Daily Shot, Newmark Research

Rates Expected to Peak Next Year but Remain over 3% For Years to Come

Rate expectations remain highly data-dependent. The October inflation print surprised to the upside, leading to a sharp reduction in yields across the curve. Even so, markets expect short-term rates to peak near 5% and remain above 3% until the end of the decade. The 10-year forward curve was pricing 4%+ yields prior to the inflation data point, but now has pulled back to just under 4%. As with short-rates, the core message remains higher for longer.

U.S. Rates Forward Curve

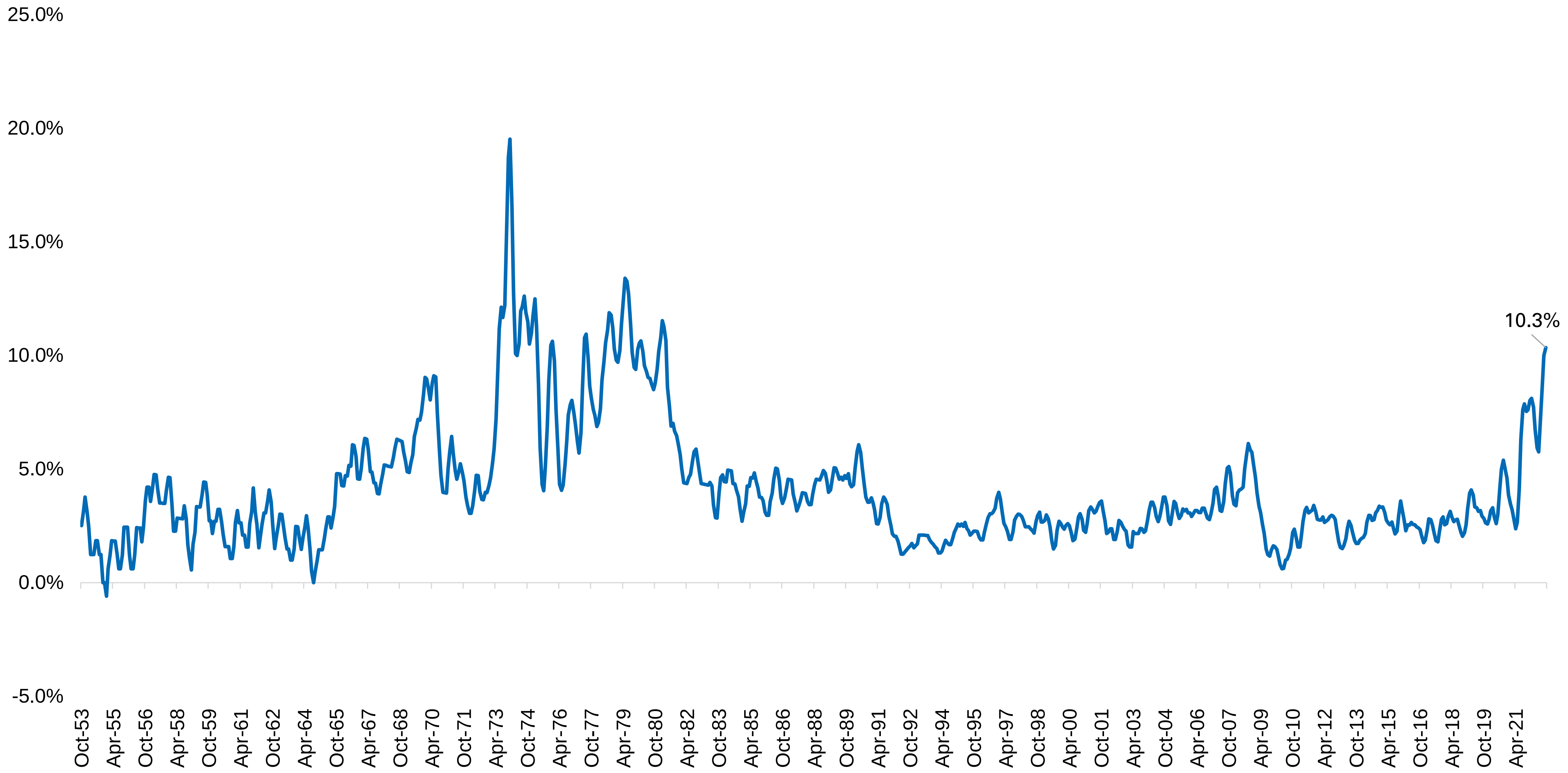


Source: Chatham Financial, Newmark Research

Wage/Labor Scarcity-Driven Inflation Continues to Accelerate

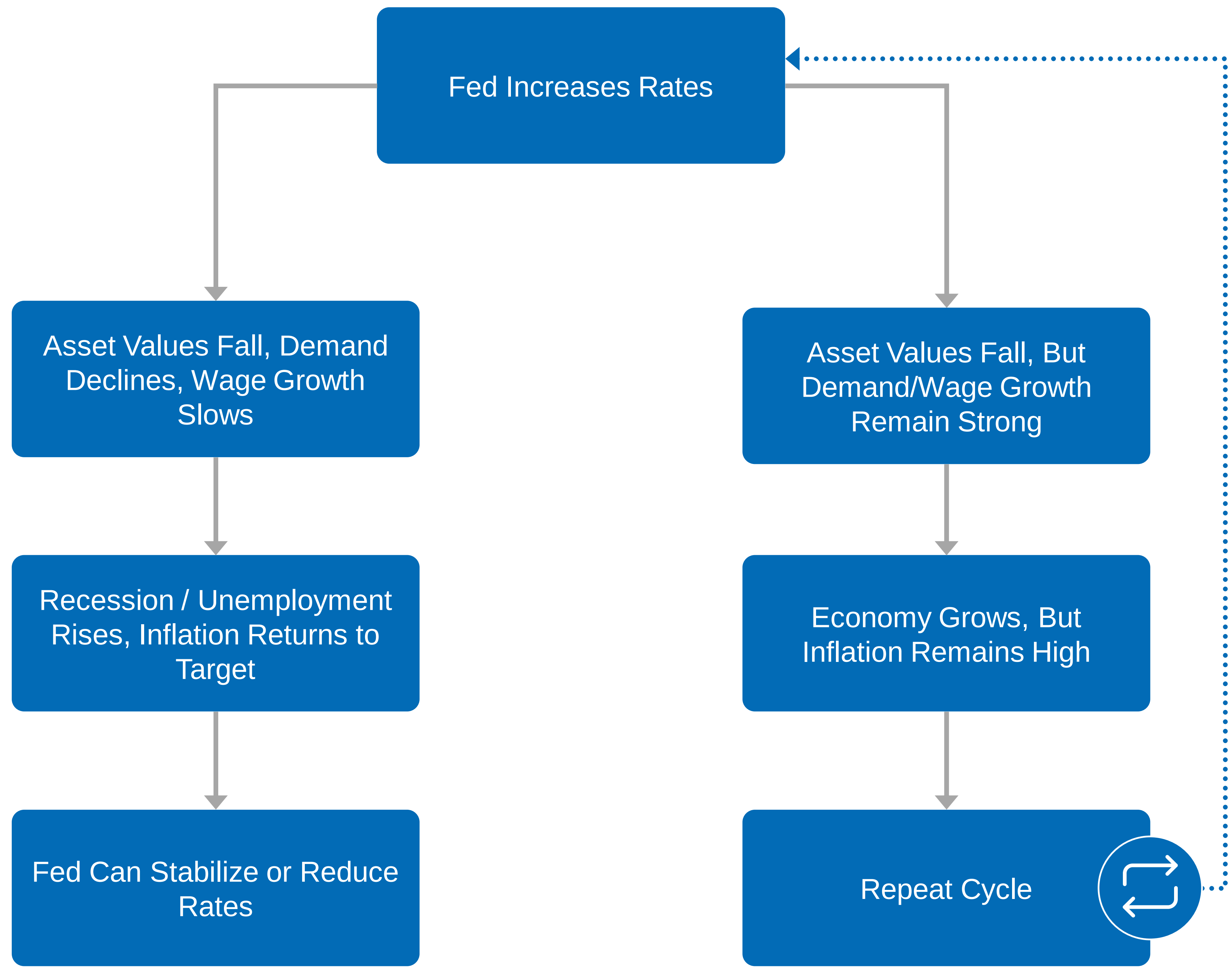
Food away from home is a strong predictor of wage/labor market-driven inflation in the broader economy. Unfortunately, even as supply-side drivers of inflation have waned, the wage-driven, or “endogenous” drivers of inflation have, if anything, accelerated. Inflation will not be controlled until the labor market weakens and endogenous inflation slows.

Food Away From Home Inflation: 3-month / 3-month (annualized)

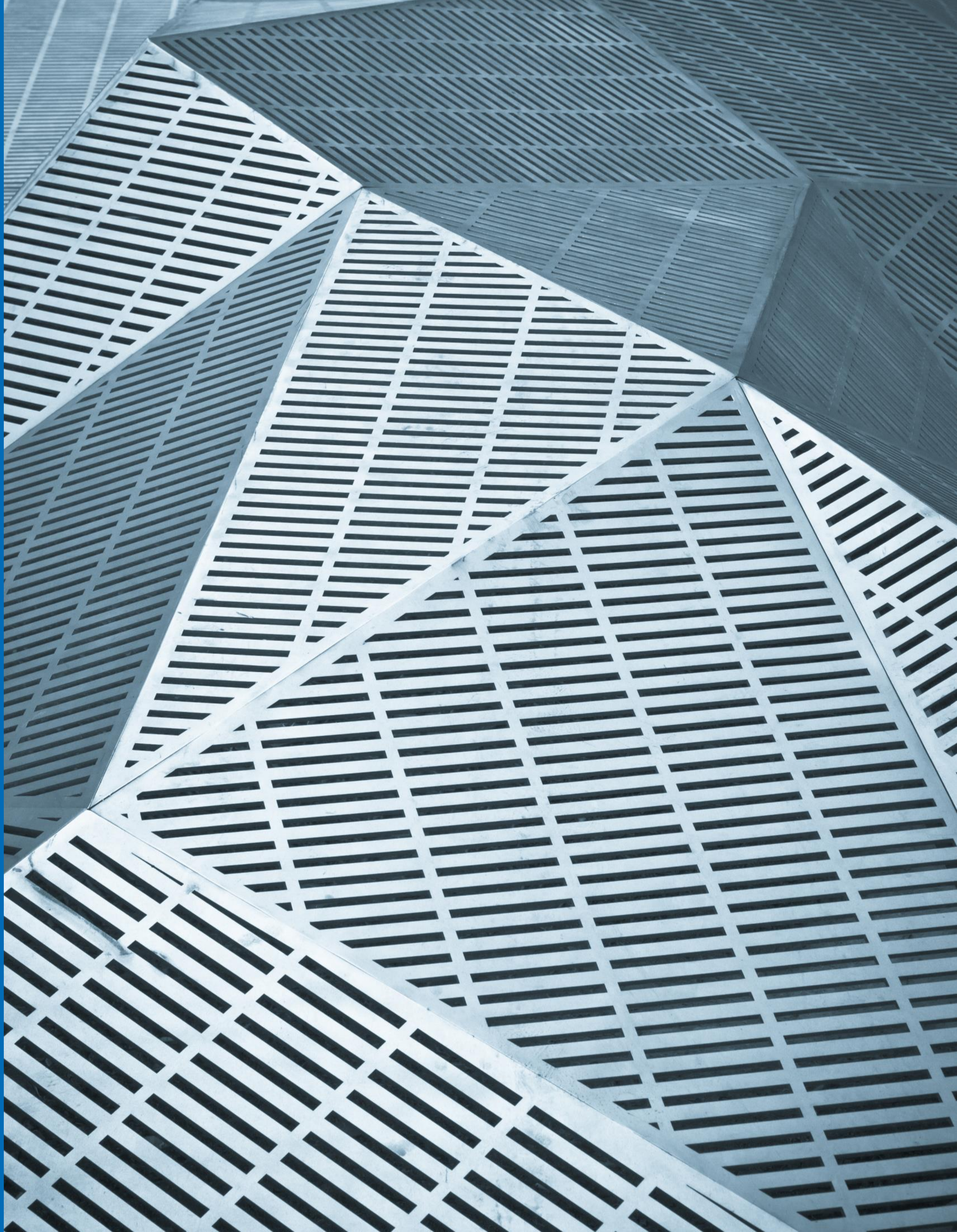


Source: U.S. Bureau of Labor Statistics, Newmark Research

The More Resilient the Economy, the Harder the Fed Will Push Rates



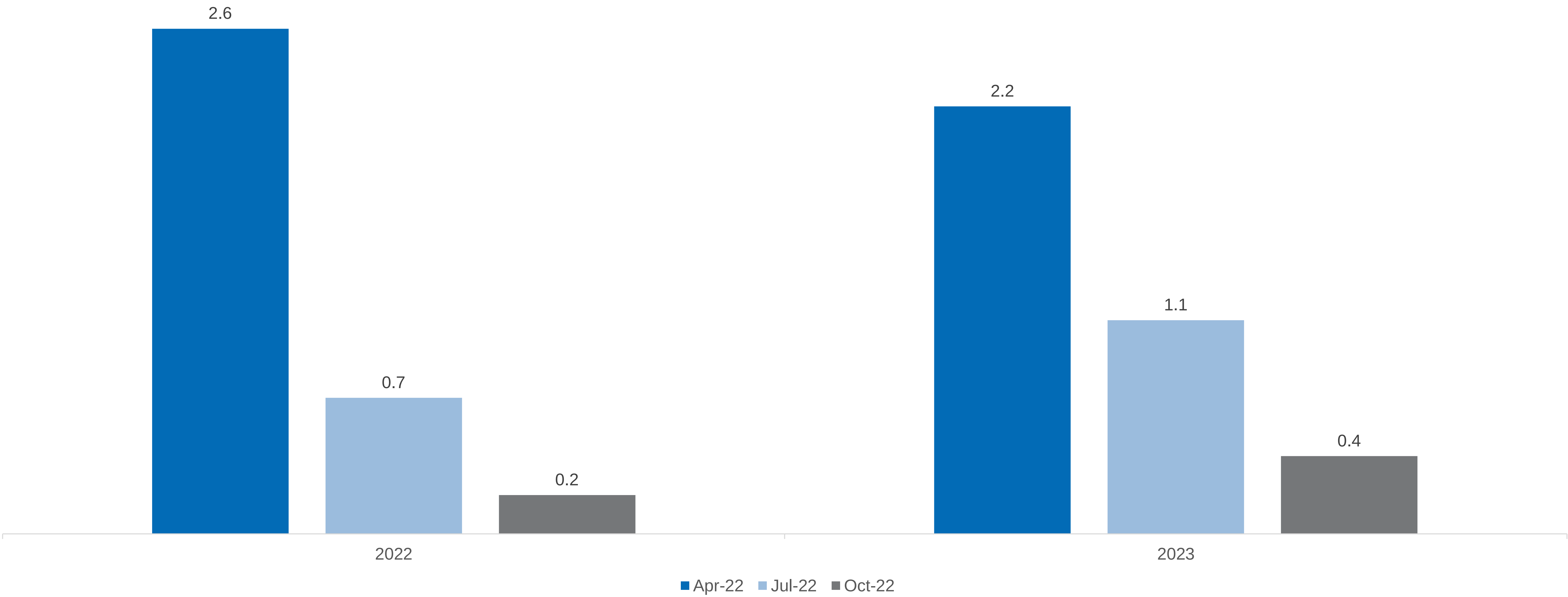
Determinants of Industrial Demand



Macroeconomic Forecasts Revise Downward Amid Shaky Economic Conditions

Across the board, forward-looking prognostications for short- and mid-term economic growth have been revised downward successively throughout the year, signaling the trajectory of the economy is likely heading towards a recession.

Forecasts for Annual GDP Growth Rate (%) by Select Month

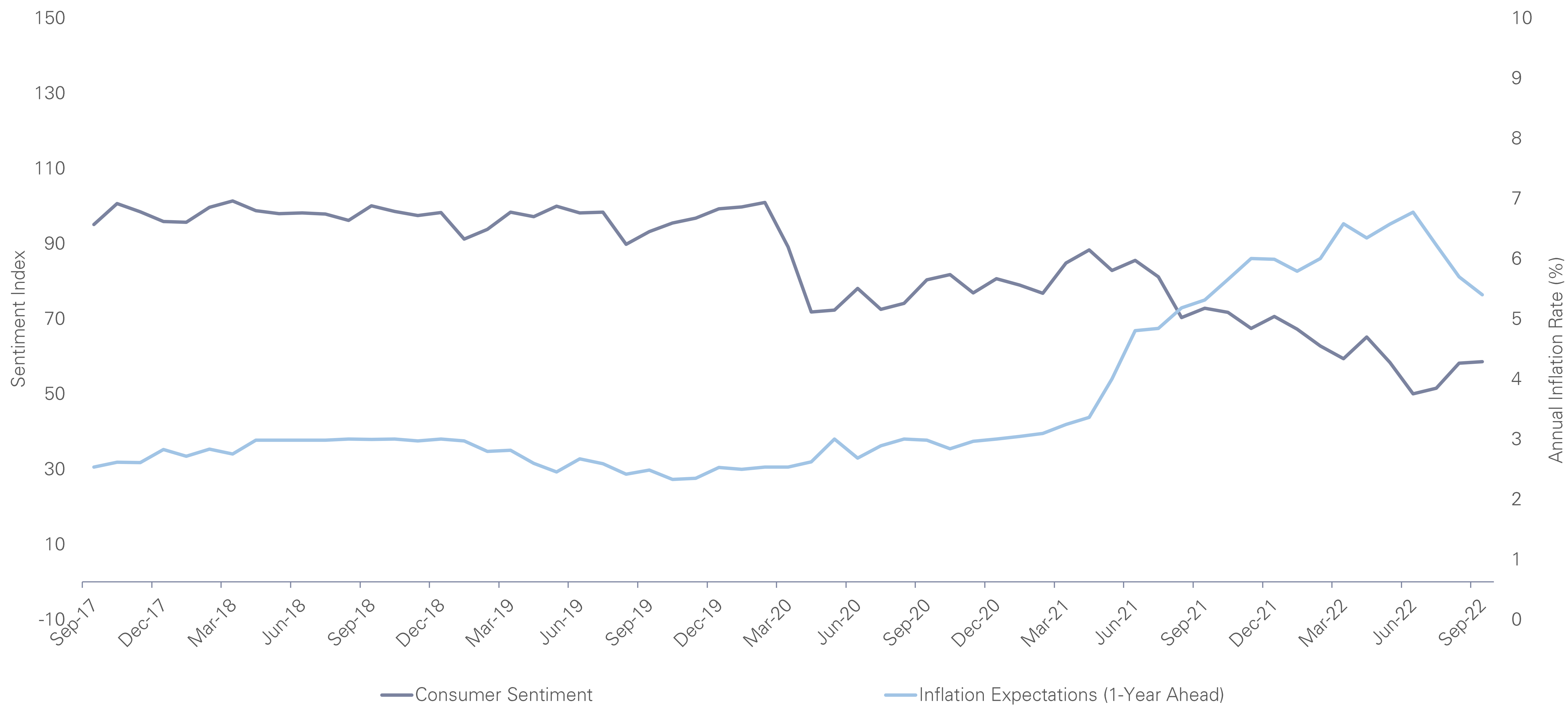


Source: Newmark Research, Wall Street Journal Survey of Economists

Consumer Sentiment Has Declined, But So Have Inflation Expectations

Consumer sentiment has been on a downbeat trend for over a year; recent fluctuations underscore a prevailing uncertainty about the future, which will continue to impact consumer behavior. On the positive side, consumer expectations for future inflation fell for the third consecutive month.

Consumer Sentiment and Inflation Expectations

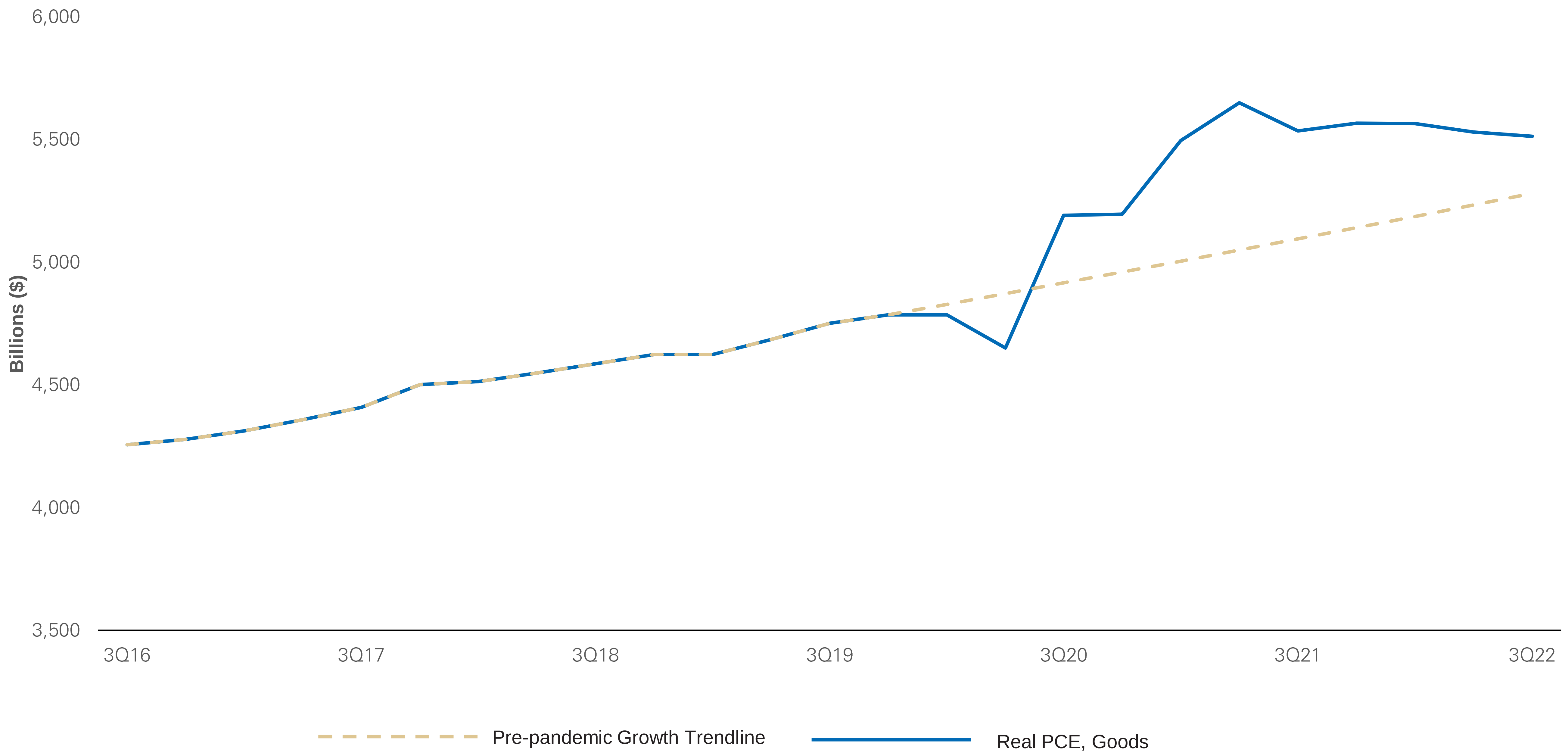


Source: Newmark Research, Federal Reserve of NY, University of Michigan

Primary Economic Driver of Industrial Demand Resilient, but Normalizing

Although consumption of goods remains well above the pre-pandemic trend as consumers demonstrate resiliency to significant economic headwinds, consumer spending is decelerating. Total spending on goods in the third quarter of 2022 declined 0.4% year over year, adjusted for inflation.

