INVESTMENT RESEARCH

QUARTERLY INSIGHTS

With interest rates close to peaking and a surprisingly resilient occupier market, talk has begun about whether the worst of this real estate cycle is behind us. If it is, transactions activity should start to pick up. Some forecasters are pencilling in an investment recovery in the fourth quarter. Cycles do turn quickly but such an outlook feels overly optimistic.

The risk that rates remain higher for longer has grown and we are yet to see the well-known lagged effects of higher rates and slower growth on the jobs market.

This quarter, each region takes into consideration the factors above and, alongside an in-favor sector, addresses how the financial markets are impacting the outlook.

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- Will Rising Flexible Working Drive Further Polarization in the Office Sector?

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QUARTERLY INSIGHTS | INVESTMENT RESEARCH

ASIA PACIFIC

Key Themes

- As Lending Conditions Start to Improve, Will the Investment Cycle Reach a Turning Point Soon?
- Will Rising Flexible Working Drive Further Polarization in the Office Sector?

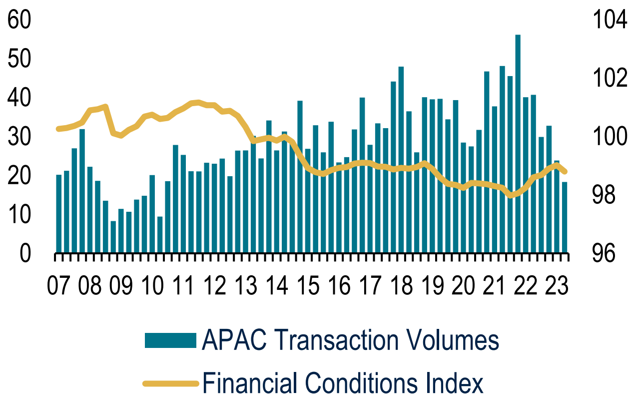
As Lending Conditions Start to Improve, Will the Investment Cycle Reach a Turning Point Soon?

The transaction volume of standing assets was US$42 billion in the first half of this year, down almost 50% year-on-year. Investors are clearly cautious, but the decline in activity is also linked to a marked deterioration in lending conditions (**Exhibit 1, left chart**).

As during the Global Financial Crisis, tighter lending conditions hit investment activity simply because assets have to work harder to make the numbers add up – and this is a tough sell into a downturn. But there is also evidence that tighter lending conditions hurt investment activity because it dampens investor sentiment. This in turn implies investors will become more active when lending conditions stabilize – a precursor to an improvement – or outright ease (**Exhibit 1, left chart**).

Exhibit 1: Investment Activity Expected to Pick Up When Lending Conditions Improve

Asia Pacific Quarterly Transaction Volumes (US$ Billion) & Financial Conditions Index* (Long Term Average = 100, Lower score implies easing)



Note: *Financial Conditions Index gauges the overall looseness or tightness of financial conditions in an economy. The APAC series is the average of FCI for Australia, China, Japan, and South Korea.

Sources: MSCI RCA, Goldman Sachs, PGIM Real Estate. As of August 2023.

PGIM Real Estate Lending Conditions Barometer*

	Lending Indicators			Risk Profile	
	Liquidity	Interest Rates	LTV	Core	Non-Core
Australia	Amber	Red	Amber	Green	Red
China	Green	Green	Amber	Green	Red
Hong Kong	Amber	Red	Amber	Amber	Red
Japan	Amber	Amber	Amber	Green	Green
Singapore	Green	Red	Amber	Green	Red
South Korea	Amber	Green	Green	Green	Amber

Note: *PGIM Real Estate Lending Conditions Barometer is constructed based on an internal survey via interaction with lending institutions across major markets in the Asia Pacific region. A scoring system is developed to reflect changes in the lending conditions. The survey is conducted on quarterly basis.

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Such an improvement in lending conditions now looks to be in the cards. A lending conditions survey we have been running for a number of years is reporting either stable or improving lending sentiment across the region (**Exhibit 1, right chart**). Over the course of 2Q, borrowing costs continued to rise in Australia, Hong Kong and Singapore – largely driven by further hikes of central banks' base rates – but credit spreads have either stabilized or moved lower. South Korea reported the largest improvement, with banks now offering a higher loan-to-value (LTV) ratio since the start of the year and spreads have compressed significantly.