Real Personal Consumption Expenditures, Goods

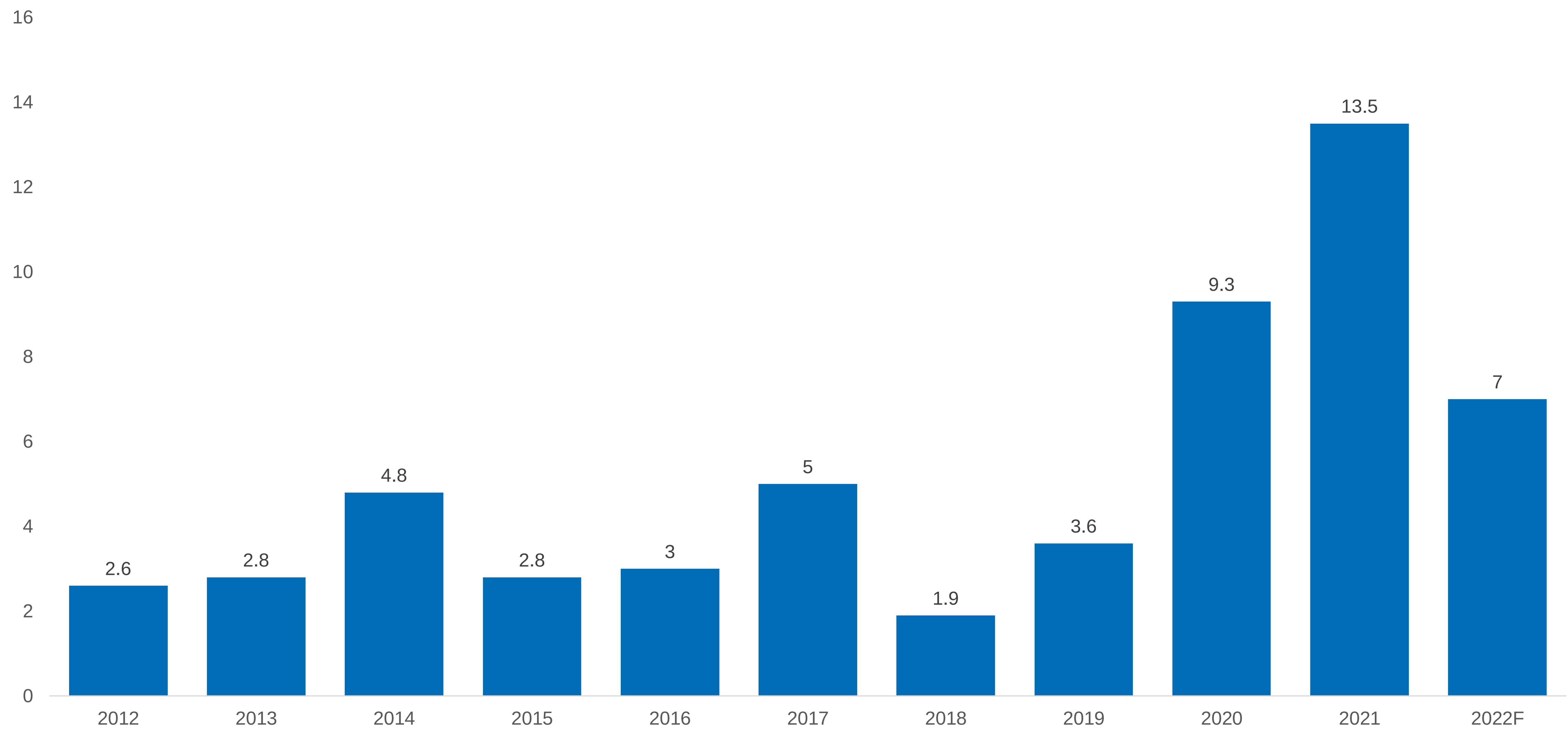


Source: St. Louis FRED, Newmark Research

As the Holiday Season Approaches, Sales are Forecast to Increase

Holiday shoppers are expected to drive seasonal sales 7.0% higher than last year's volume, unadjusted for inflation. This is a moderation from 2021's double-digit annual gains. Projections for online holiday shopping range from 6.0% to 7.0% annual growth. Online fulfilment and attendant returns will boost short-term industrial demand.

National Retail Federation Holiday Sales Growth Forecast (%)

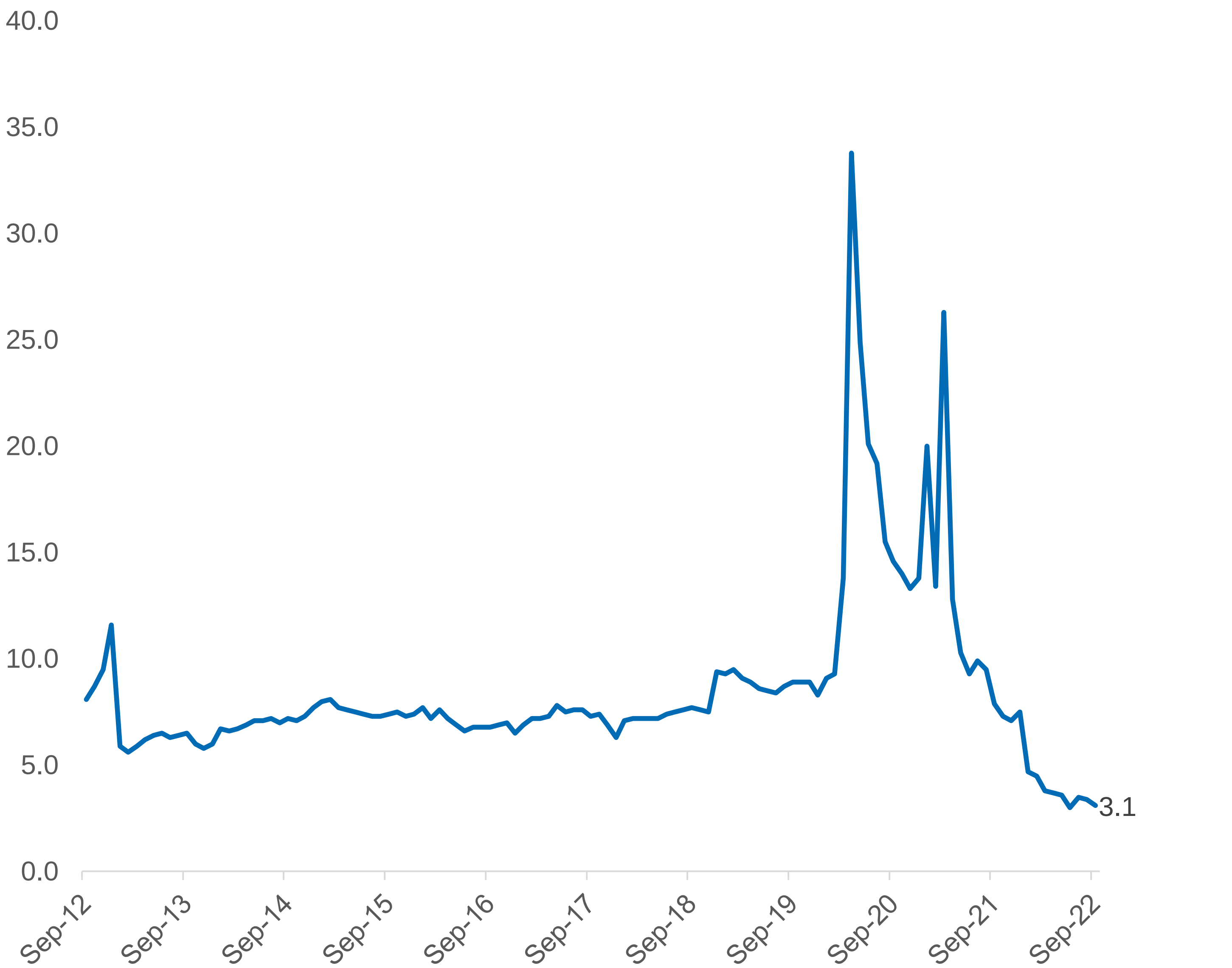


Source: National Retail Federation, Digital Commerce 360, Newmark Research

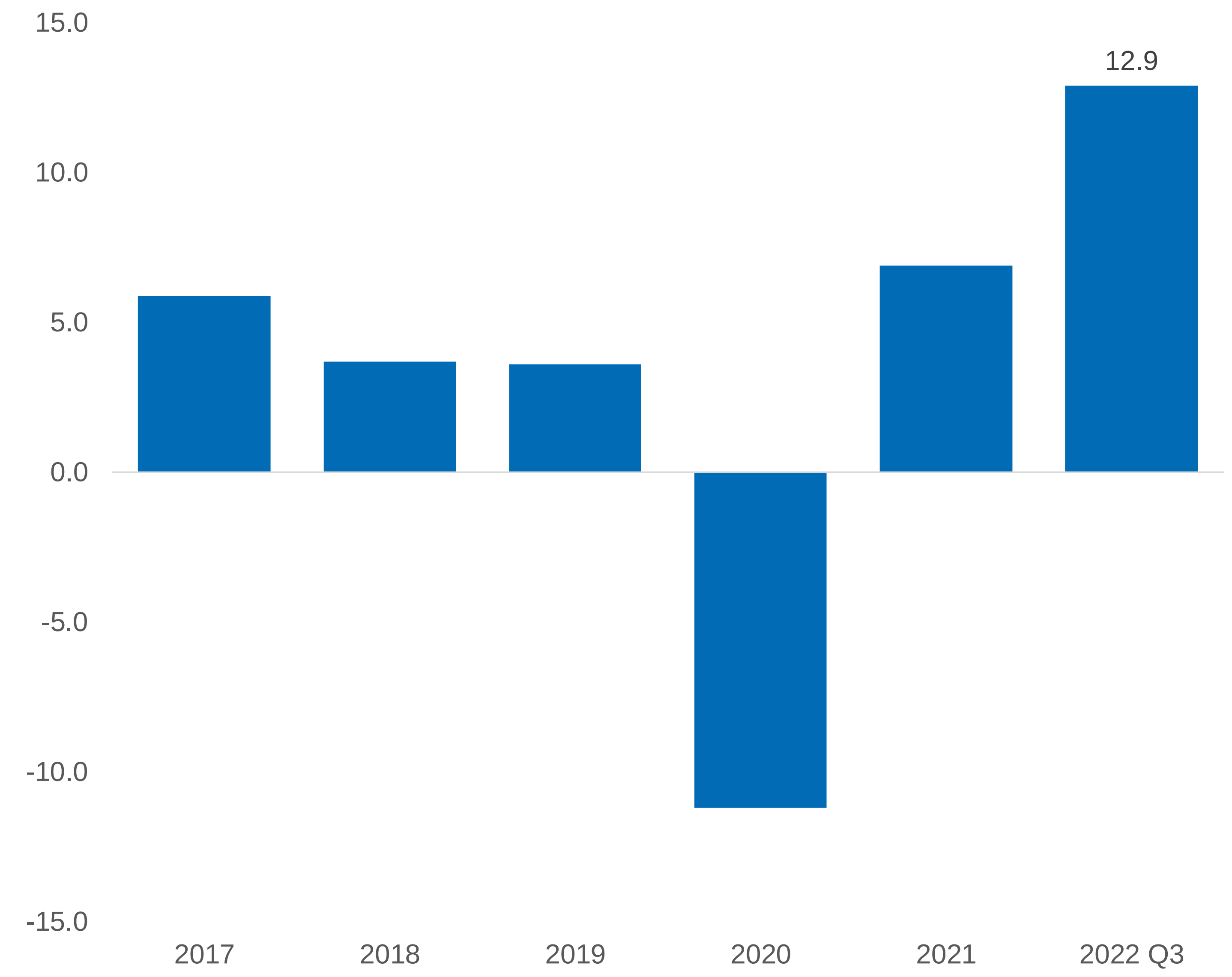
But Consumers are Increasingly Going into Debt to Keep Spending

Consumer revolving credit, which mostly represents outstanding credit card balances, has risen nearly 13.0% year-over-year to an all-time high of $1.162 trillion. The personal savings rate fell below the long-term pre-pandemic average of 7.4% at the end of 2021 and has declined to just 3.1% by September 2022. With interest rates rising, consumers will have to spend more to service the interest on credit, further decreasing discretionary spending power.

Personal Savings Percentage Rate



Revolving Consumer Credit, Annual Percentage Change

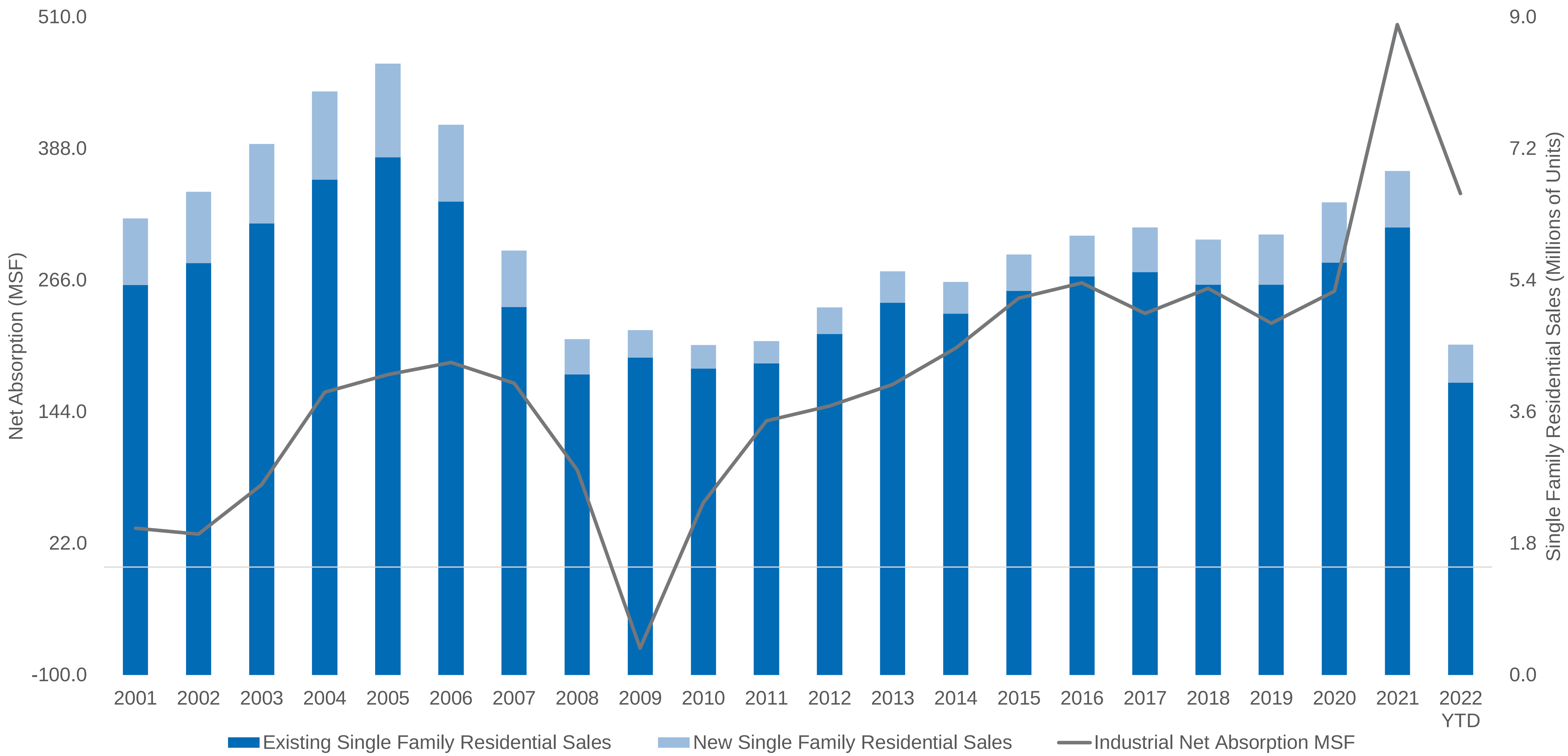


Source: Federal Reserve, FRED, Newmark Research

Home Sales Slide Against Backdrop of Aggressive Interest Rate Hikes

Home sales are a significant driver of goods consumption and therefore, industrial demand. Downward pressure on home sales caused by rising interest rates, depleted consumer spending power and general economic uncertainty will contribute to lessened industrial demand, particularly from home goods segments.

Single Family Residential Sales and Industrial Net Absorption

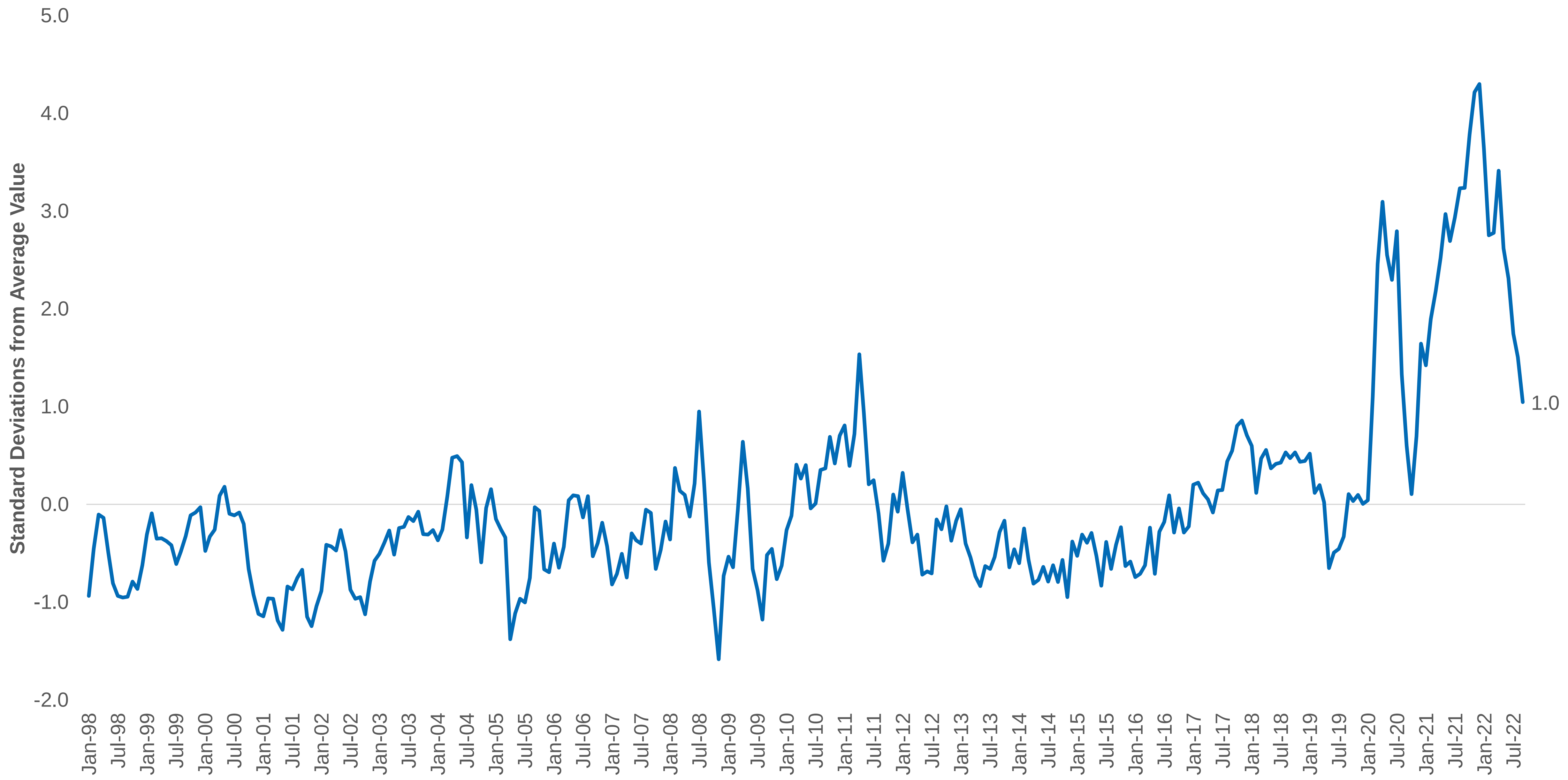


Source: Newmark Research, National Association of Realtors

Supply Chains Still Struggling to Find a "New Normal," but the Worst Delays are Over

Gargantuan volumes of inventory working through the supply chain have been a primary driver of systemic challenges this year, from the point of production to final delivery of finished goods. A variety of indicators, including falling global shipping container demand and improved delivery times, indicate that peak congestion is in the past as consumption of goods moderates, helping a backlog of inventory clear the supply chain.

Federal Reserve Global Supply Chain Stress Index

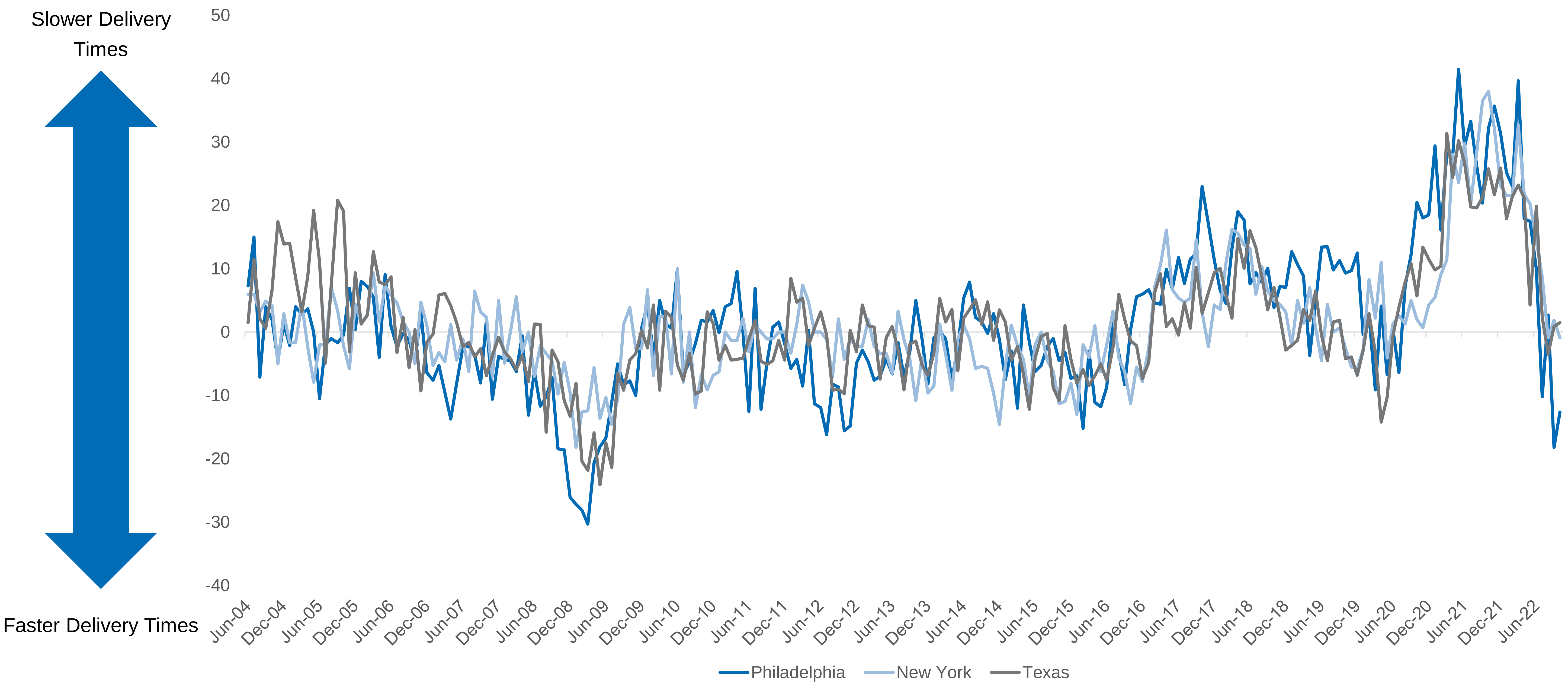


Source: Federal Reserve Bank of New York, Global Supply Chain Pressure Index, Newmark Research

Delivery Times Faster; Declining Order Backlogs

Purchasing managers' indices and small business sector survey show the same trends.

Federal Reserve District Current Delivery Times Diffusion Index

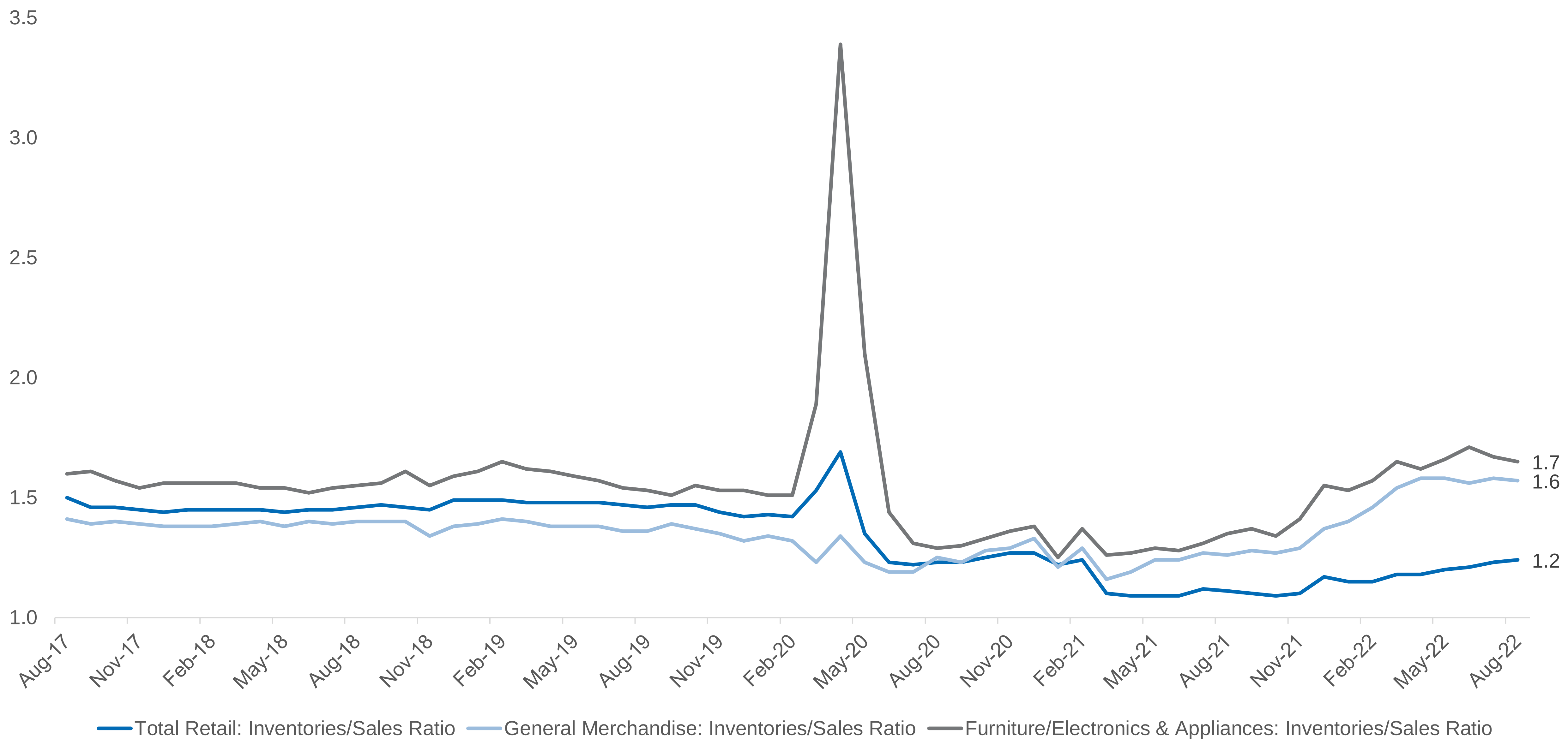


Source: FRB Philadelphia, FRB New York, FRB Texas

Warehouses are Still Stuffed to Capacity Amid Record Low Vacancy

Supply chain delays are receding, but warehouses are still contending with an excess amount of inventory, driving utilization rates higher and leaving less space for new, incoming deliveries. This dynamic will buoy industrial demand from consumer goods and third-party logistics firms, in particular within markets boasting higher availabilities at lower costs, as retailers look to displace unwanted inventory.

Inventories to Sales Ratio, Total Retail and Sector-Specific

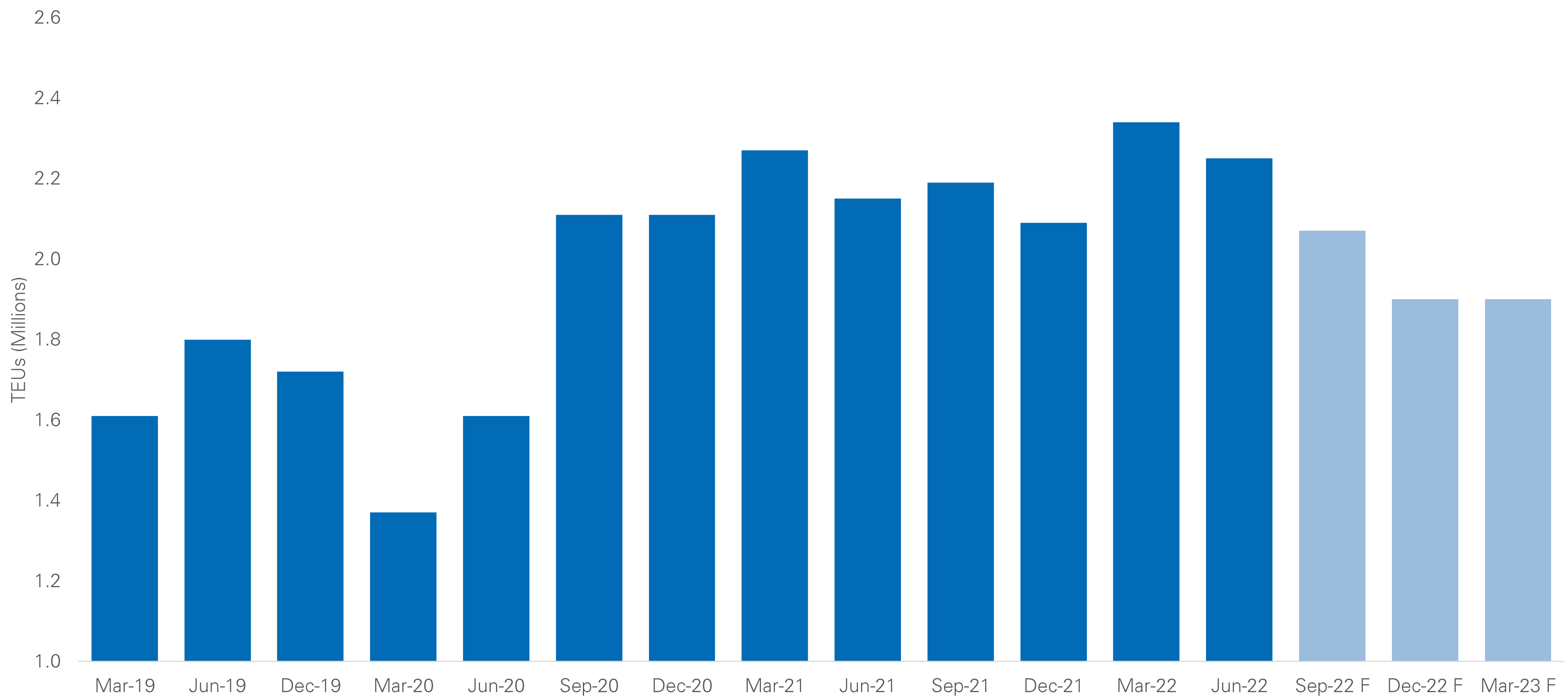


Source: St Louis FRED, Newmark Research

Containerized Imports Decline from Lofty Heights

Monthly U.S. retail imports are decelerating from pandemic-era heights and are forecasted to continue declining through the final quarter of the year and into 2023 as many firms brought in inventory ahead of “peak season” to avoid delays or are significantly scaling back overseas orders due to a combination of excess inventory and falling consumer demand.

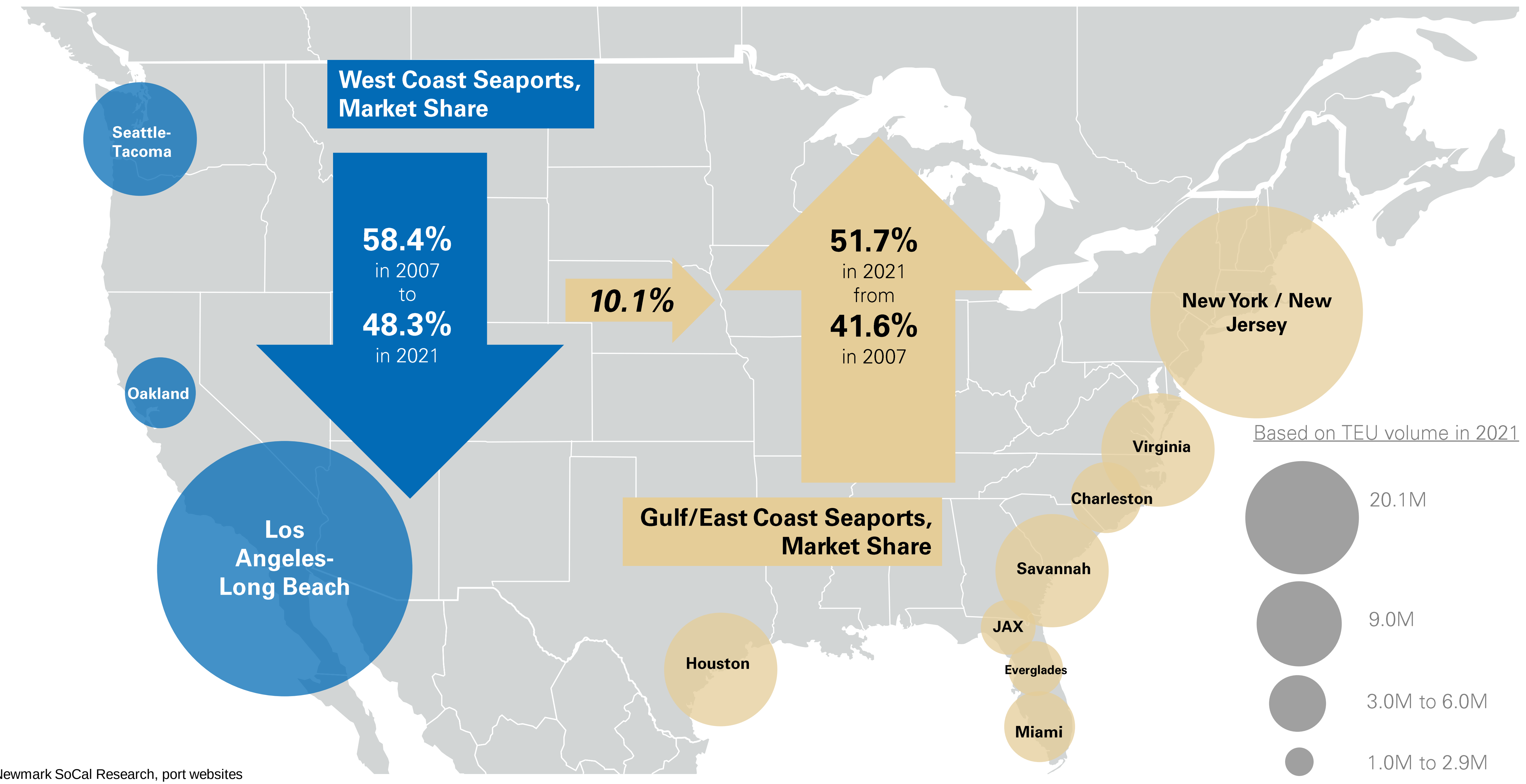
Global Port Tracker: U.S. Retail Imports



Source: National Retail Federation, Newmark Research

Import Market Share is Shifting from the West to the East

Major U.S. Gulf and Eastern seaports have invested billions to dredge their harbors and update infrastructure to accommodate larger container vessels. Moreover, Southeastern ports in particular have land for expanded warehouse development. As some global supply chains are reoriented away from China, toward friendlier South Asian countries aligned with an East Coast sea route, Gulf and Eastern ports will likely gain even more market share - driving additive demand for warehouse space.

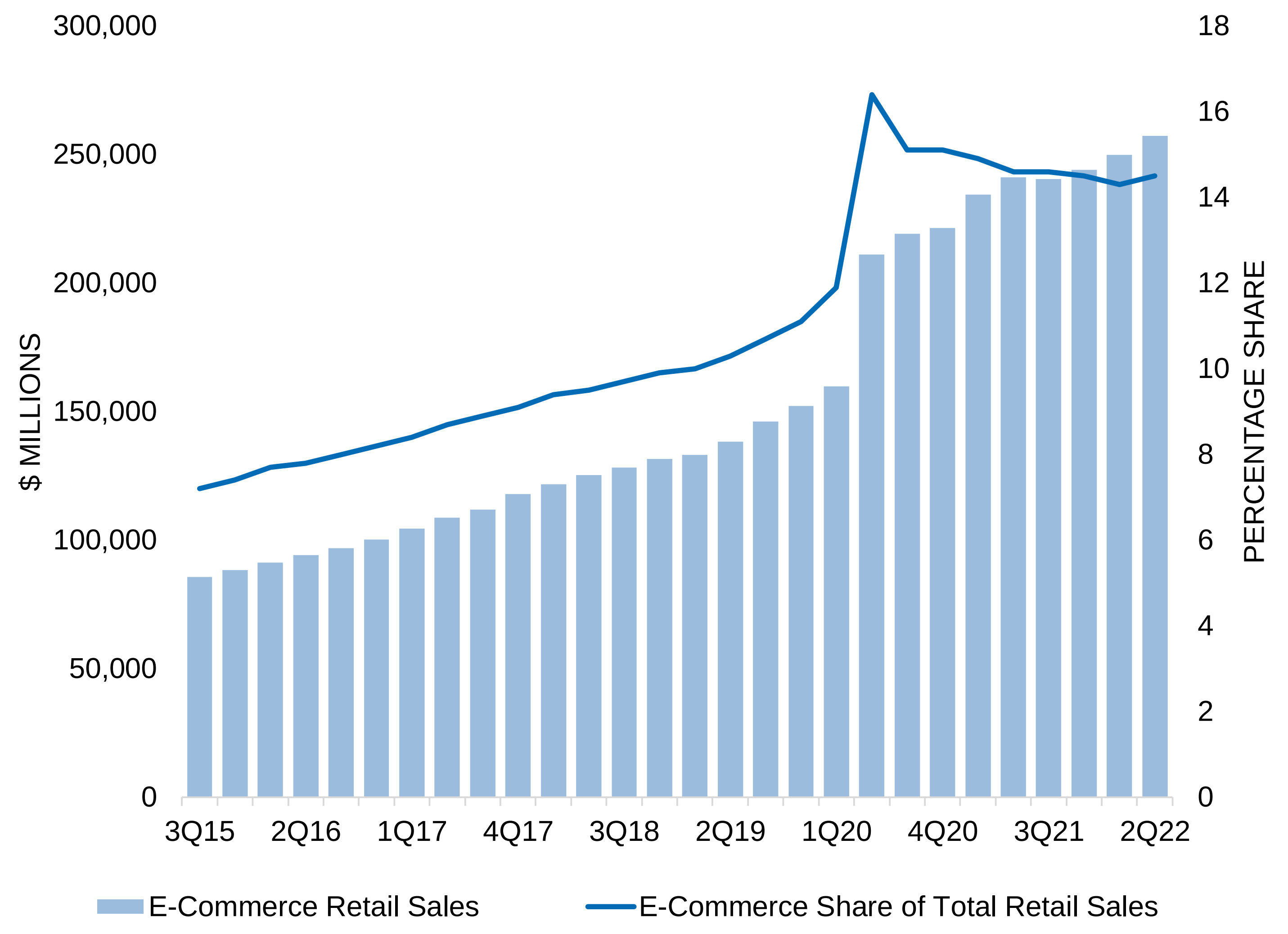


Source: Newmark SoCal Research, port websites

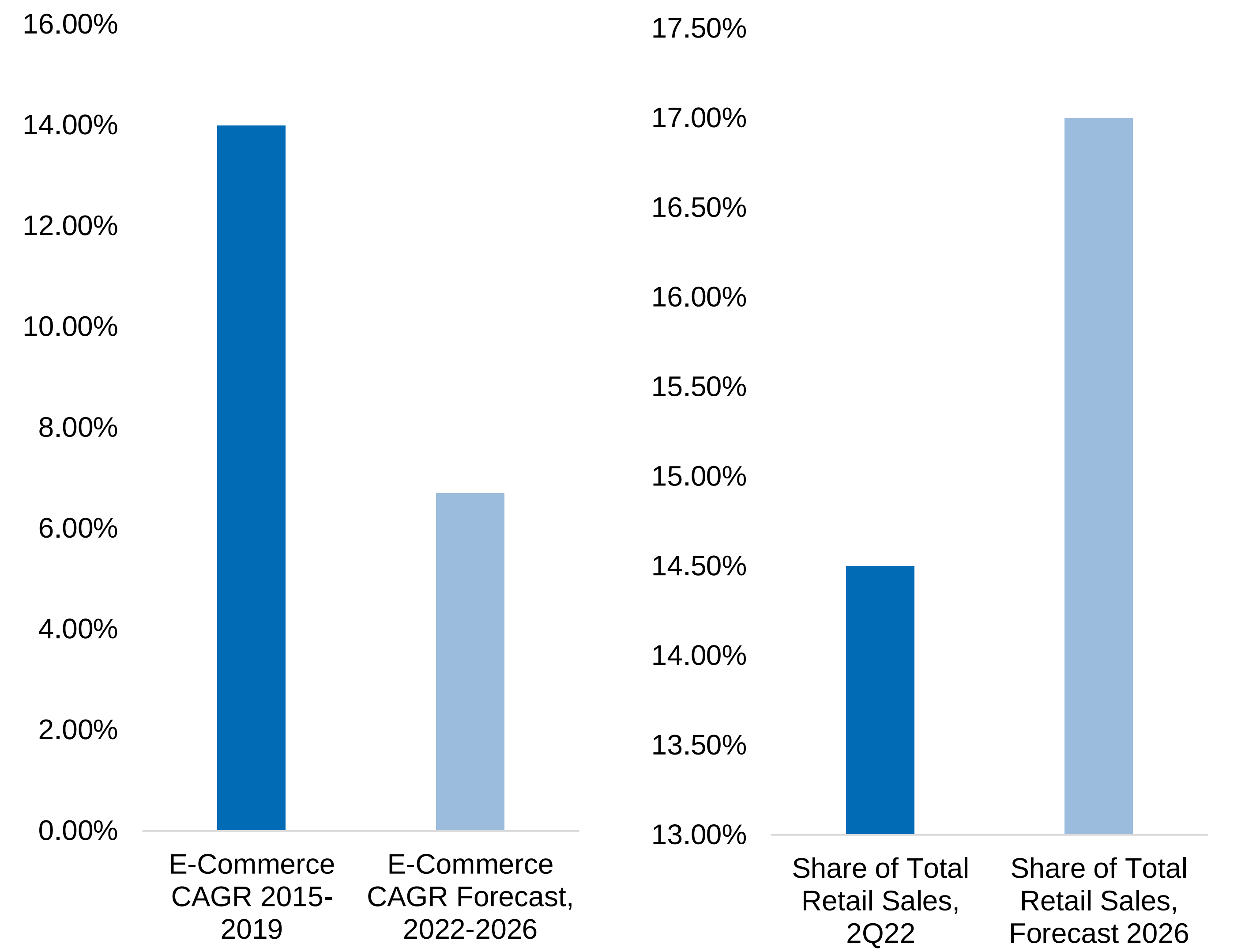
E-Commerce Will Continue to Be a Secular Growth Engine (at Moderating Rates)

During the pandemic, e-commerce sales soared, growing in two years what pre-pandemic trends signaled would take four. Uncertainty around the "stickiness" of consumer behavior has cleared; as spending normalizes back to mixing in-store, online and omnichannel patterns, forecasts for e-commerce sales and share of total retail expenditures have adjusted in turn. Even at lower annual rates than previously expected, e-commerce growth will drive industrial demand. An estimated 1.2 million square feet of logistics space is needed to support every additional $1.0 billion in e-commerce sales gains.

E-Commerce Sales and Share of Total Retail Sales



Historical and Forecasted E-Commerce Growth and Penetration Rate

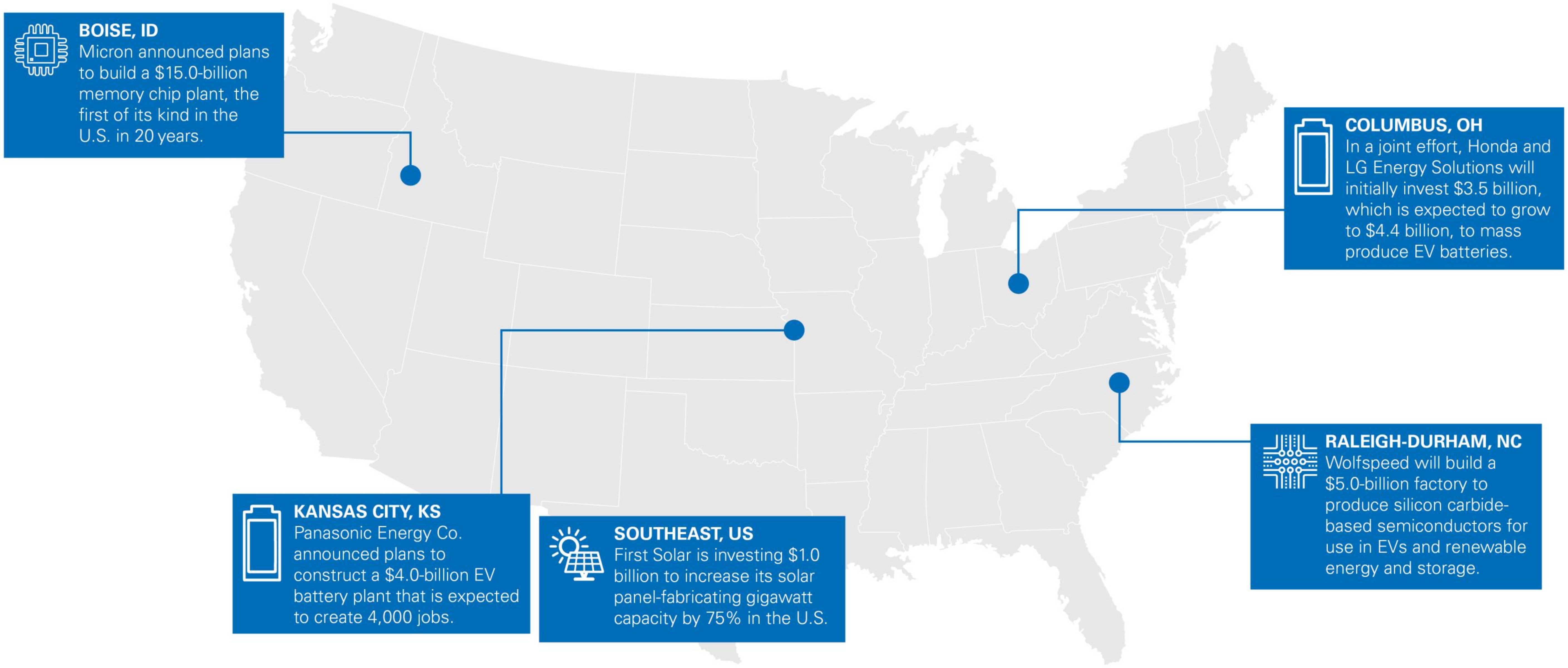


Source: U.S. Census Bureau, St. Louis FRED, Green Street, Prologis, Emarketer.

Manufacturing a Bright Spot Despite Lower Mid-Term Demand for Finished Goods

Manufacturers are increasingly looking to produce either in the U.S. or nearby to mitigate supply chain issues and reduce geopolitical risk. Recently passed legislation – Infrastructure Investment and Jobs Act, CHIPS and Science Act and Inflation Reduction Act – is poised to bolster manufacturing, particularly for the burgeoning semiconductor, electric vehicle (EV), and EV battery sectors.

Select New Manufacturing Announcements

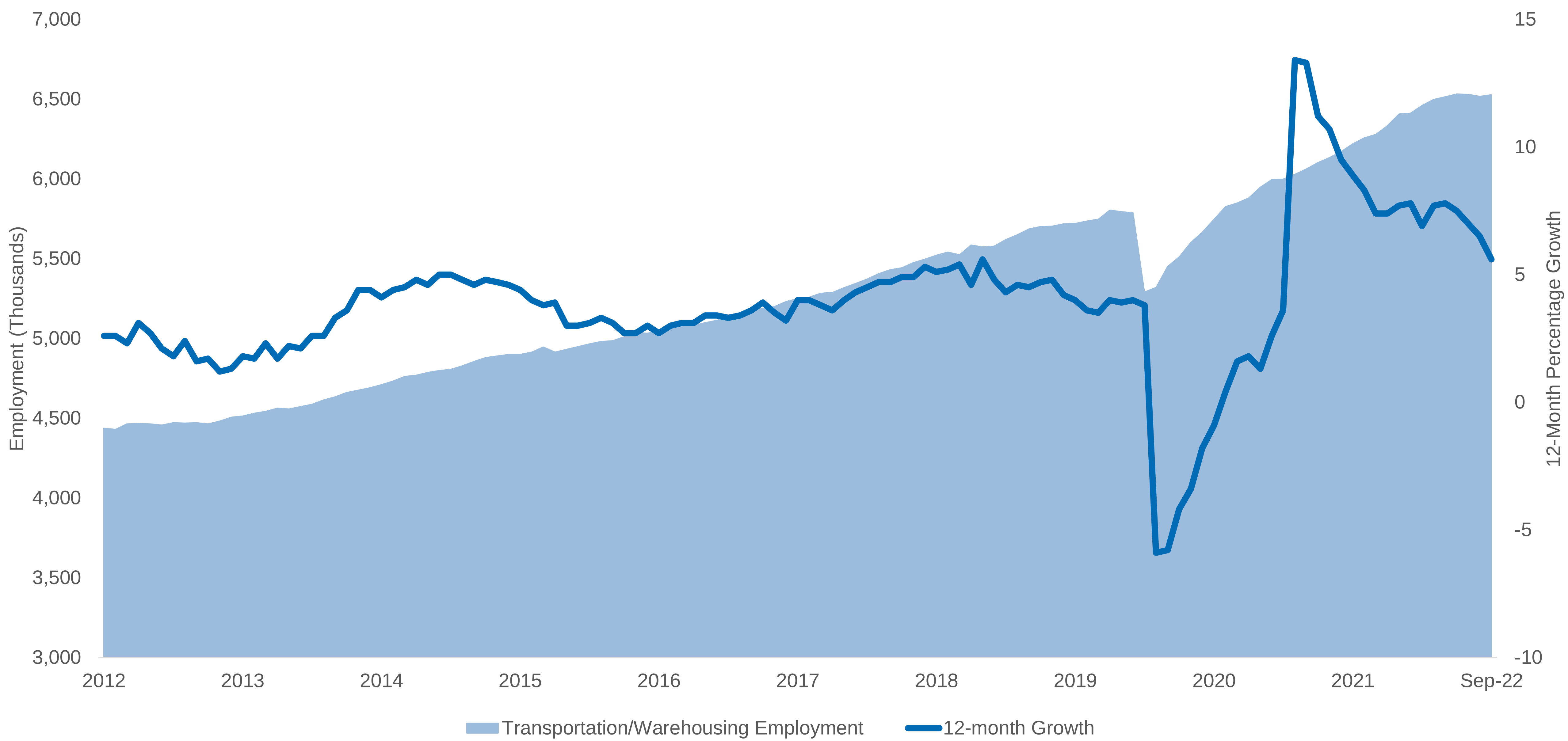


Source: Newmark Research, TrendForce, CNBC.com, Virtual Capitalist, S&P Global Market Intelligence, November 2022.