As long as the economic and financial outlooks remain uncertain, investors will be on their toes, but early signs of lending conditions stabilizing imply investment activity is set to pick up in the coming quarters.

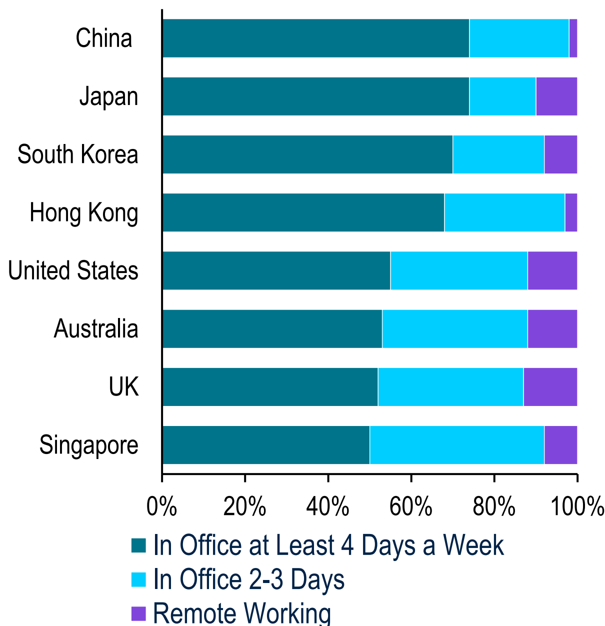
Will Rising Flexible Working Drive Further Polarization in the Office Sector?

The rise of flexible working and its long-term impact on the value of office space remains a critical topic for real estate investors across global markets. Whilst most markets report a recovery in utilization rates, office attendance in major cities in China, Japan and South Korea is still only back to around 80-90%[1] of the pre-pandemic level.

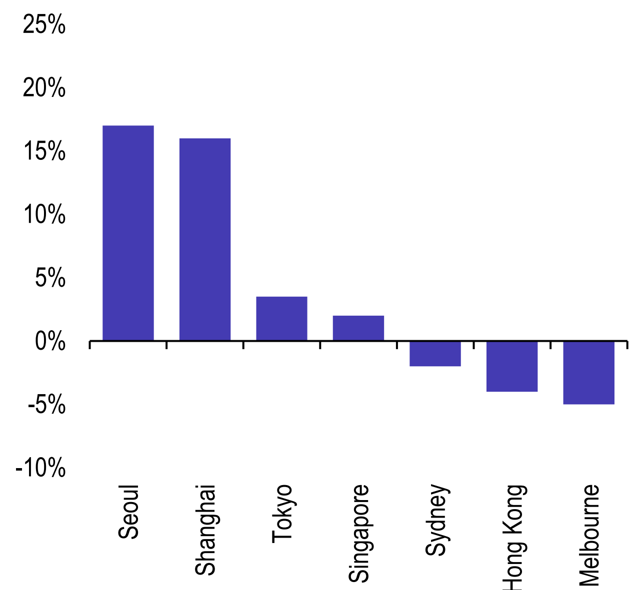
All signs point to this being a new normal – that flexible working will remain much more prevalent going forward than before the pandemic – but such prevalence will continue to vary across markets (see **Exhibit 2, left chart**). In itself, this points to a more varied outlook across office markets, but this outlook is compounded by the fact that despite lower utilization rates, over the same period, the total stock of occupied office space is now higher than it was in 2019.

Exhibit 2: Rise of Flexible Working Doesn't Lead to Widespread Declines of Occupied Space

Hybrid Working Arrangement by Country



Change in Occupied Office Space (4Q19 – 2Q23)



Sources: CBRE, JLL, Oxford Economics, PGIM Real Estate. As of August 2023.

[1] Source: CBRE.