Industrial Employment is Plateauing; Finding Workers is Still a Primary Issue for Many

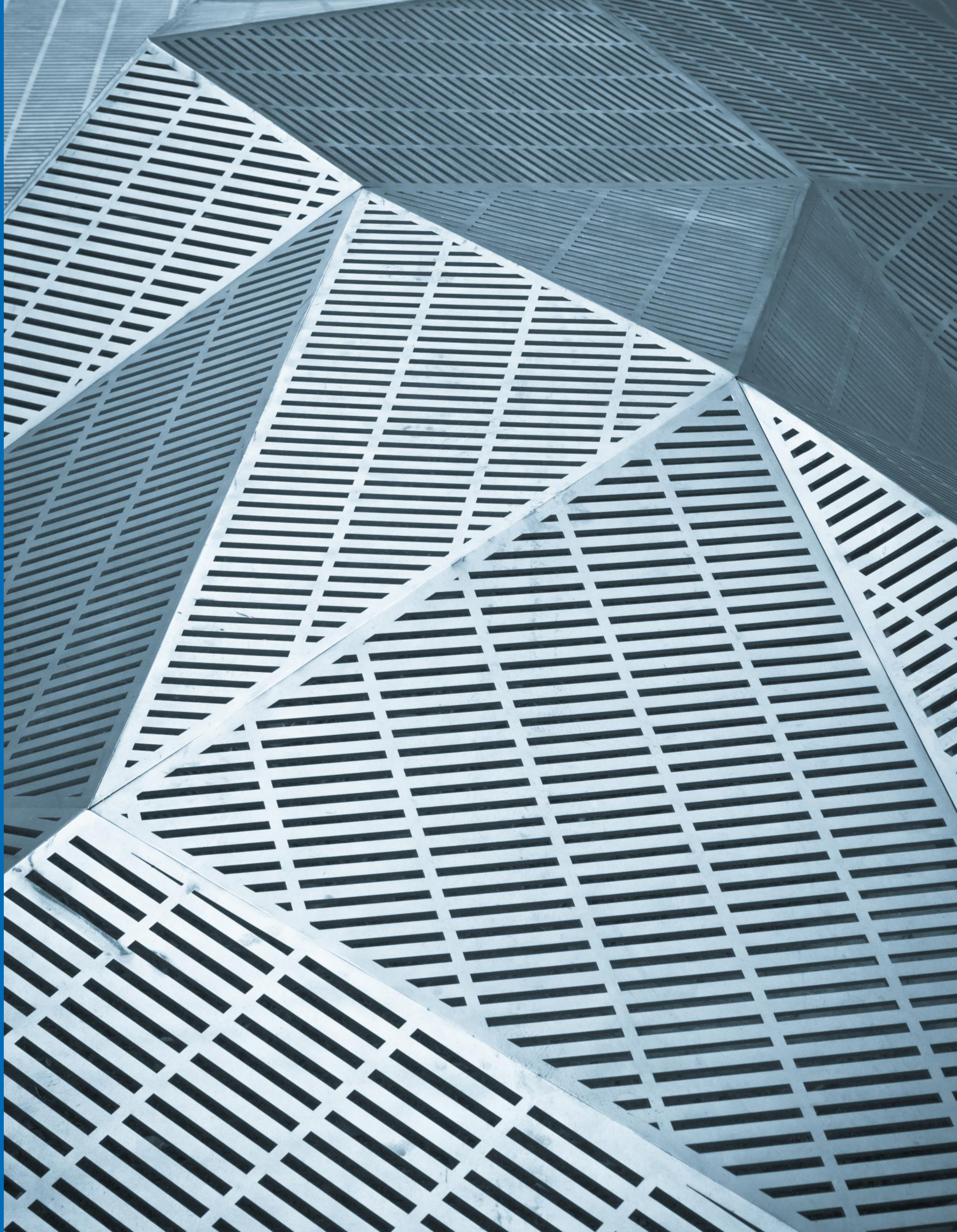
After an unprecedented surge in workforce growth during the pandemic, transportation and warehousing firms are reacting to a shifting economic landscape and adjusting labor needs. However, finding quality talent is still a challenge in many markets. To better appeal to new workers and retain existing ones, some companies are rethinking the working environment, with examples ranging from adding amenities to warehouses or choosing fully-conditioned facilities for worker comfort.

Total Employment and 12-Month Growth Rate, Transportation/Warehousing



Source: Bureau of Labor Statistics, Newmark Research

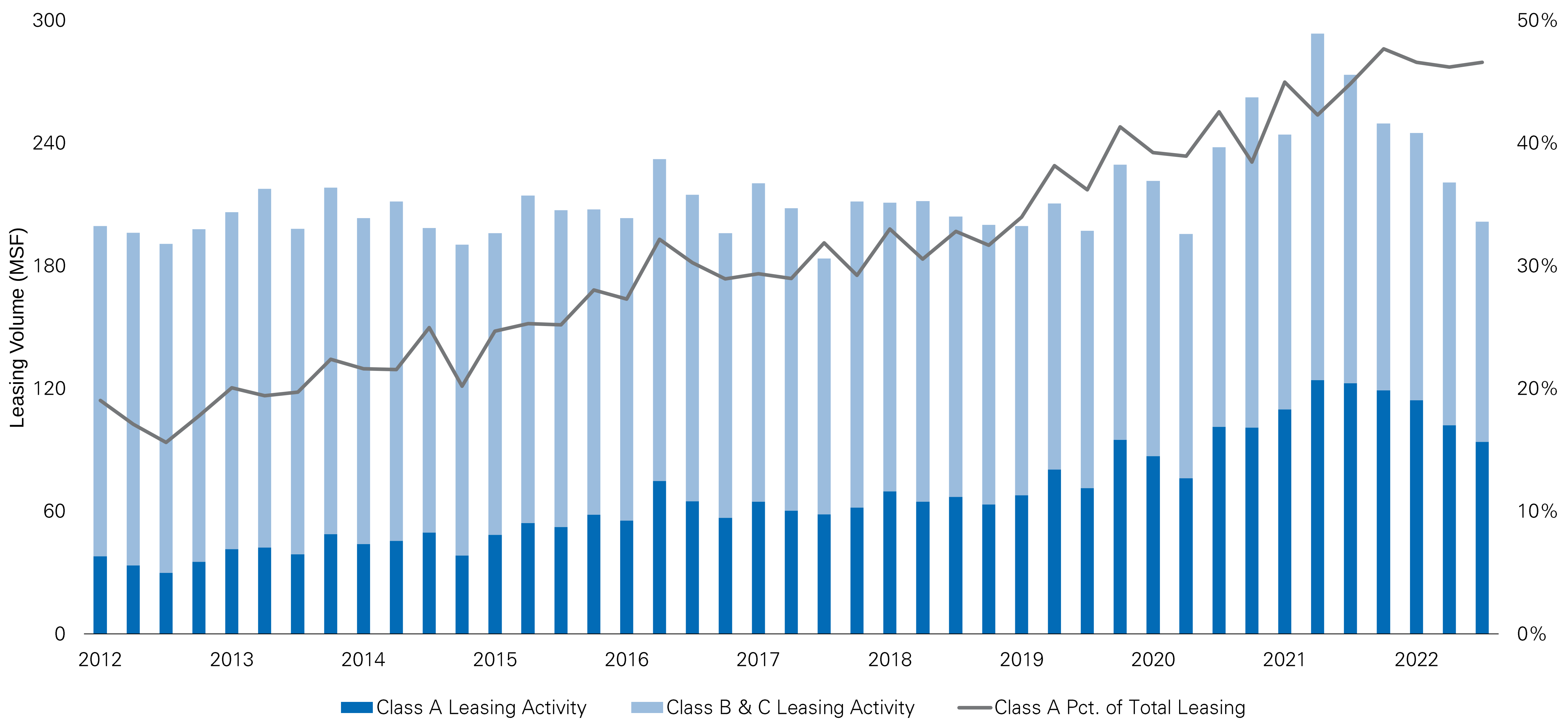
Industrial Leasing Market



Industrial Leasing Activity Softening; Still Strong

Fueled by strong consumer spending, industrial leasing activity likely reached a cyclical high of 293.7 million square feet in the second quarter of 2021. Leasing continues to be strong but has trended downward each quarter since the peak. Coming out of the Great Recession, e-commerce was a significant demand driver with occupiers turning more to Class A space in support of operational efficiency. With current economic headwinds, some occupiers are likely to be more cost-conscious and increasingly look at second-generation or lower-cost buildings to solve their space needs.

Industrial Leasing Activity by Class

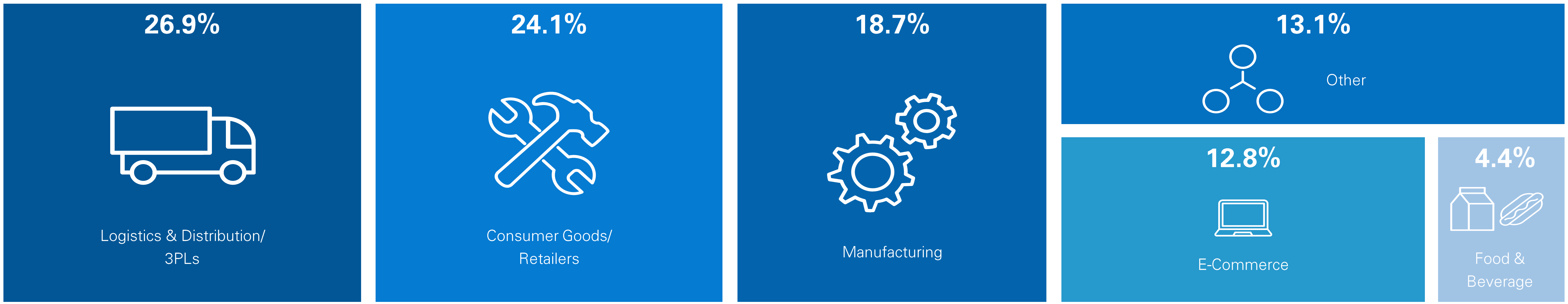


Source: Costar, Newmark Research
Class A is defined as buildings 100,000+ square feet with a clear height of 30'+ built since 2000.

Industrial Leasing Trends by Sector

Faced with a glut of inventory, many consumer goods companies and retailers are increasingly turning to third-party logistics to solve storage and fulfillment issues. This is the third consecutive quarter with logistics & distribution/3PLs in the top spot, followed closely by consumer goods/retailers. The reemergence of the manufacturing sector in the U.S. continues, driven strongly by electric vehicles, batteries, and semiconductors.

Top Industrial Leasing Activity By Sector, 3Q22



Notable 3Q22 Lease Transactions

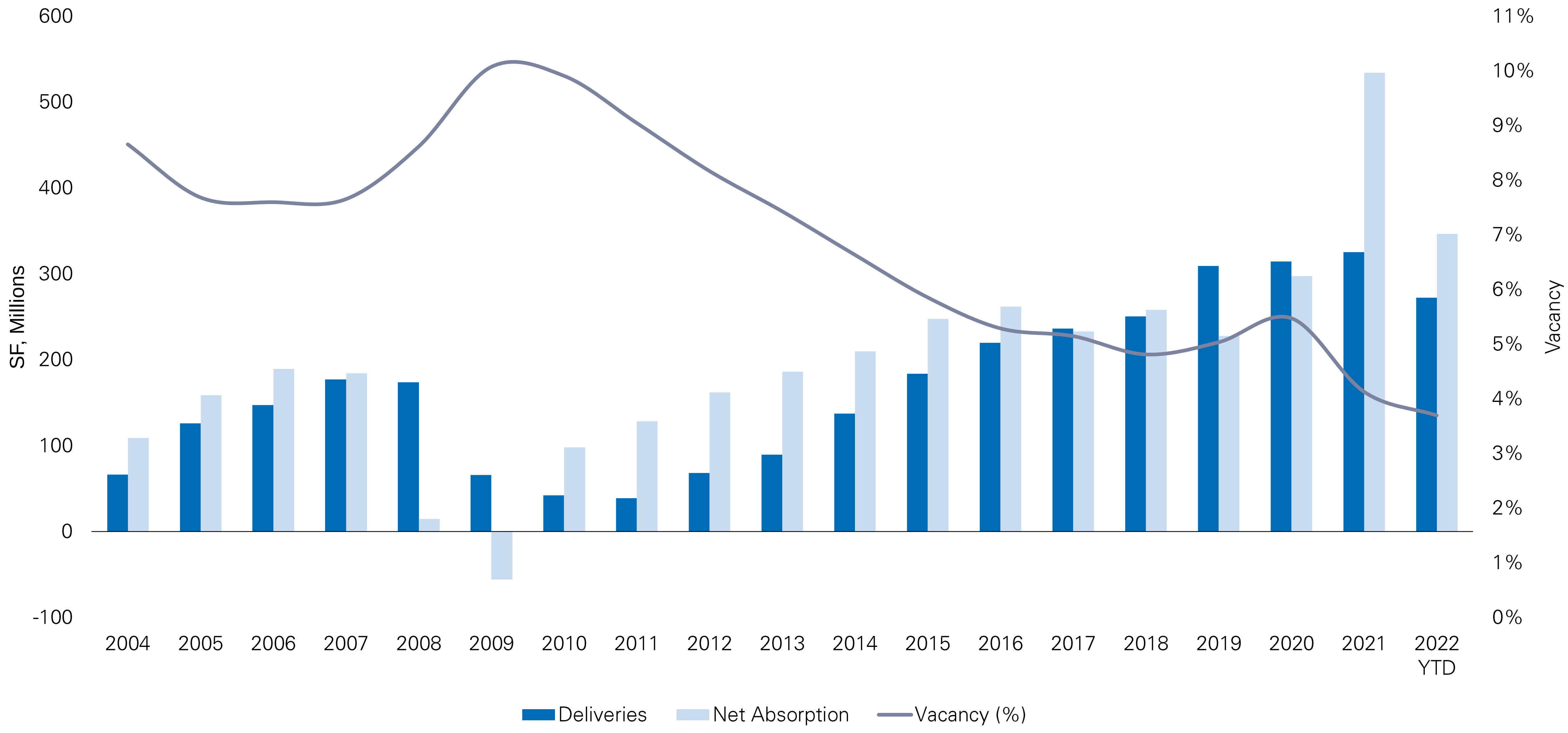
Tenant	Building	Market	Type	Square Feet	Industry
Amazon	1990 Ashland Rd.	Richmond	Direct New	3,248,265	E-Commerce
SHEIN USA	36500-37356 Cherry Valley Blvd.	Inland Empire	Direct New	1,827,582	E-Commerce
Target	5400 El Rivino Rd.	Inland Empire	Direct New	1,186,950	Retailer
Shopify	3000 Rand Blvd.	Northern New Jersey	Direct New	1,249,122	E-Commerce
Lowe’s	209 Dziak Dr.	I-81/I-78 Corridor	Direct New	1,229,136	Retailer

Source: Newmark Research, November 2022.
*Note: Based on top leasing activity in markets tracked by Newmark

Vacancy Setting New Record Lows Amid Continued Strong Demand

Demand has outpaced supply additions for eight consecutive quarters, squeezing vacancy to record lows. This trend is poised to reverse as deliveries accelerate over the coming quarters, bringing some measure of relief to a strained market.

Industrial Deliveries, Net Absorption, and Vacancy



Source: Newmark Research, November 2022.

United States Industrial Demand Rankings

For the sixth consecutive quarter, net absorption exceeded 100.0 million square feet. Since reaching a peak in the third quarter of 2021, net absorption has declined each quarter, but remains 65.0% above the trailing three-year pre-pandemic quarterly average. Excess inventories are likely to abate throughout the remainder of the year and into 2023. As inventories normalize, some cost-conscious occupiers will look to strategic markets in which they can easily secure space and the cost to carry inventory is lower than the national average. Some of these markets include Pennsylvania's I-81/I-78 Corridor, Dallas, Indianapolis and Chicago.

Net Absorption: Top 10 Markets

Market	2022 YTD Net Absorption (MSF)
Chicago	31.8
Dallas	25.3
Atlanta	21.8
Houston	19.9
Penn. I-81/78 Corridor	19.1
Phoenix	18.0
Philadelphia	11.7
Charlotte	10.9
Inland Empire, CA	10.5
Indianapolis	9.9
United States	**346.4**

Demand Growth: Top 10 Markets

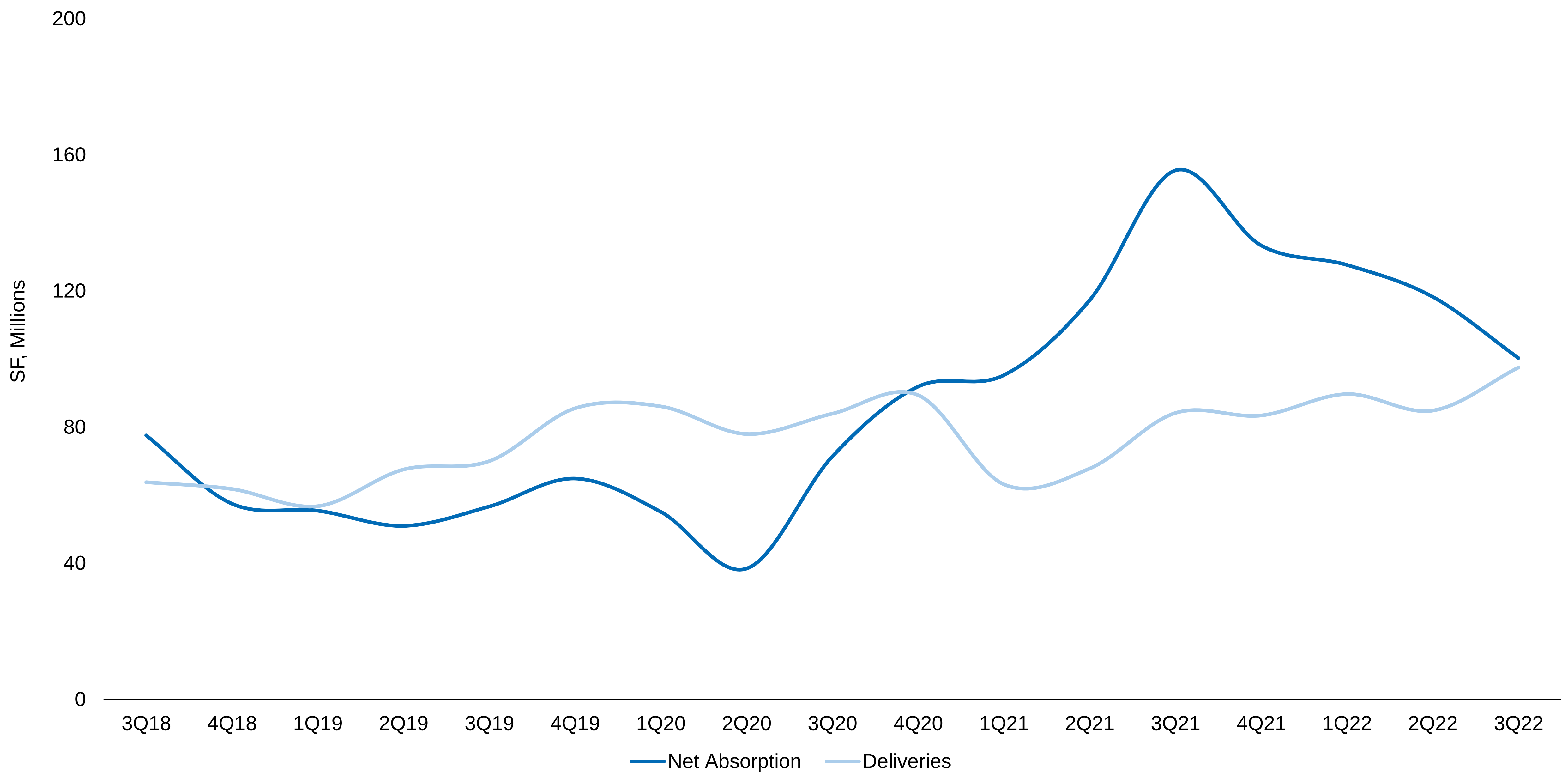
Market	2022 YTD Net Absorption (% of Occupied SF)
Austin	8.1%
Charleston, SC	7.2%
San Antonio	6.3%
Phoenix	5.4%
Penn. I-81/78 Corridor	4.6%
Las Vegas	4.0%
Atlanta	3.4%
Raleigh/Durham	3.3%
Jacksonville	3.1%
Houston	3.1%
United States	**2.2%**

Source: Newmark Research, November 2022

Industrial Demand and Supply at Near-Equilibrium

The supply and demand imbalance of the last two years neared equilibrium in the third quarter of 2022, which is the closest the two metrics have come since the fourth quarter of 2020. With the amount of square footage under construction – 689.4 million square feet – deliveries are expected to overtake net absorption in the coming quarters as consumer spending weakens amid persistently high inflation.

National Industrial Supply vs. Demand

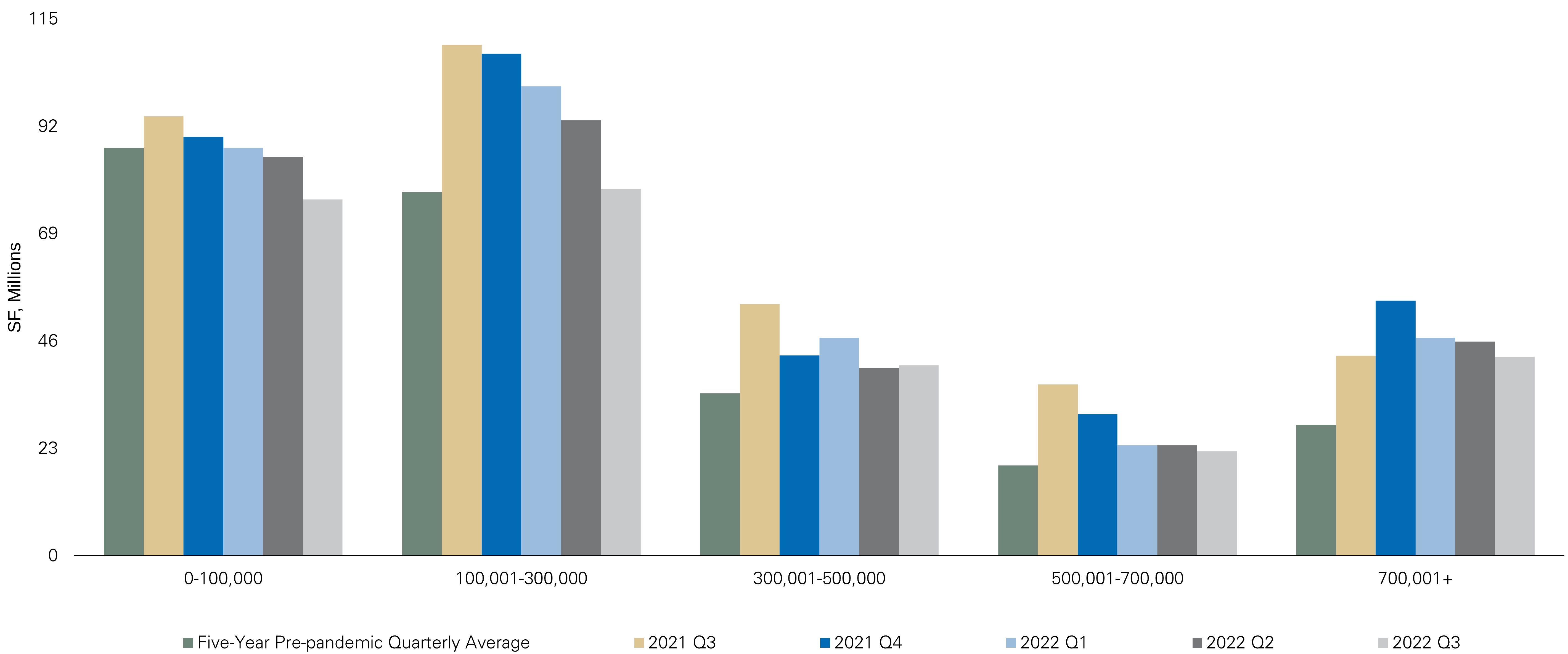


Source: Newmark Research, November 2022.

Leasing Activity Highest in Buildings Under 300,000 SF

While leasing activity is down by an average of 22.2% across all building size ranges since the third quarter of 2021, it is important to note that leasing remains strong by recent historical standards. The average leasing activity in the third quarter of 2022 is still an average of 14.6% higher across all building size ranges from the five-year pre-pandemic quarterly average, with all size ranges experiencing positive growth with the exception of the 0 to 100,000-square-foot building range.