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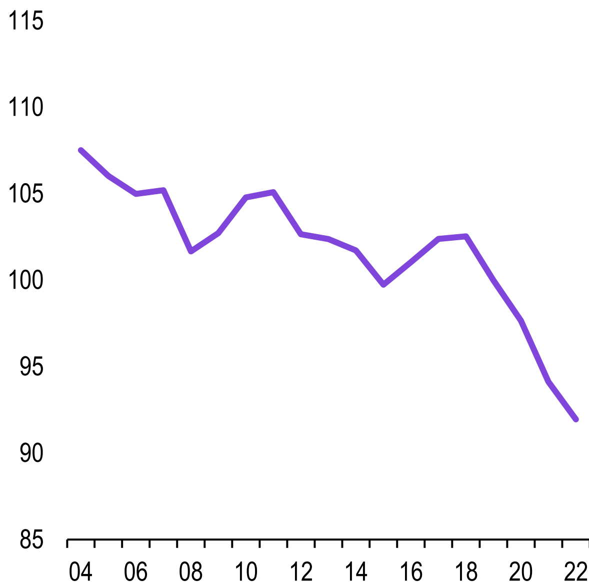
Together these help explain not only the divergence in office market performance across the region but also within cities. While overall demand for office space is growing, it is not growing at the same pace or even direction everywhere (**Exhibit 2, right chart**). Moreover, with utilization rates now lower, occupiers are upgrading to Grade A space in CBDs, albeit with smaller floorspace.

What does this mean for the rental outlook? The implication is that with local demand-supply dynamics to one side, Grade A office rents will significantly outpace poorer-quality, poorer-located stock as space demand becomes more concentrated. This is because firms are able to afford higher rents from a per-square-meter perspective simply by reducing their floorspace demand. In other words, a smaller floorspace means a higher worker per-square-meter density, which in turn means higher output per square meter, and therefore higher rental affordability (**Exhibit 3**).

This pattern is set to be an ongoing feature of major office markets for the next few quarters, further driving a divergence in rental prospects across office asset quality and submarkets (**Exhibit 4**).

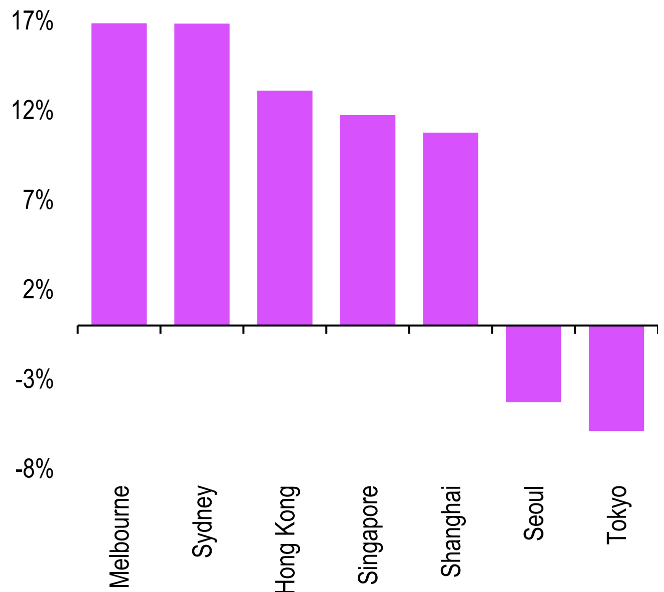
Exhibit 3: Sharp Declines in Office Space per Employee Are a Boost to Office Productivity in the Post-Pandemic Period

Occupied Office Space per Worker* (Index, 2019=100)



Note: *Major CBD office markets in Australia, Hong Kong, Japan and Singapore, measured by occupied office space per employee for major office-using industry.

Change Office Productivity* (4Q19 – 2Q23)



Note: *Office productivity is measured by the ratio of GDP of office-using industries including financial and business services; technology, media and telecommunication; and other services sectors and total occupied office space.

Sources: JLL, Oxford Economics, PGIM Real Estate. As of August 2023.