Leasing Activity by Building Size

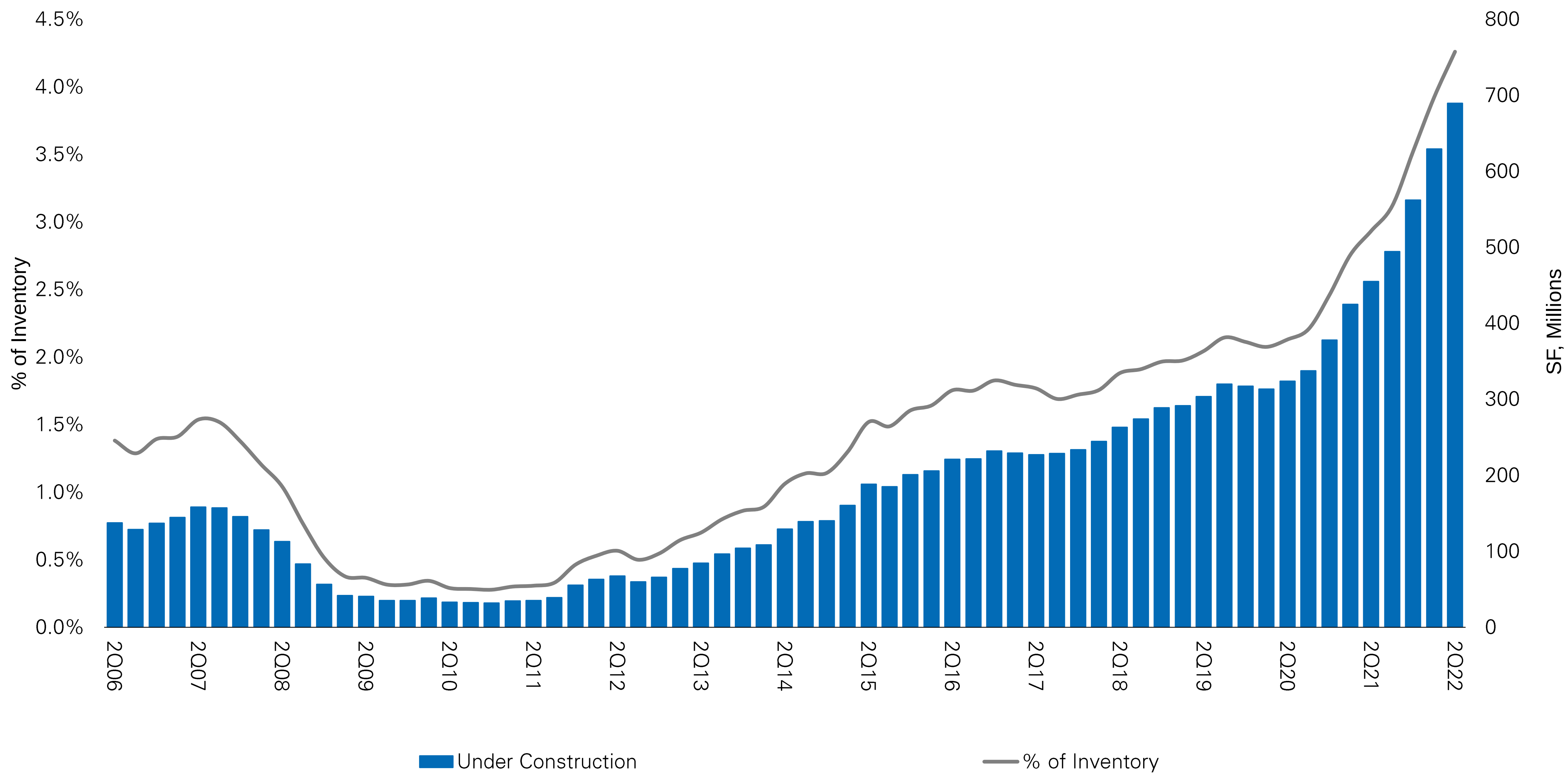


Source: Costar, Newmark Research

Industrial Supply Pipeline Expands to New Heights

The construction pipeline is at an historically high level, 260.0% higher than the pre-pandemic three-year annual average, as developers responded to strong tenant demand, low vacancy, and escalating rents. While many construction projects are still moving forward, economic uncertainty is causing some developers to transition to build-to-suit development, pause development completely or capitalize on historically high land values and exiting land positions entirely.

U.S. Industrial Under Construction and % of Inventory

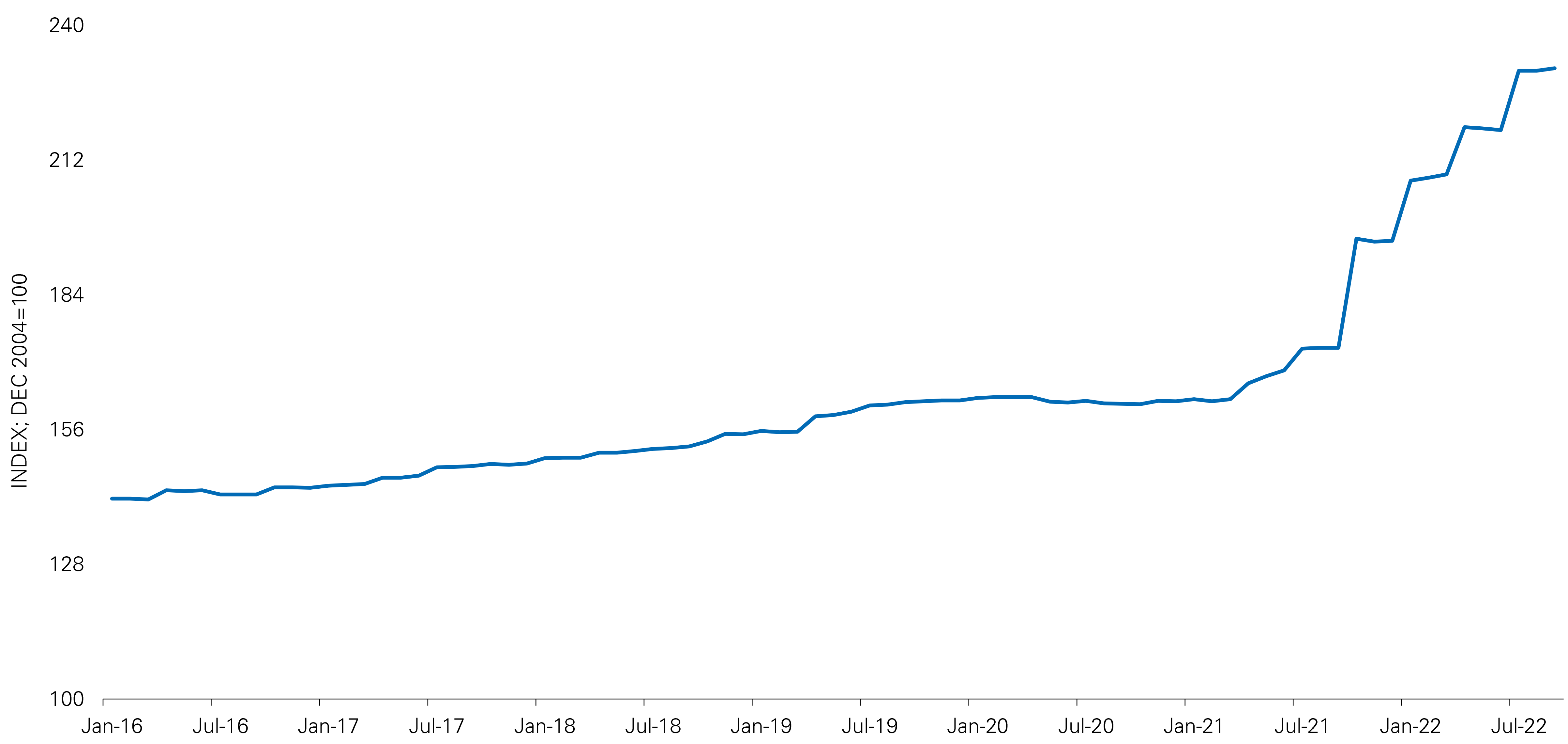


Source: Newmark Research, November 2022.

Costs for New Warehouse Construction Appear to Plateau

After a rapid rise in new warehouse construction costs from 2021 to 2022 – with land, labor and materials all contributing to the increase – the Producer Price Index for New Warehouse Building Construction appears to be plateauing. Higher costs and low vacancy will continue to apply upward pressure on rental rates for new warehouse space over the short term. Two factors are likely to provide some relief to construction costs over the coming quarters: an elevated construction pipeline delivering to a market as consumer demand cools, and rising interest rates increasing the costs for construction debt.

Producer Price Index: New Warehouse Building Construction

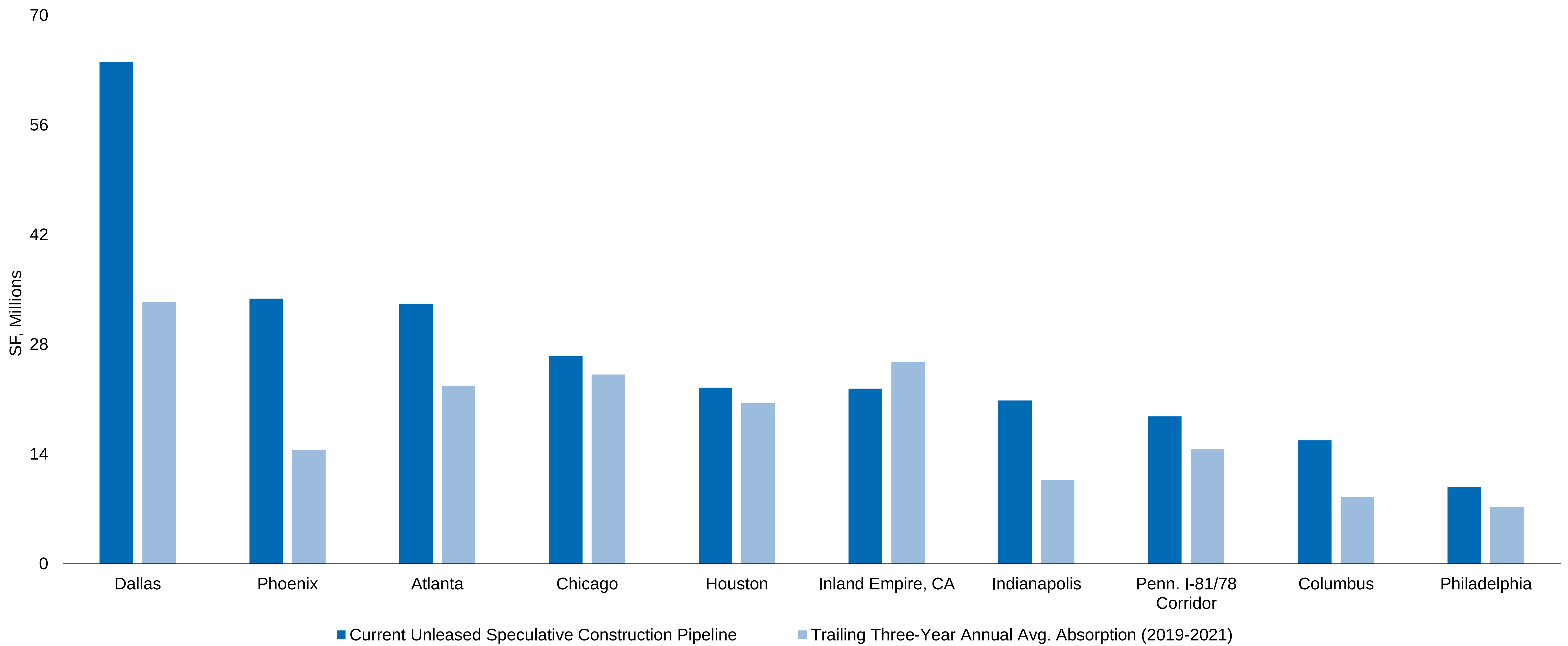


Source: Newmark Research, St Louis FRED, November 2022.

Oversupply? A Nuanced, Market-Specific Issue

Comparing recent historical demand to the unleased construction pipeline reveals some markets have more than twice the annual average absorption delivering soon. With national leasing activity continuing to decelerate as high inflation outstrips earnings, several of these markets are likely to be vulnerable in the near term to rising vacancy and slower rent growth, particularly as some tenants look to consolidate space via subleasing.

Unleased Speculative Construction Pipeline and Trailing Three-Year Annual Average Absorption (2019-2021)

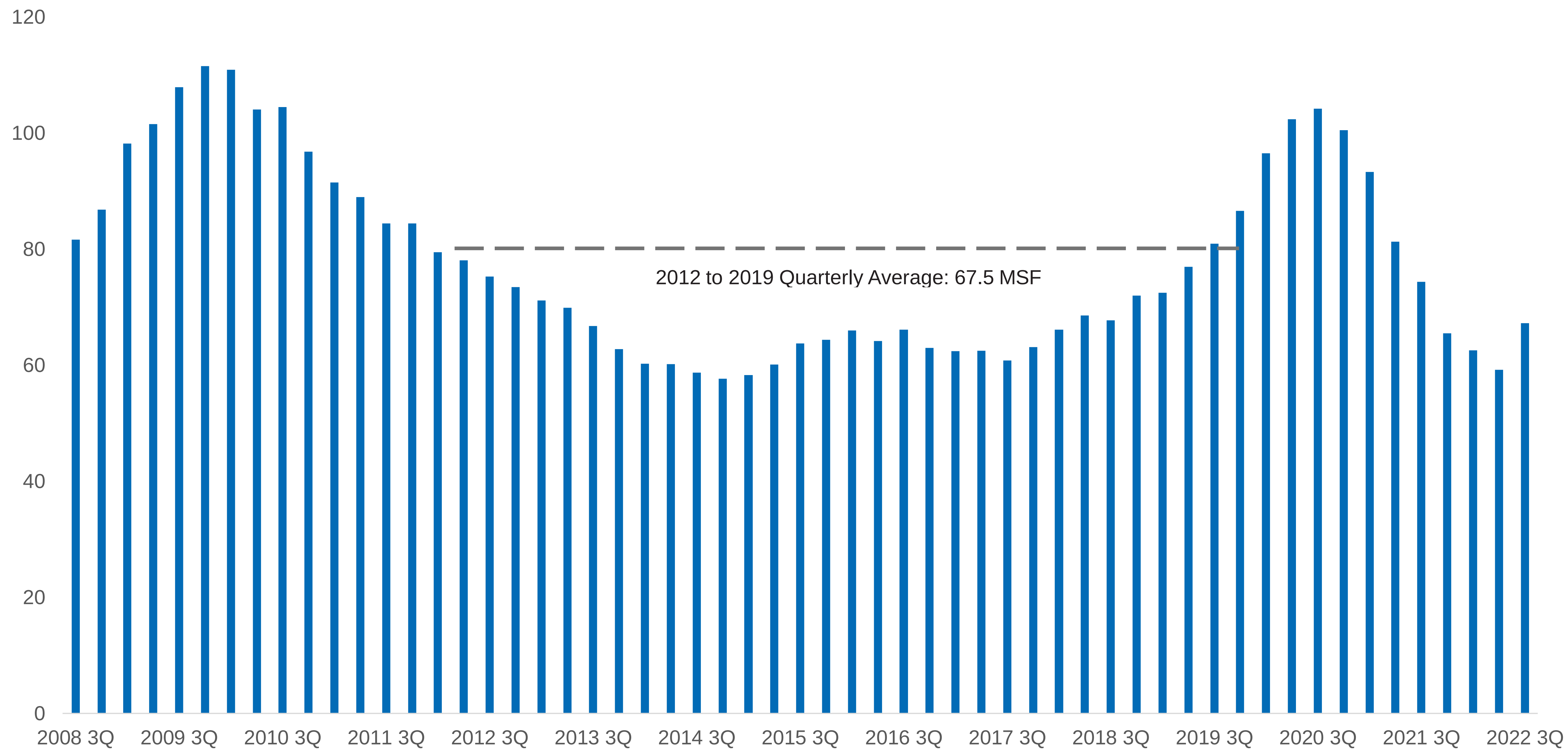


Source: Newmark Research, November 2022.

Industrial Sublease Volume Hovers at Long-Term Historical Average (For Now)

Sublease volume was in line with pre-pandemic historical levels in the third quarter of 2022 and significantly less than volume charted during the height of the pandemic, but the rate at which subleases were added to the market provoked one of the highest quarterly increases on record (14.0%). Rising interest rates, an inflationary environment and declining consumer demand are driving some firms to control costs via supply chain optimization and consolidation, which includes putting excess or underutilized space on the market for sublease. Sublease volume will continue to increase into 2023.

Industrial Sublease Volume (MSF)



Source: Newmark Research

United States Industrial Vacancy Rankings

Both the lowest vacancy and largest vacancy decline rankings continue to largely be port-serving markets and strong population-growth Sunbelt markets, as well as some regionally significant inland markets. Vacancy is likely at a cyclical low and will rise over the coming year as large amounts of construction delivers to the market.

Lowest Vacancy: Top 10 Markets

Market	3Q22 Vacancy
Inland Empire, CA	0.9%
Los Angeles	0.9%
Orange County, CA	1.8%
Las Vegas	2.1%
Salt Lake City	2.2%
Charleston, SC	2.4%
New Jersey Northern	2.6%
Milwaukee	2.7%
Jacksonville	2.7%
Sacramento	2.7%
United States	**3.7%**

Largest Vacancy Decline: Top 10 Markets

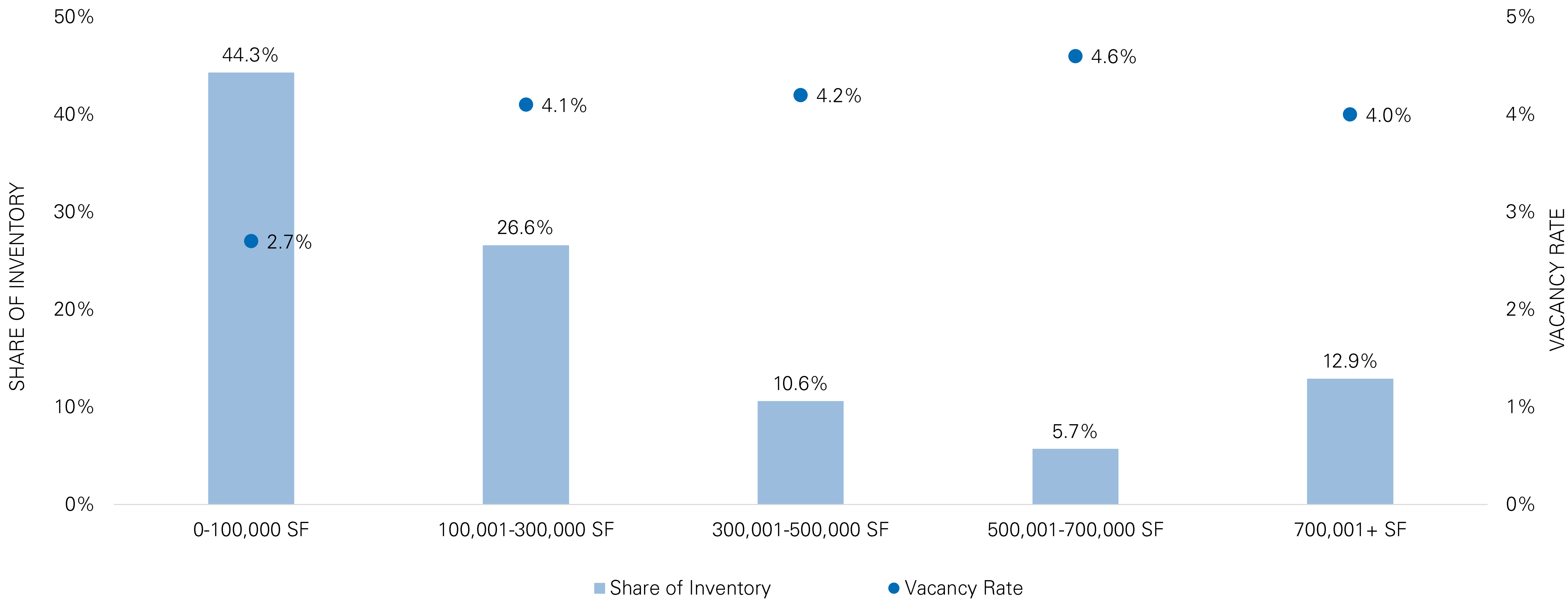
Market	3Q21-3Q22 Vacancy Change (BPS)
Baltimore	-446
Penn. I-81/78 Corridor	-334
Greenville, SC	-280
Cincinnati	-257
Silicon Valley	-208
San Antonio	-190
Oakland/East Bay	-190
Chicago	-161
Houston	-150
San Diego	-141
United States	**-83**

Source: Newmark Research, November 2022.

Buildings Under 100,000 SF Have the Lowest Vacancy of Any Size Segment

All 49 industrial markets tracked continue to experience single-digit vacancy with only 10 of those markets seeing an increase in vacancy year-over-year. The 0 to 100,000-square-foot segment represents the largest share of total inventory and has the lowest vacancy, but this segment is the lowest both in terms of share of under-construction square feet and delivered square feet in the third quarter of 2022, 7.0% and 9.4%, respectively.

3Q22 Industrial Vacancy Rate by Building Size



Source: Newmark Research, November 2022

United States Industrial Asking Rent Rankings

Robust rent growth continues nationally with port-serving markets or markets within a one-day truck drive seeing the largest increases. With ebbing consumer demand, occupiers may be more willing to choose markets that offer substantial discounts in terms of occupier costs without too significant a hit to delivery speeds.

Highest Asking Rent: Top 10 Markets

Market	3Q22
Silicon Valley	$28.07
Los Angeles	$19.30
Oakland/East Bay	$18.95
Orange County, CA	$18.73
Inland Empire, CA	$17.74
Long Island	$16.64
San Diego	$15.07
Boston	$13.88
Austin	$13.41
New Jersey Northern	$13.22
United States	**$9.75**

Largest Asking Rent Growth: Top 10 Markets

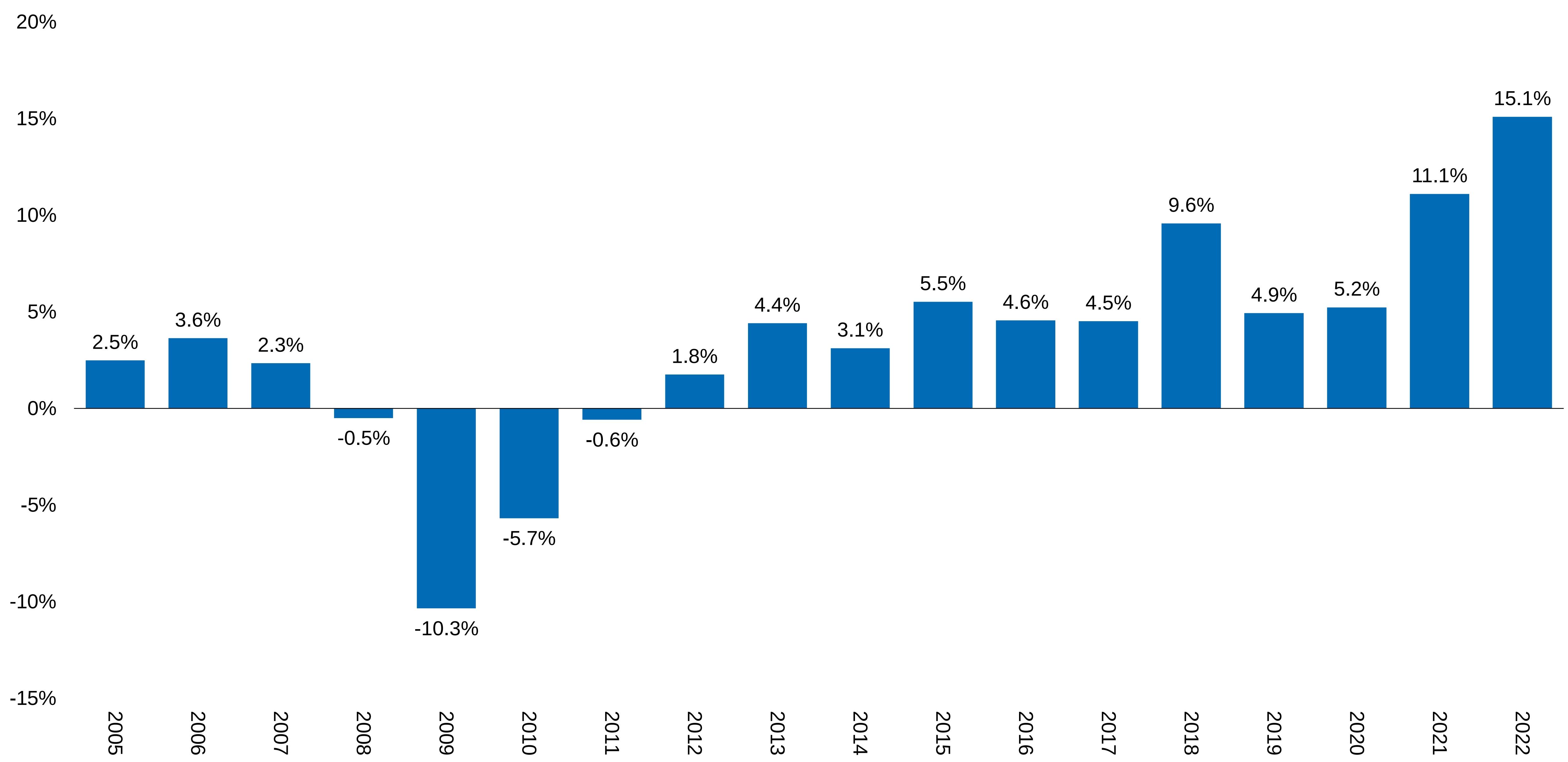
Market	3Q21-3Q22 Pct. Change
Inland Empire, CA	79.2%
Phoenix	53.3%
Los Angeles	53.1%
Miami	50.8%
Las Vegas	43.3%
Jacksonville	31.1%
Atlanta	27.4%
Palm Beach	26.8%
Orange County, CA	24.8%
Oakland/East Bay	23.1%
United States	**15.1%**

Source: Newmark Research, November 2022
*Note: An outsized share of the Silicon Valley industrial market is R&D space which contributes to the relatively high overall asking rent.

Annual Industrial Asking Rent Growth Breaks Record

Asking rent grew by an impressive 15.1% year over year, supported by low vacancy, pent-up occupier demand, rising construction costs and construction delivery delays. Rent growth is expected to be more muted nationally as a wave of new construction delivers to the market in late 2022 through 2023.

Year-over-Year Industrial Asking Rent Growth

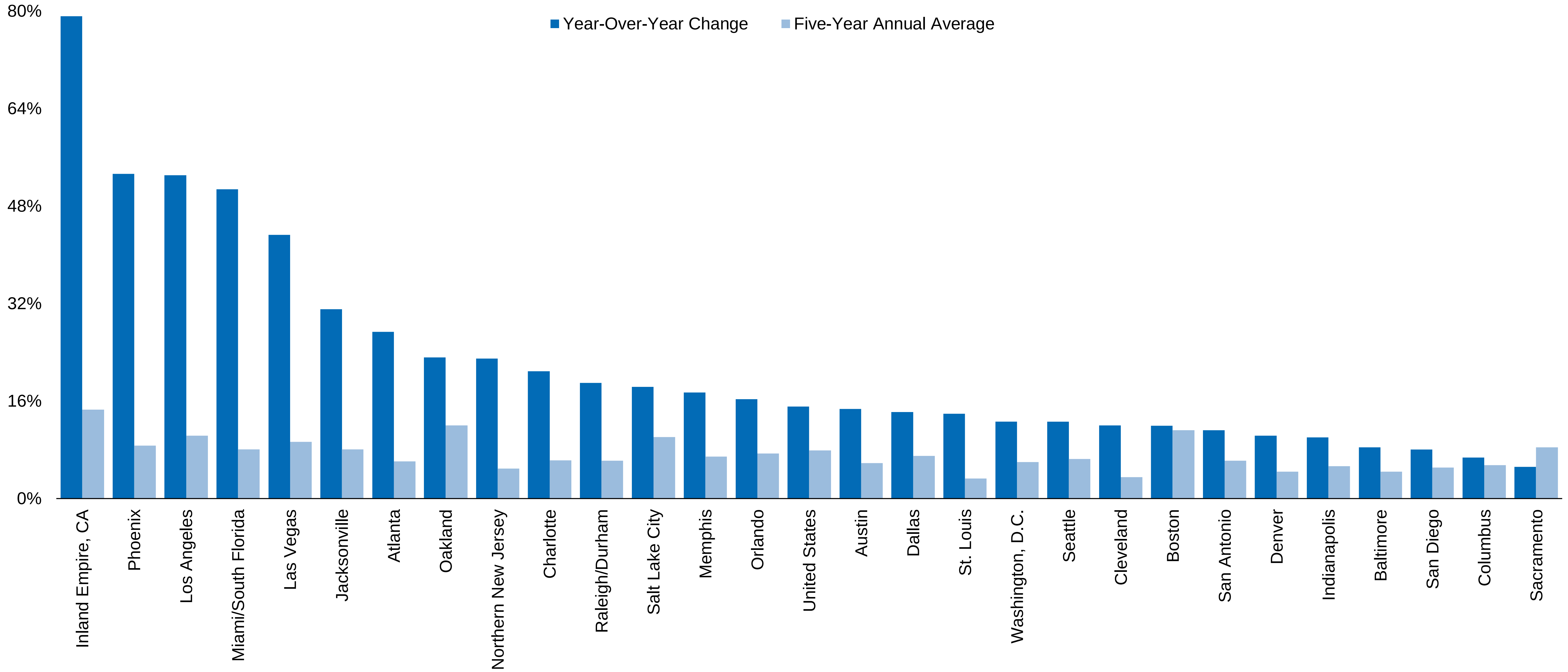


Source: Newmark Research, November 2022.

Industrial Rent Growth Varies Significantly Across Markets

The Southern California port-serving markets of the Inland Empire and Los Angeles and markets within a one-day truck drive (Las Vegas and Phoenix) are experiencing the strongest year-over-year rent growth. A global supply chain reshuffling with Gulf and Eastern Coast ports seeing an increasing portion of port activity market share will relieve some pressure on the supply-constrained Southern California markets with rent growth likely to come down from the current elevated levels.

Market Rent Growth, Annual and Historical Average

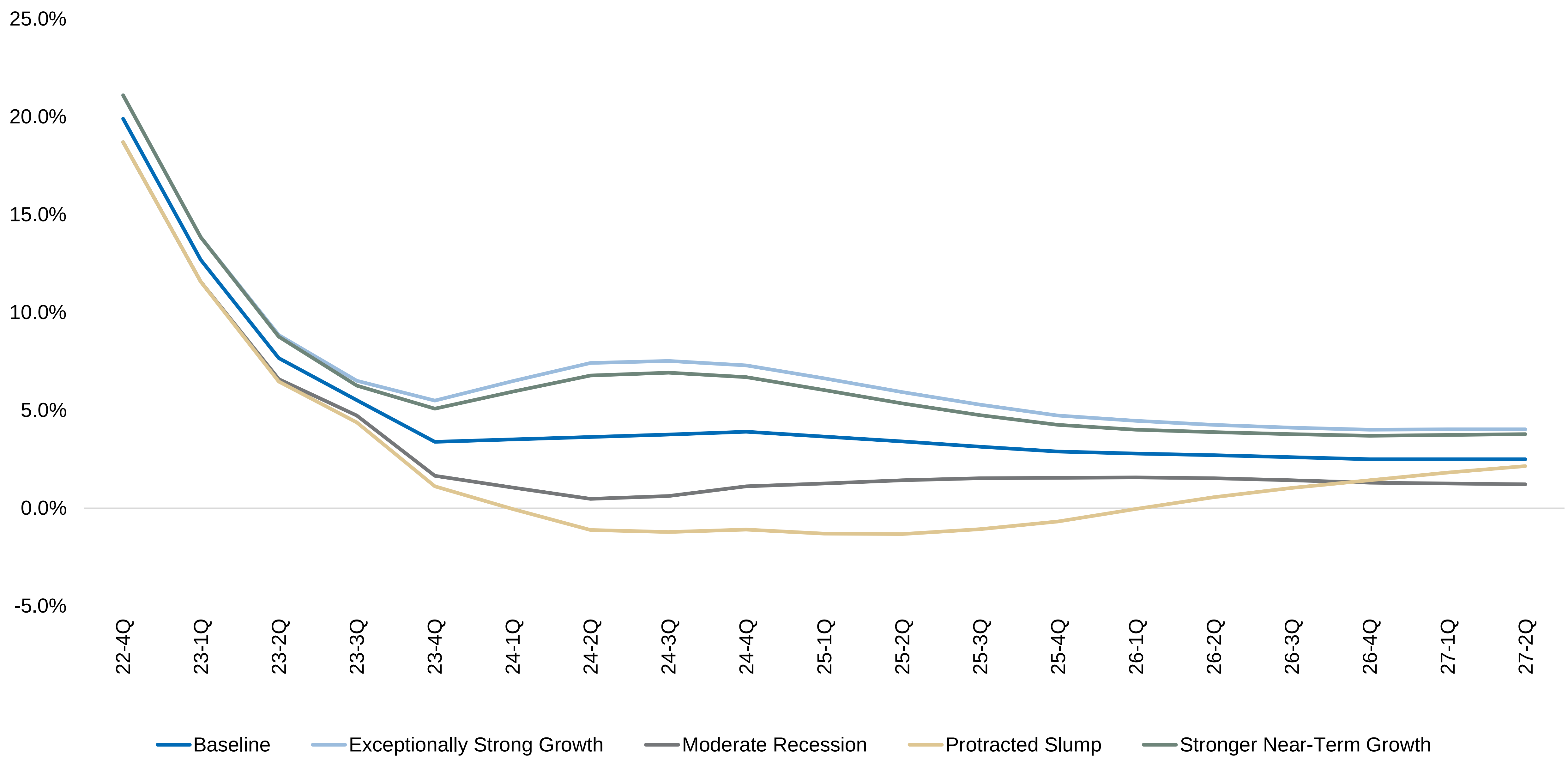


Source: Newmark Research

Green Street Industrial Asking Rent Forecast

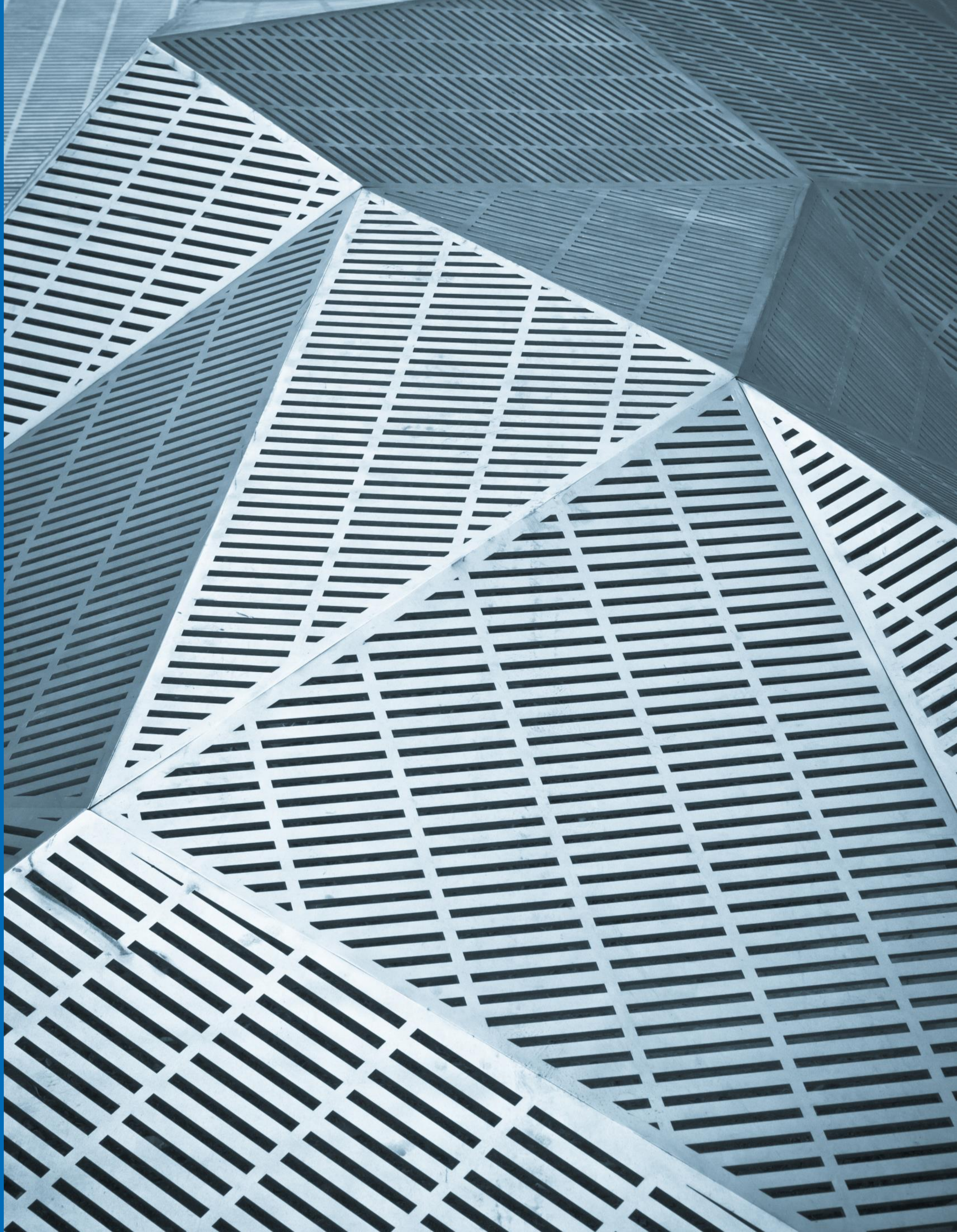
With numerous economic headwinds, the U.S. industrial market is entering into a period of uncertainty. Green Street is projecting much lower industrial rent growth for the top 50 industrial markets combined than seen in the last two years of the current economic expansion. The various forecast scenarios show waning, but still-strong rent growth throughout 2023 before rents return to more historically normalized rent growth scenarios through 2024 to 2027.

Top 50 Industrial Markets Rent Growth Forecast



Source: Newmark Research, Green Street, November 2022.

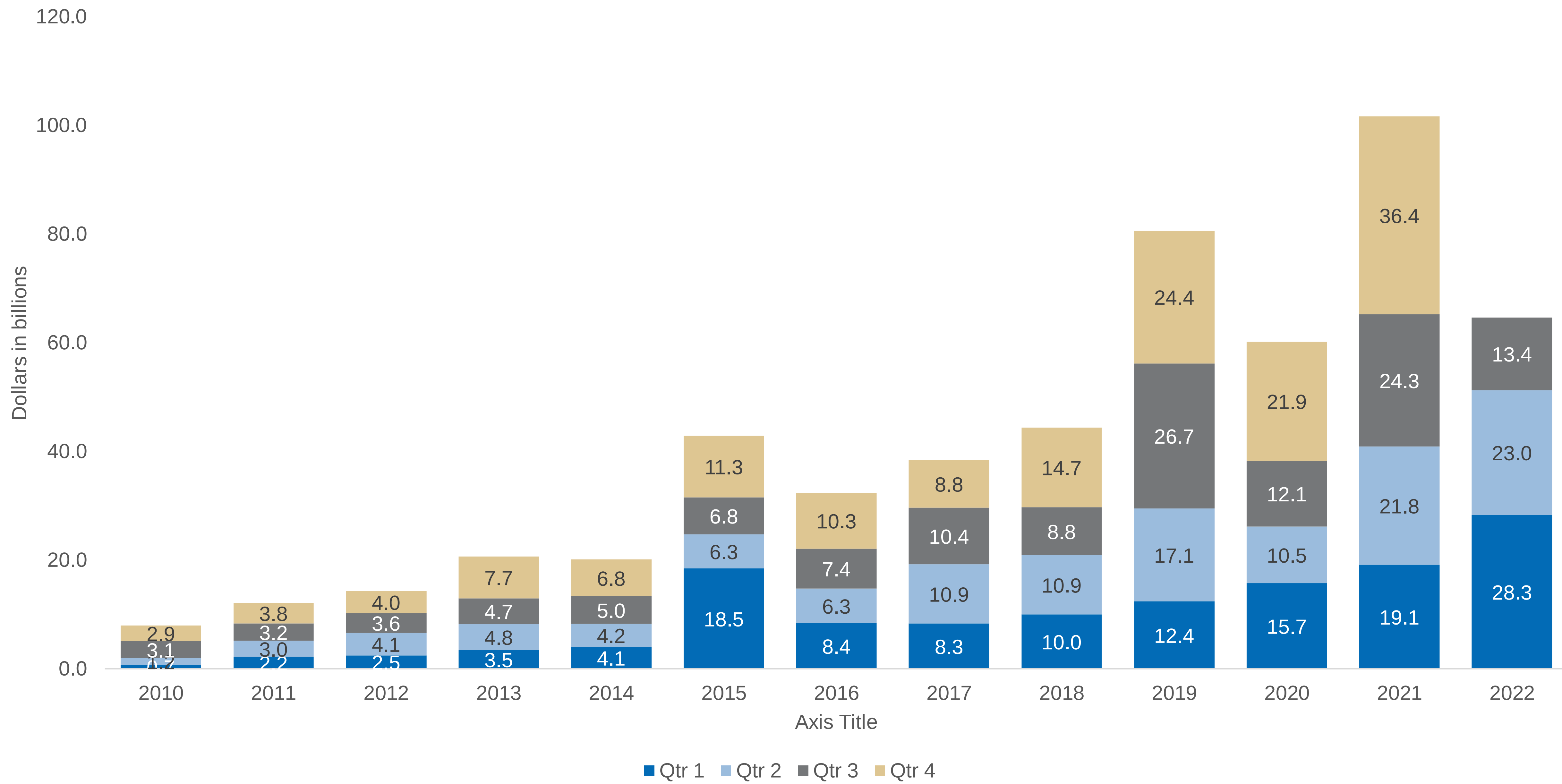
Industrial Capital Markets



Industrial Debt Originations Down 45% YoY in The Third Quarter of 2022

Year-to-date, debt originations are essentially flat with 2021, but this is a product of extremely strong activity in the first half of the year.

Industrial Debt Origination Volume*

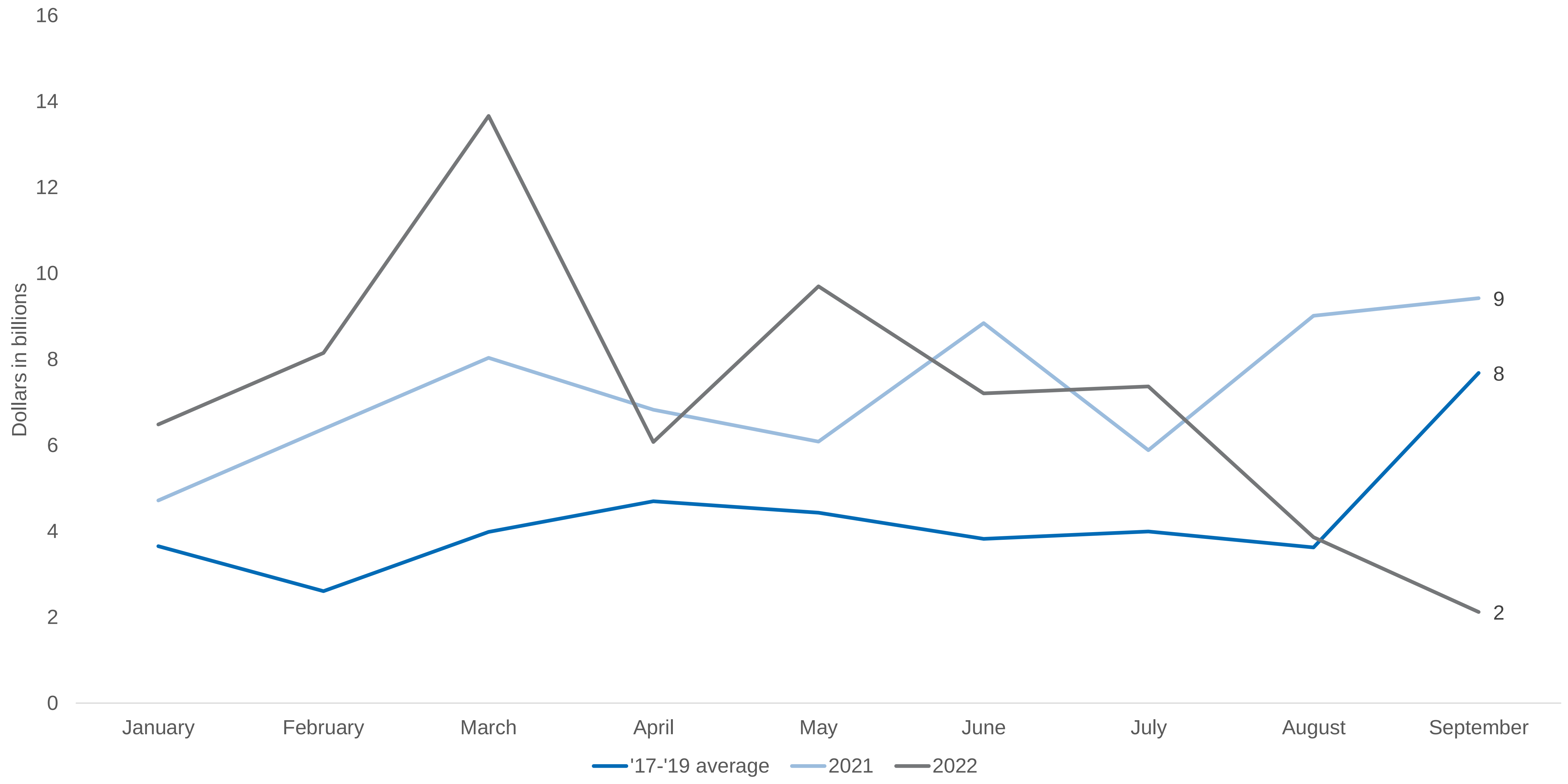


Source: RCA, Newmark Research
*Excludes construction loans

Origination Activity Has Decelerated Sharply Since May

While origination volumes are likely to be revised upwards as the data matures, it will almost certainly continue to show a sharp decline both sequentially and relative both to the 2021 and pre-pandemic. Refinancing activity has become uneconomic amid rising rates while acquisition activity has also faltered.

Monthly Industrial Debt Originations Volume*

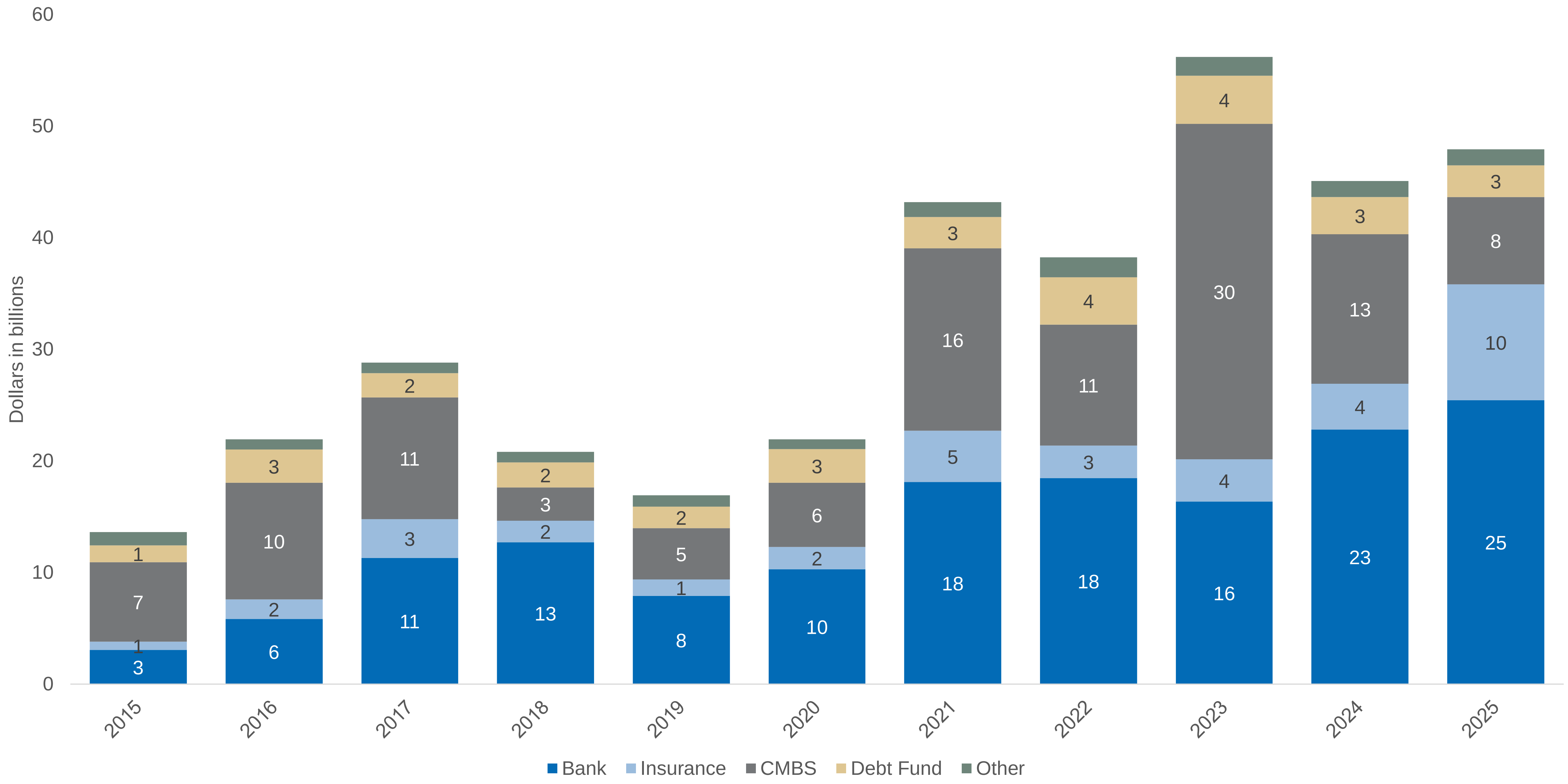


Source: RCA, Newmark Research
*Excludes construction loans

Record Debt Maturities in Next Several Years

83% of the debt maturing in 2023 was originally issued in 2020 at record low debt costs.