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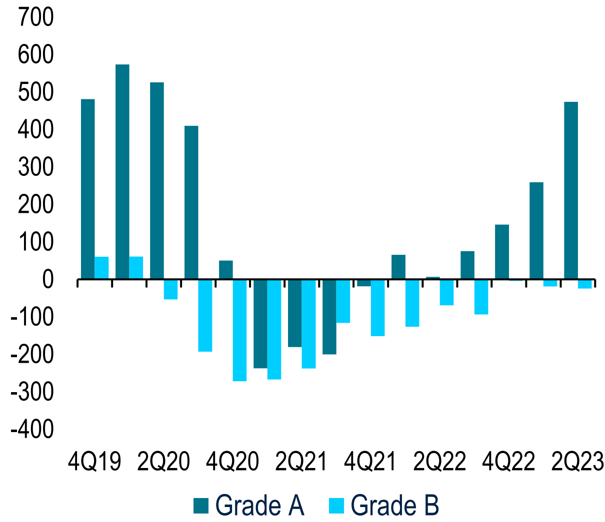
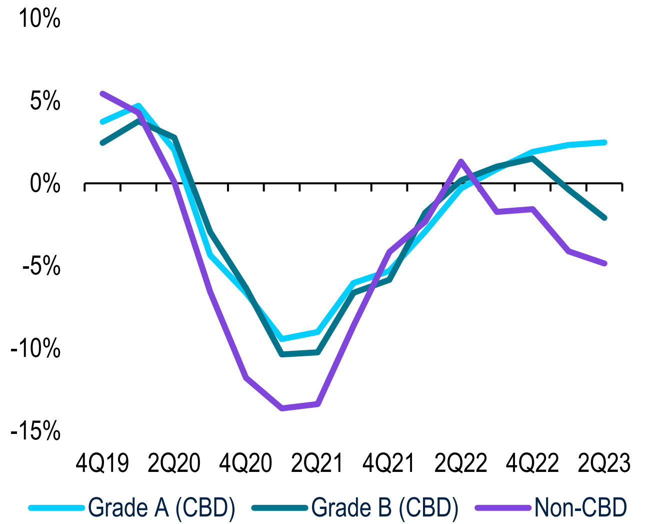
Exhibit 4: Widening Polarization of Office Demand and Rental Growth Prospects Across Grades and Submarkets

CBD Office Net Absorption by Grade* (4Q Rolling, '000 sm)



Australia Office Market Rental Growth by Grades and Submarkets (% p.a.)



*Major CBD office markets in Australia and Japan

Sources: JLL, PGIM Real Estate. As of August 2023.

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QUARTERLY INSIGHTS | INVESTMENT RESEARCH

EUROPE

Key Themes

- Falling Values: What Role are High Debt Costs Playing?
- How Much Further Does the Value Correction Have to Go?
- Is Now a Good Time to Buy Logistics?

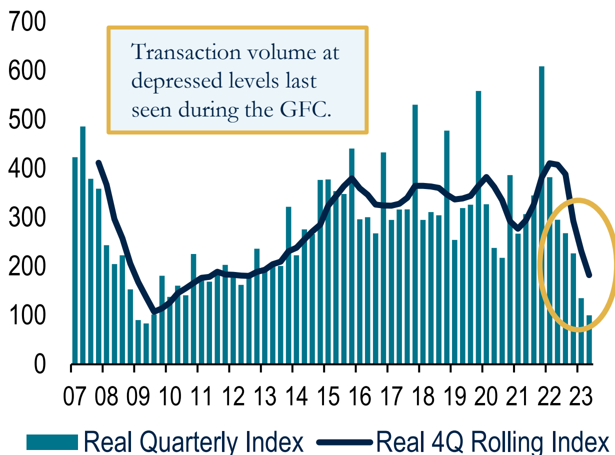
Falling Values: What Role are High Debt Costs Playing?

Given elevated interest rates, a weak economic growth outlook, a large bid-ask spread and higher returns on other asset classes, real estate transaction volume in real terms has fallen to levels last seen during the Global Financial Crisis (GFC) when investment volume deteriorated as credit effectively disappeared amidst financial market turmoil (**Exhibit 1**).

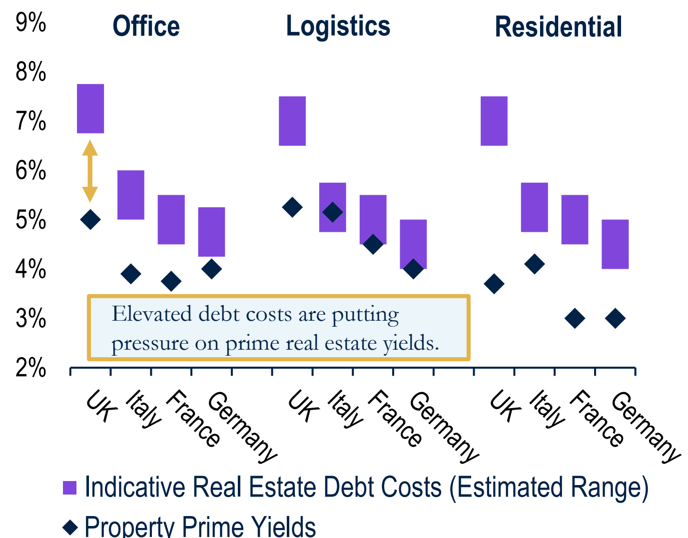
There are echoes of this today as financial markets adjust to higher real estate debt costs, which are currently above prime yields in many major European markets, implying debt is dilutive to investment returns unless significant rental growth is underwritten. This restriction on leverage is dampening investment activity, especially for large deals where substantial financing is required and in sectors in which the rental growth outlook is downbeat.