Industrial Loan Maturities*

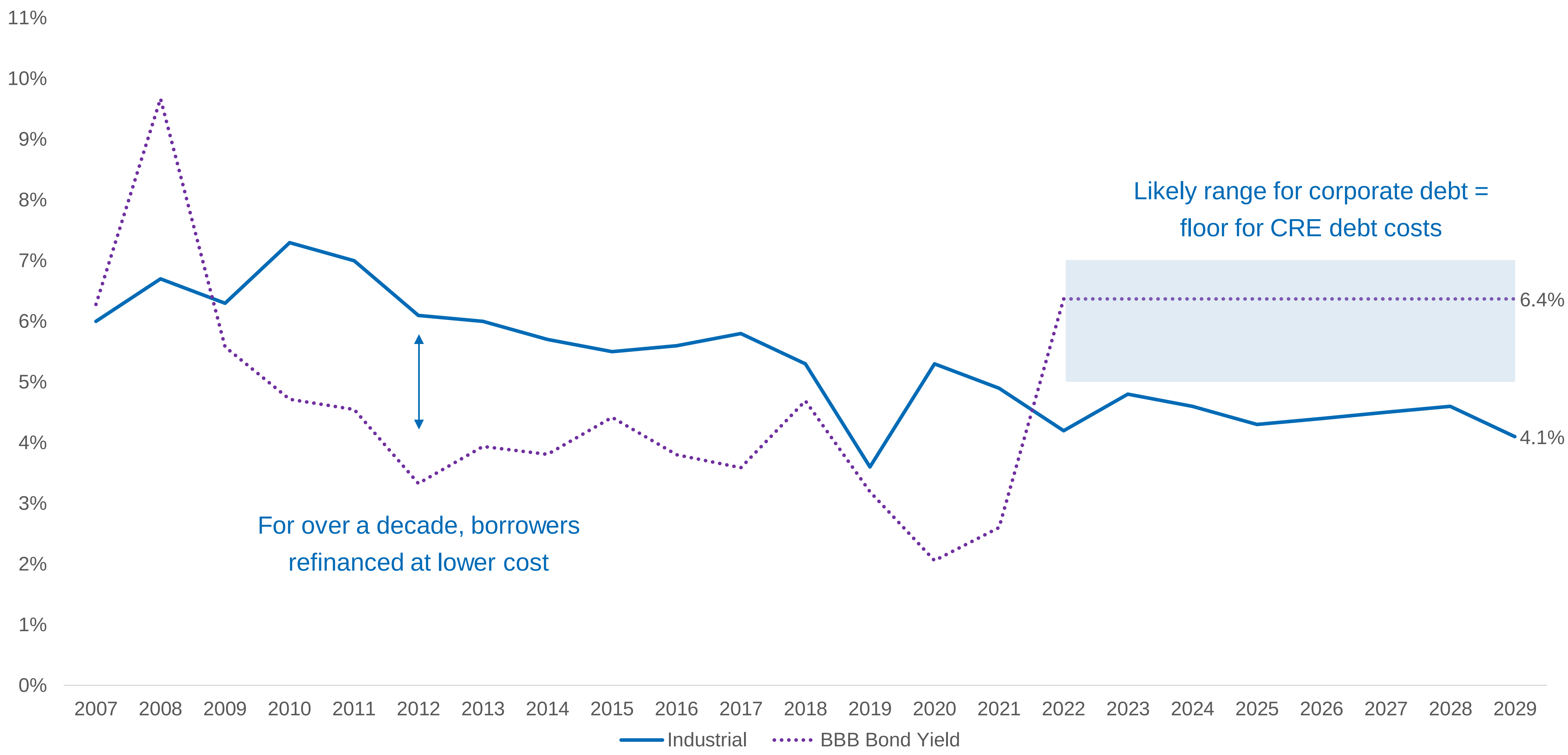


Source: RCA, Newmark Research
*Excludes construction loans

Borrowers Will Face Starkly Higher Costs as Loans Mature

Higher debt costs on refinancing will lower return for all and will give rise to a range of reactions within the market. Some borrowers will choose to pay down their debt, especially if the asset has appreciated meaningfully. Others will refinance the principal or partially pay down, whereas in a lower cost of capital environment, they would have re-levered. Still others will be unable to make the math work and will need to pursue a loan modification, return the keys and/or source rescue equity at an appropriate price point.

Weighted Average Interest Rate on Maturing Debt vs. Prevailing Bond Yields

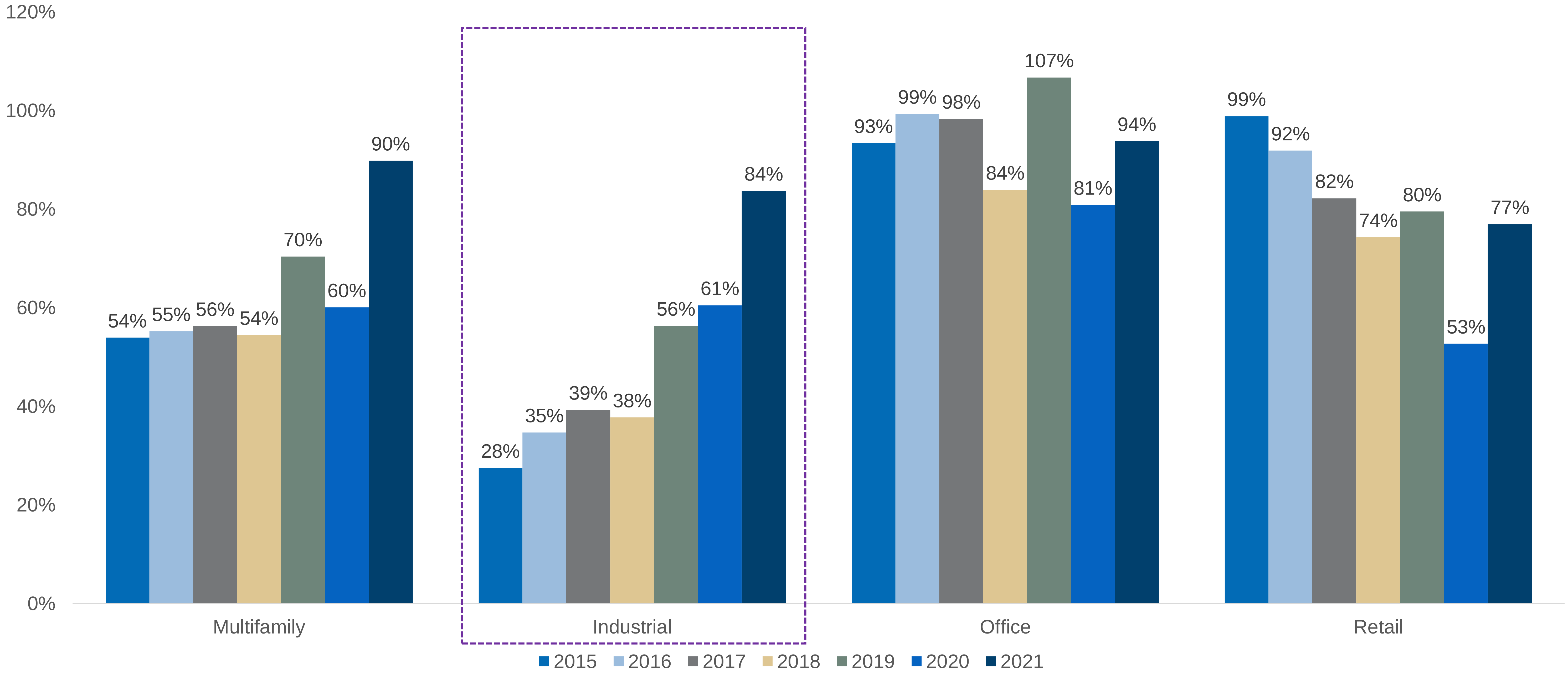


Source: RCA, ICE Data Indices, Newmark Research

Strong Price Appreciation Will Protect Against Industrial Distress

Industrial values have risen tremendously since 2015. As a result, most recent loan vintages have organically deleveraged even when accounting for the recent reduction in market values. That said, industrial loans originated in 2021 are at greater risk, having been struck at the top of the market though this is counterbalanced by further off maturity dates.

Mark-to-Market* Loan-to-Value Ratio by Year Debt Originated

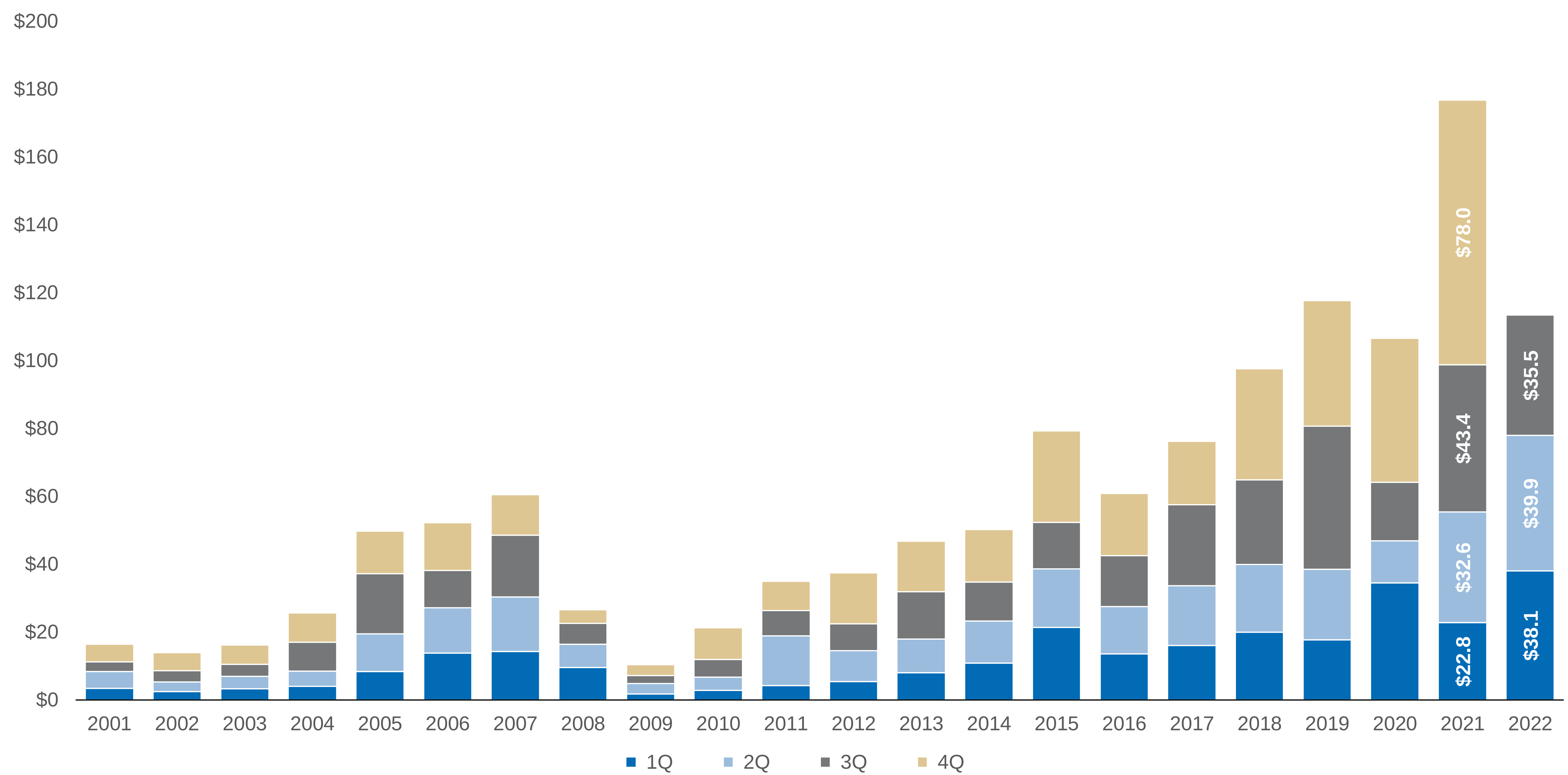


Source: RCA, NAREIT, S&P Capital IQ, Newmark Research
*We take the average LTV in a given year and then increase the value of the denominator by the cumulative price return of the corresponding NAREIT property sector index since the year the loan was originated. For example, apartment loans made in 2005 had an average LTV of 68%. We would then increase the denominator by the cumulative REIT price return from 2006-2022 YTD.

Industrial Sales Volume Decelerating (Though Still Historically High)

Third-quarter 2022 deal volume dropped 18.0% from the same period last year. Acquisitions have become more challenging to finance amid upward pressure on interest rates, with no clarity yet on the size or frequency of future rate hikes. Despite the turmoil in capital markets and an inevitably slower fourth quarter to come, 2022 is still poised to realize the second-highest annual sales volume on record.

Investment Sales Volume in Billions

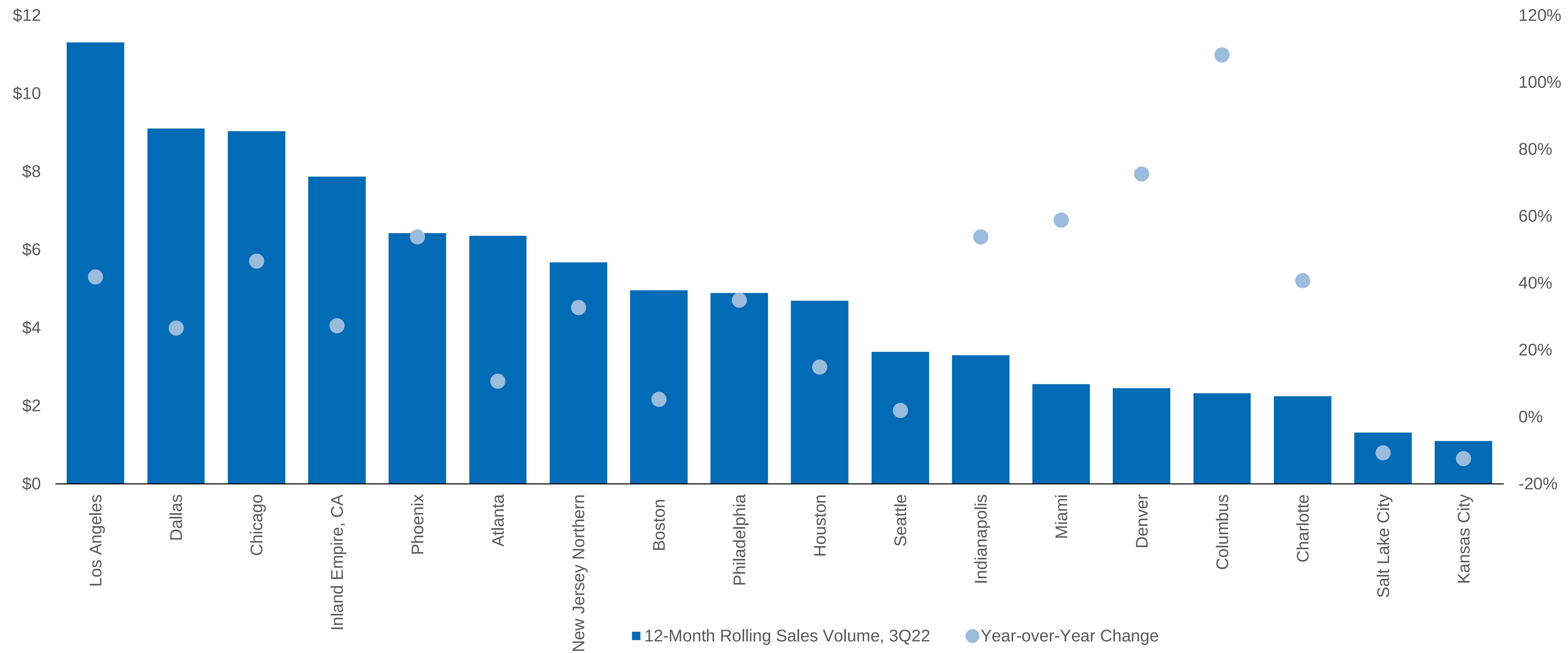


Source: Newmark Research, MSCI Real Capital Analytics

Primary Markets See Outsized Investment; Secondary Markets See Biggest Growth

Despite the tumultuous economic climate, vast volumes of capital are still flowing into industrial assets across the country; 21.0% of the rolling 12-month sales volume went into just three regions: Southern California, Dallas and Chicago. Secondary markets primarily in the Midwest saw significant year-over-year gains in volume, in part driven by record amounts of new product delivering in these markets.

12-Month Sales Volume by Market ($B) and Year-over-Year Change

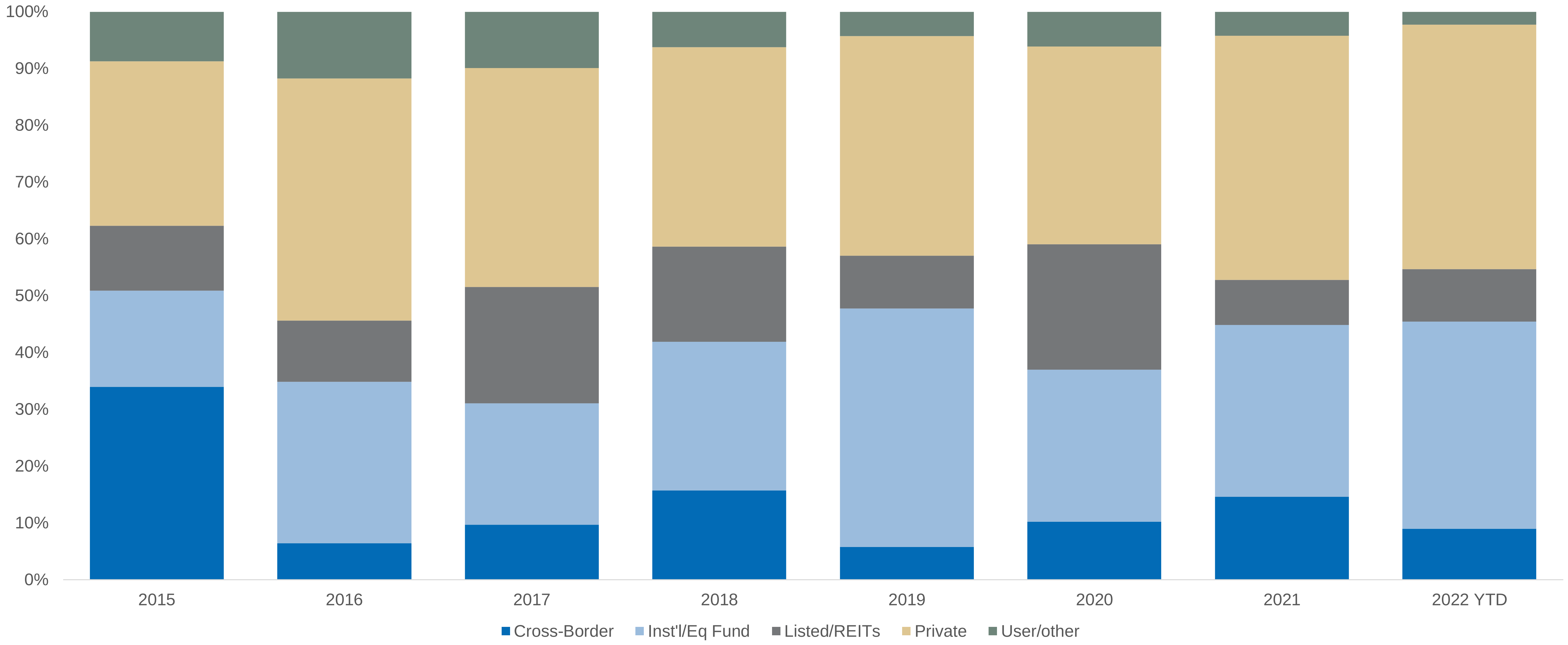


Source: Newmark Research, MSCI Real Capital Analytics

Industrial Buyer Composition Shifts

Cross-border investors and users have cooled acquisition activity more dramatically than other types of buyer profiles. Users have largely been priced out of opportunities year-to-date and the strong dollar has dissuaded some potential cross-border investment. All-cash buyers and non-heavily leveraged investors will see significant opportunities, as will potential users, during a prolonged period of price discovery.

Composition of Industrial Buyers

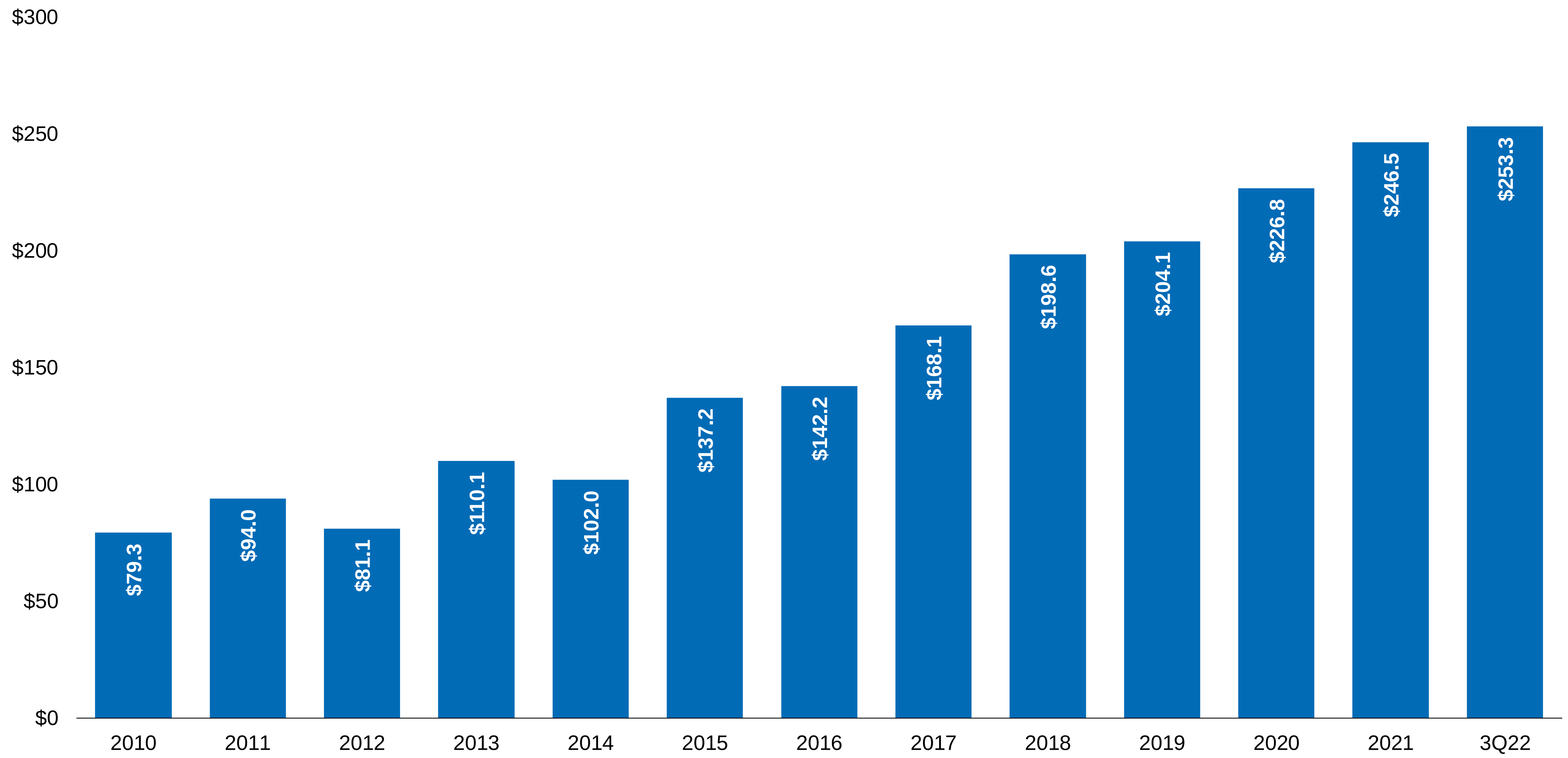


Source: Newmark Research, MSCI Real Capital Analytics

Record Levels of Capital Waiting on the Sidelines to Be Deployed

Fundraising has led to an incredible amount of dry powder to be deployed for commercial real estate acquisition; investor allocation to industrial product will remain high, along with multifamily. Numerous funds are being raised for alternative/niche asset types in the industrial sector, such as industrial-service properties, cold storage and advanced manufacturing facilities.