Exhibit 1: Transaction Volumes Down – Elevated Debt Costs a Crucial Factor

European All Property Transaction Volume Index (Real Volume, 2Q23=100)



Indicative Real Estate Debt Costs vs Prime Yields



Sources: Real Capital Analytics, CBRE, PGIM Real Estate. As of August 2023.

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The larger the gap between real estate debt costs and property yields the more pressure for yields to move up. Currently this is clearly playing out in the UK (**Exhibit 1**), in particular in office markets, where financing costs have risen by more compared to Continental Europe, and as such we are expecting further pressure and a bigger correction on UK yields before the market can clear, which is going to lead to market dislocation.

On the flipside, pressure on yields from elevated debt costs is less of an issue in logistics, where the typical deal size is smaller and where yields have already expanded the most, and in residential, which is benefiting from higher nominal growth potential via a strong link with inflation.

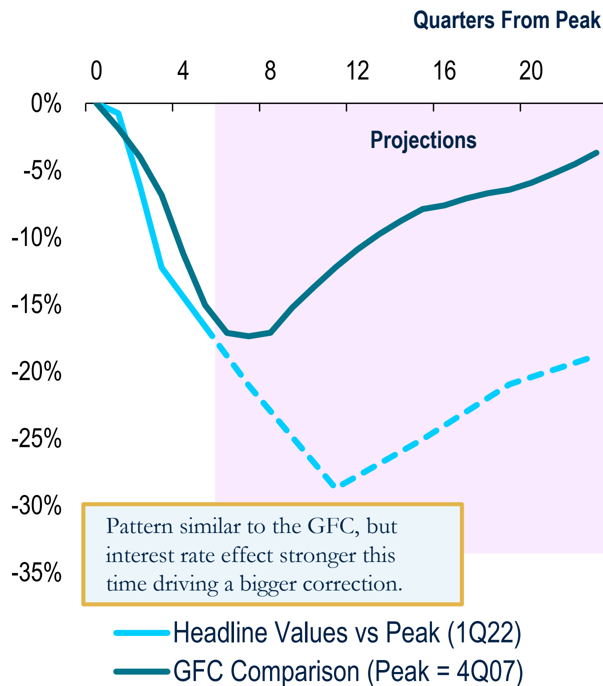
How Much Further Does the Value Correction Have to Go?

All property values fell for a fifth consecutive quarter in 2Q23. So far, the pricing adjustment has closely followed the path seen during the GFC; however, interest rate effects will be more punitive this downturn, as unlike during the GFC interest rates will not be cut back quickly.

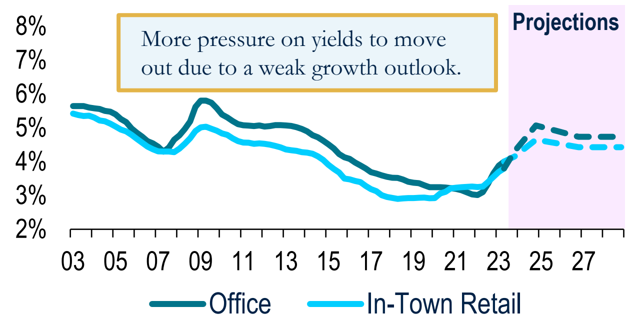
This means that the longer inflation (in particular wage-driven core inflation) surprises on the upside forcing central banks to keep policy interest rates elevated, the longer growth will be negatively affected and capital shortages will persist, and in turn the longer real estate values will remain under pressure. Our expectation is for another six months of falling values on aggregate, which would take prime capital values down another 10% (**Exhibit 2**), although this is masking a more varying story across different sectors.