Dry Powder (All Property Types, North America)

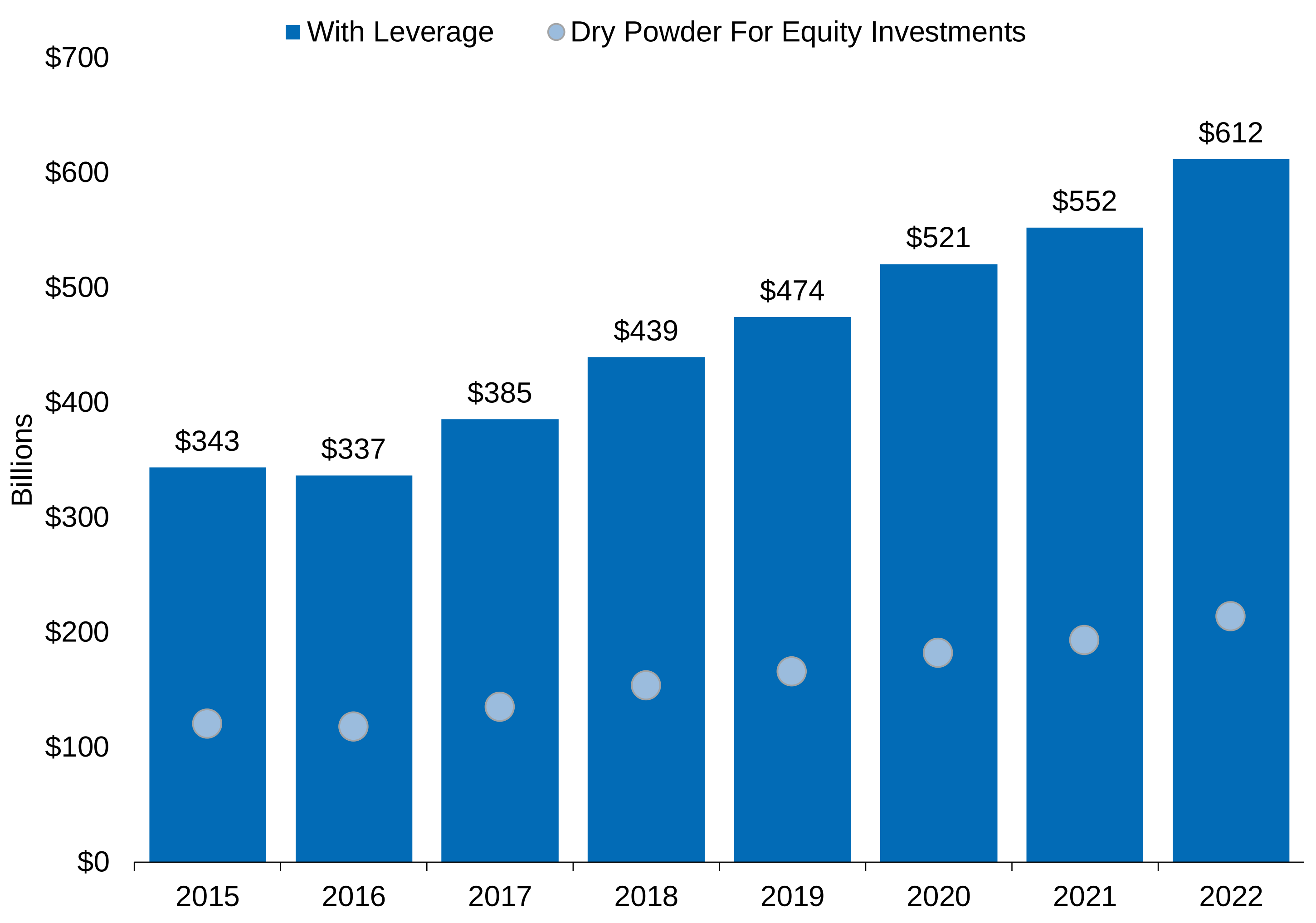


Source: Newmark Research, MSCI Real Capital Analytics

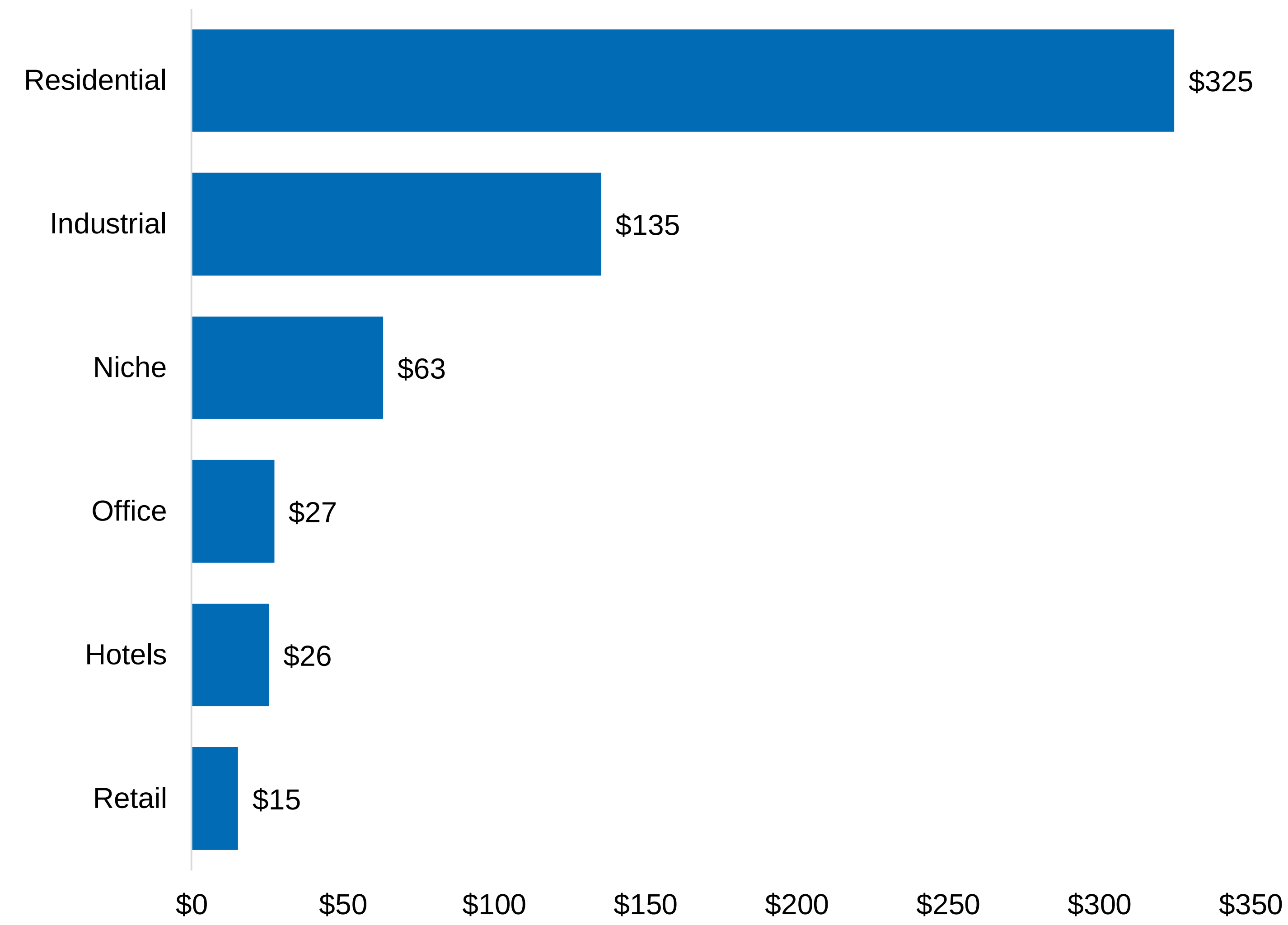
Dry Powder with Leverage

The $214 billion in dry powder raised for equity investments, not including dry powder raised for debt strategies, equates to a leveraged purchasing power of $612 billion, using a 65% loan-to-value ratio. We estimate that over half of this capital is targeted at residential assets, with most of the remainder focused on industrial assets. The capital targeting office and retail assets is quite small by comparison, which could ultimately represent a contrarian opportunity.

Dry Powder at 65% Leverage



Leveraged Dry Powder By Property Type*

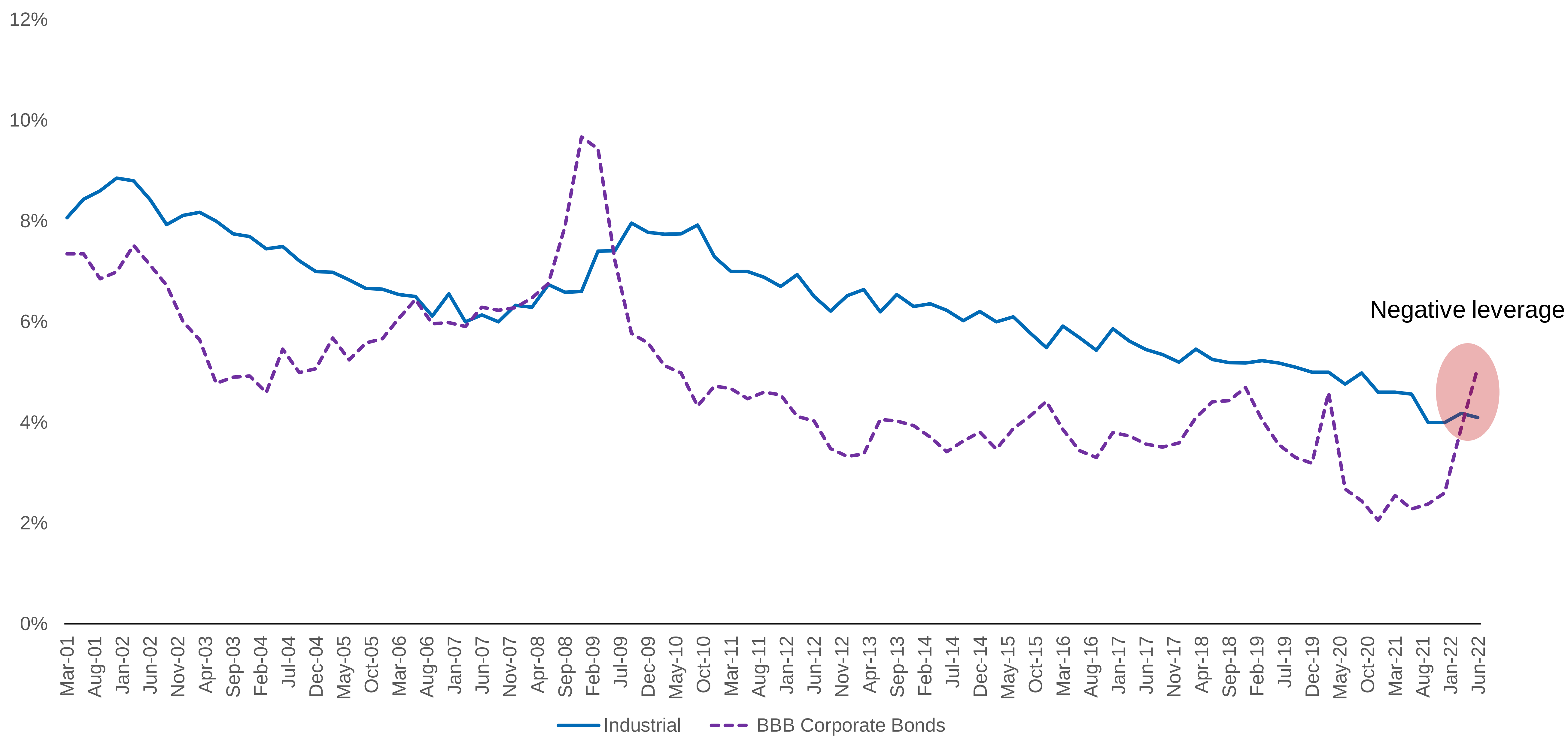


Source: Newmark Research, Real Capital Analytics, Preqin
*We looked at the percent called by vintage year and applied this to the total amount fundraised in each year to calculate the amount of uncalled capital (i.e. dry powder), broken out by main property type. Roughly half the dry powder was at diversified funds. This was allocated to the various property types in proportion to their share of total dry powder, excluding diversified funds. Finally, we grossed up the dry powder assuming 65% leverage would be used.

Increasing Cost of Debt Placing Pressure on Cap Rates

Transaction cap rates on institutional grade industrial properties have continued to compress in recent quarters even as debt costs have skyrocketed, resulting in negative leverage. This is not sustainable, and in fact, these transaction cap rates are something of a statistical mirage formed by selection bias. The properties that are trading are those which have been able to secure low cap rates. Uncounted are all the instances where a trade failed because the market clearing cap rates was higher than the seller was willing to accept. Expect price discovery to drive transaction cap rates (substantially) higher in the coming quarters.

Top Quartile Transaction Cap Rate

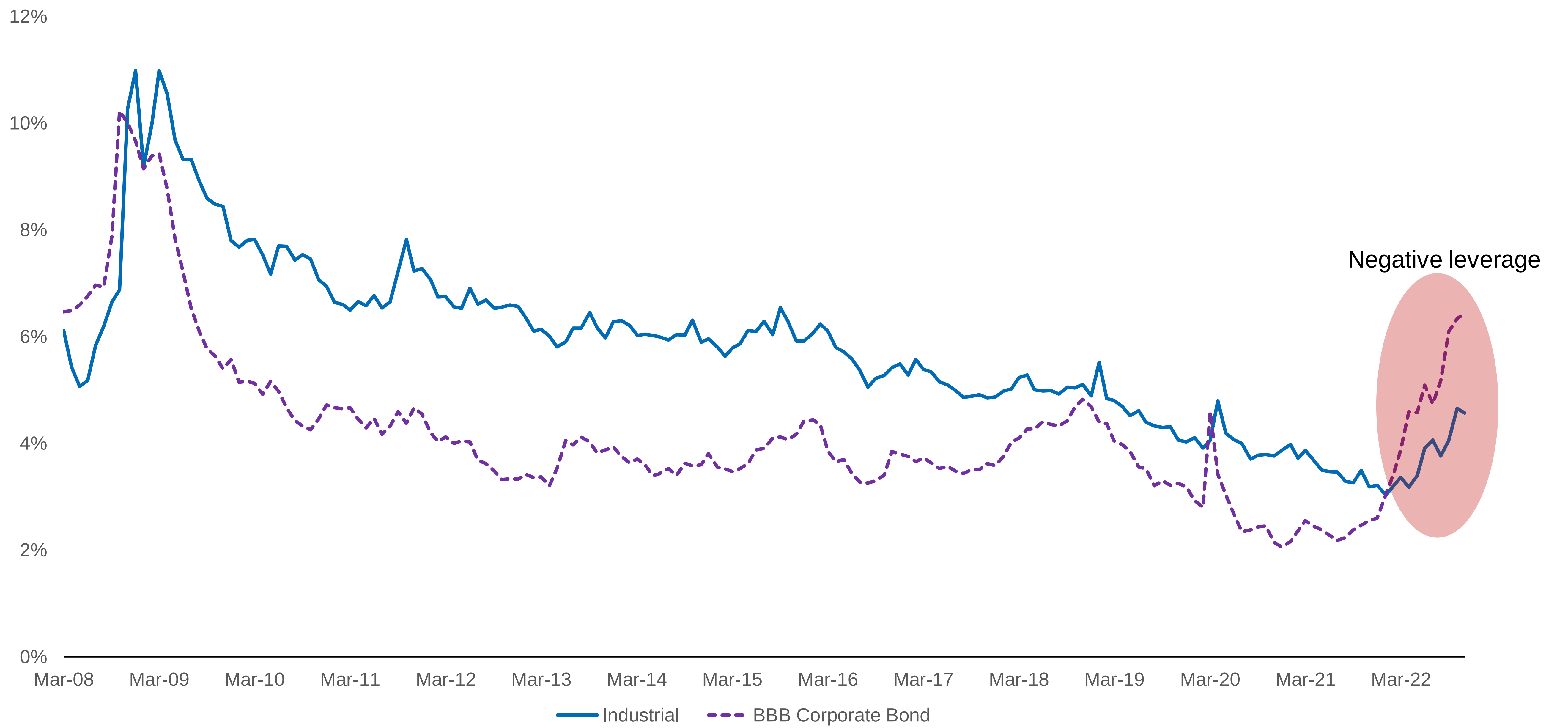


Source: Real Capital Analytics, Federal Reserve Bank of St. Louis, Moody's

Public Markets Provide A More Accurate Picture Yield Movement

Public markets have moved more quickly to reflect changing valuations. The change in corporate bond yields led the movement, suggesting that value adjustments thus far have mostly been due to general financial conditions, rather than any specific deterioration in property fundamentals, particularly for industrial where cash flow growth remains robust. Industrial REIT implied cap rates have increased sharply since the beginning of the year, but they remain significantly below the cost of debt, represented by BBB bonds. Cap rates are likely to rise further in the coming months.

REIT Implied Nominal Cap Rate

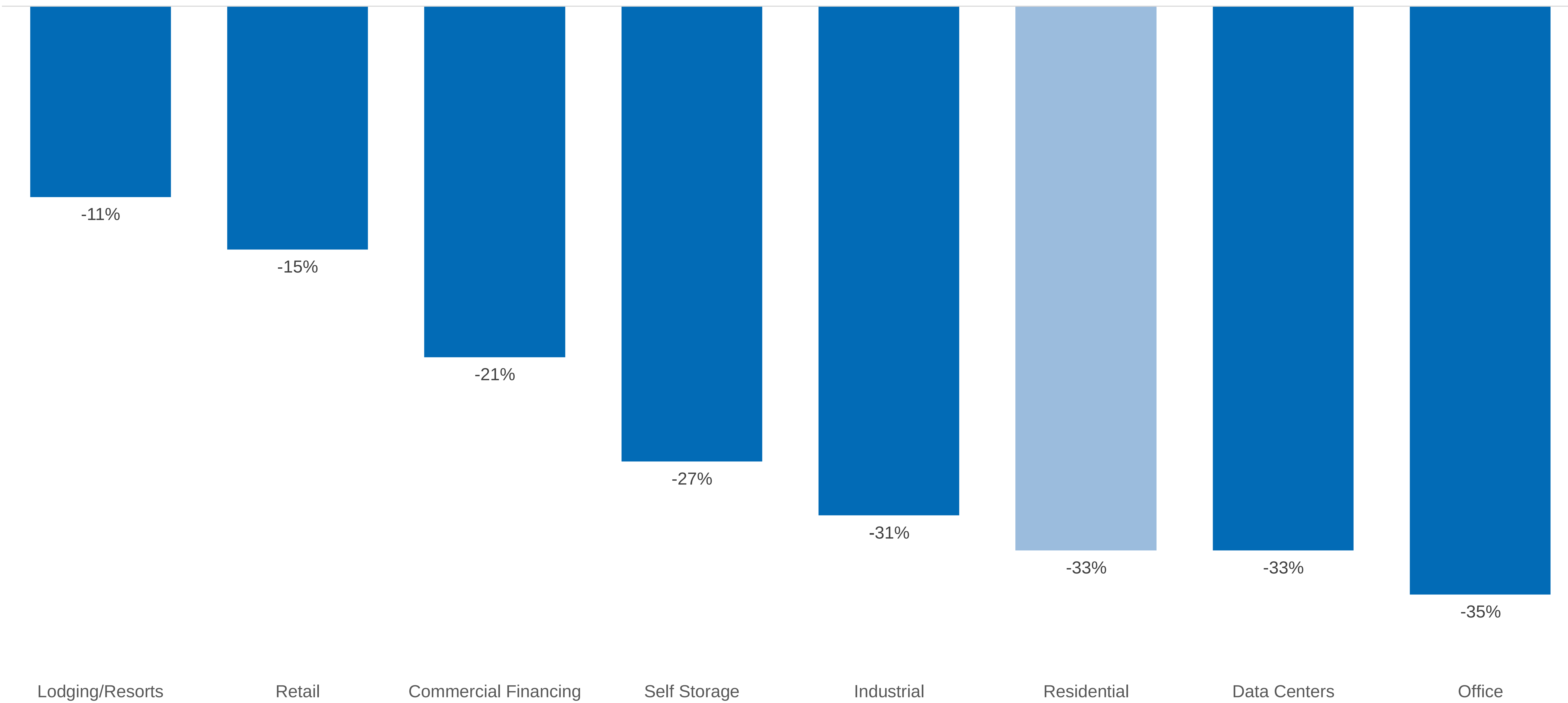


Source: Green Street, FRED, Moody's, Newmark Research

Industrial REITs Have Sold Off Dramatically Year-to-Date

Extremely low industrial cap rates left the sector highly sensitive to changes in financial conditions.

YTD Total Return by NAREIT Sector

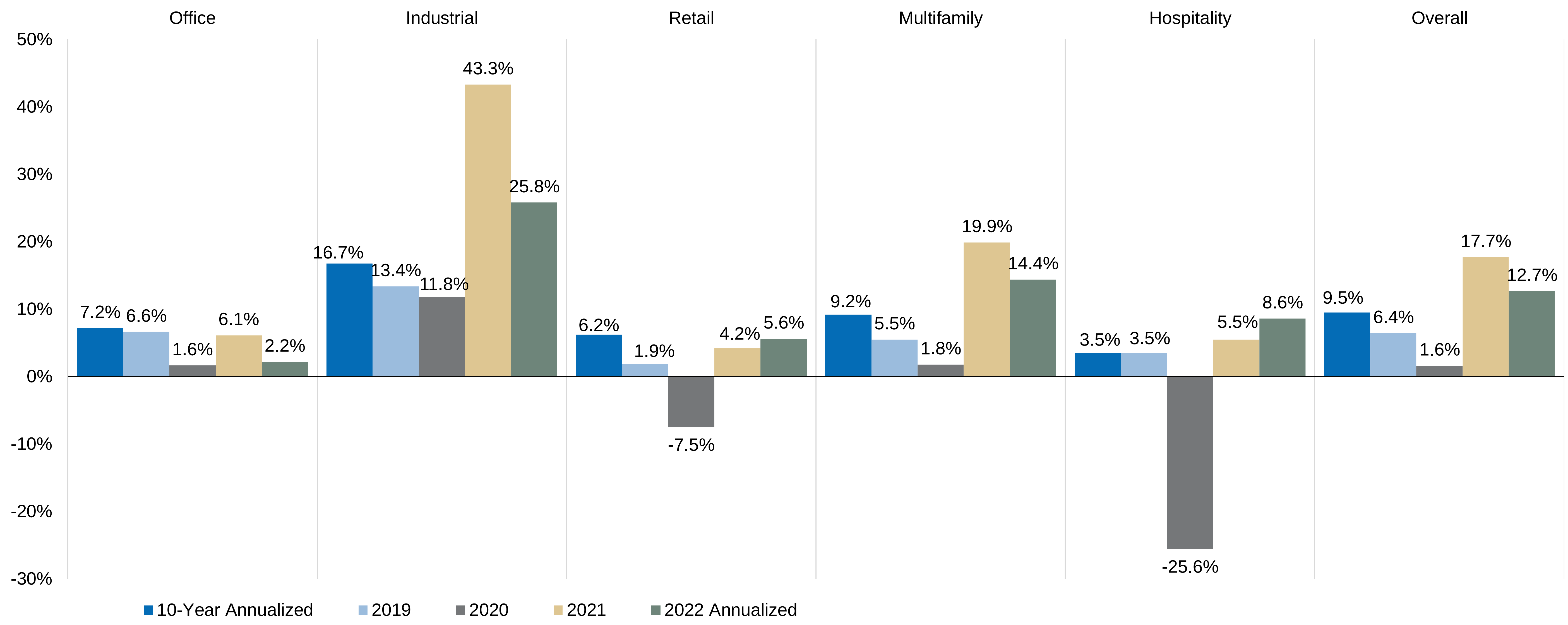


Sources: Newmark Research, Green Street

Industrial Has Consistently Outperformed All Other Sectors

Industrial generated a 25.8% annualized return in the first three quarters of 2022—beating all other sectors by a significant margin as well as its own 10-year average.

NCREIF National Property Index Total Return

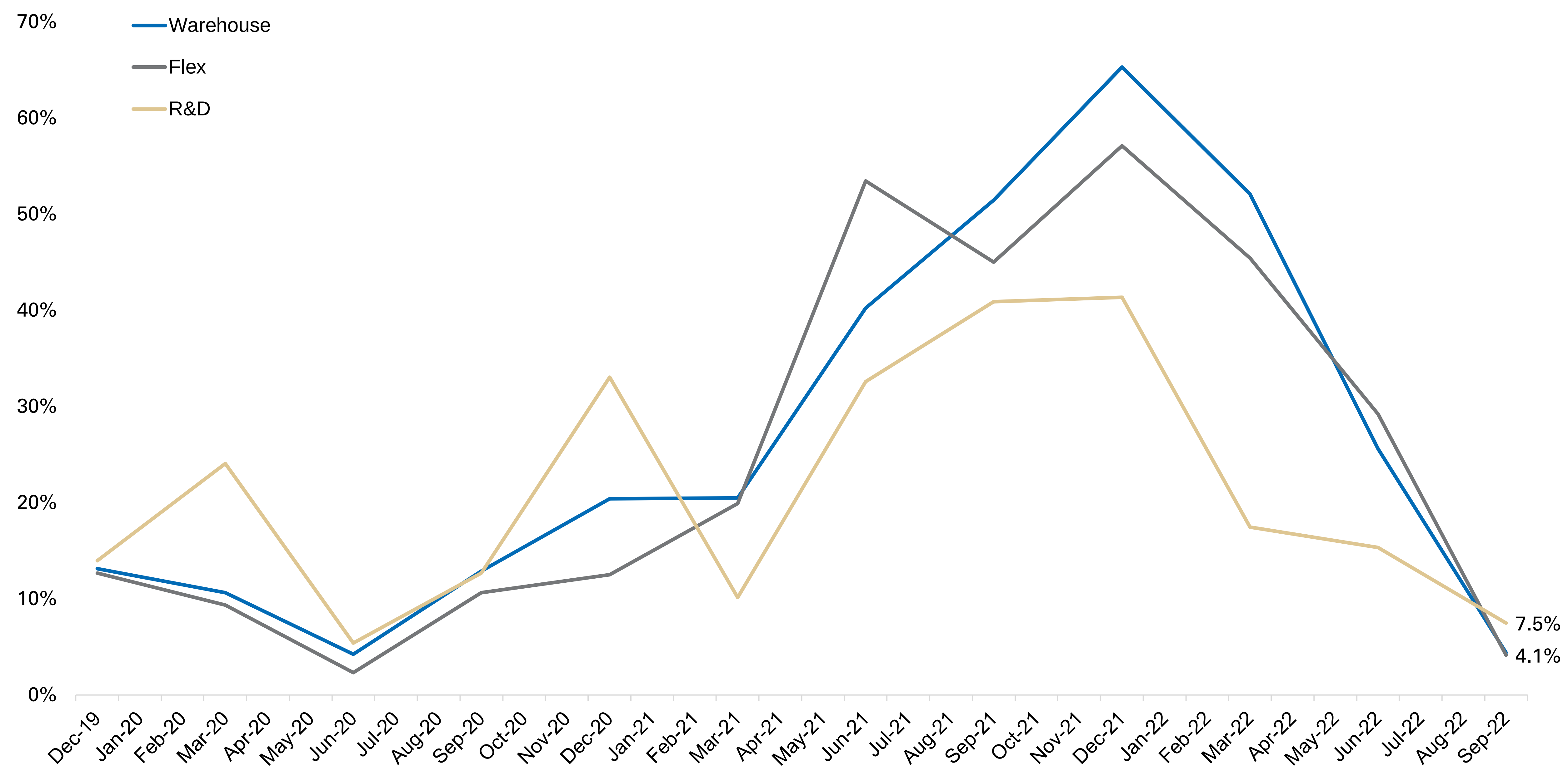


Source: NCREIF, Newmark Research

However, Returns Are Now Rapidly Decelerating Even in The Private Market

There remains a large gap between public and private market performance, which is not unusual, but the seismic changes in the macroeconomic backdrop are coming to be felt. NCREIF and other measures of private market pricing are unlikely to reflect the full impact of rising rates on fair market values due to the volatility dampening attributes of private asset markets. Instead, we are likely to see negative returns materialize slowly followed by a period of subdued returns into the next economic cycle.

NCREIF National Property Index Quarterly Total Return (Percent Annualized)



Source: NCREIF, Newmark Research

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