Exhibit 2: Values Have Fallen a Long Way, But There's Further to Go

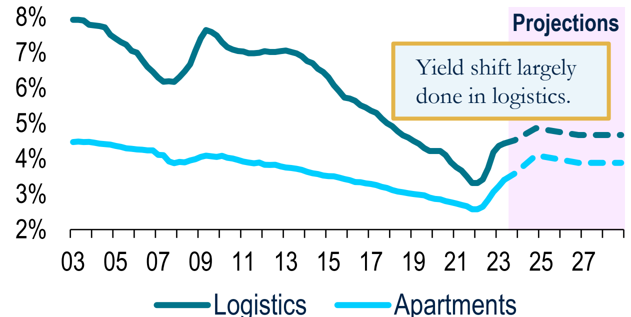
Prime Capital Values vs Peak – Europe All Property



Office and Retail Prime Net Initial Yield (%)



Logistics and Apartments Net Initial Yield (%)



Sources: PMA, Cushman & Wakefield, CBRE, PGIM Real Estate. As of August 2023.

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Reflected in rising prime yields, office and in-town retail have seen values fall significantly as the rental growth outlook turned even before interest rates started to rise, mainly on the back of the rise of remote working and e-commerce, respectively. As the rental growth outlook remains more uncertain, values are set to fall further, which means yields are set to rise to restore risk premiums and required returns in those two sectors (**Exhibit 2**).

These dynamics are less pronounced in apartments and logistics. A stronger and more certain rental growth outlook has already started to positively cushion impacts of rising interest rates, and the value correction with the corresponding outward yield shift is expected to be more moderate looking ahead.

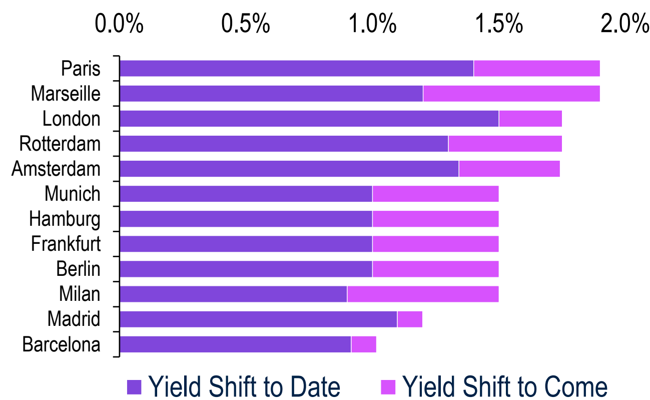
Is Now a Good Time to Buy Logistics?

Investor intentions surveys and investment flows into logistics point to the sector remaining the most favored across Europe. In particular, overseas capital is still chasing logistics stock, over retail and office investments, on the back of a strong structural rental growth outlook for distribution space close to major urban conurbations and transport nodes.

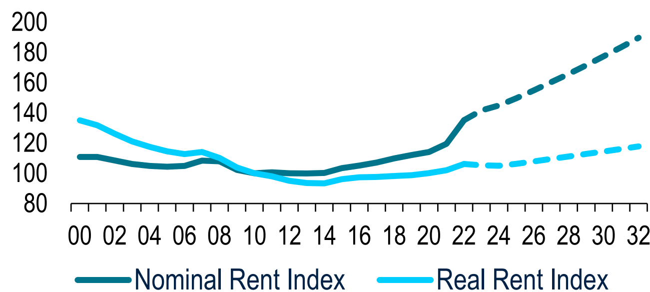
In addition, logistics yields have moved out by more than 100bps in many markets in a short period of time and, based on our estimates, are already two-thirds through the adjustment process that is playing out (**Exhibit 3**). In cities such as London or Madrid, the yield shift looks nearly done, pricing in resilient rental growth going into the downturn and a positive rental growth outlook looking ahead.

Exhibit 3: Logistics Repricing Has Gone a Long Way

Logistics Yield Shift Since 1Q22 and Projected (%)



Rent Indices – European Logistics (2010=100)



Sources: Cushman & Wakefield, PMA, CBRE, PGIM Real Estate. As of August 2023.

What Could Go Wrong for Logistics?

- Full impact of higher interest rates on household spending yet to be felt
- Supply spike of space that was started before the downturn hitting a weakening market
- Sub-leasing of space – low vacancy partly misleading
- Largest markets such as Germany, UK and Netherlands recording steepest demand falls
- Incoming ESG regulation driving market bifurcation
- Rental affordability becoming stretched
- Selective rental growth narrowing asset pool

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In a broader sense we are seeing a strong structural rental growth story playing out across all of Europe as rents are rising in nominal and real terms on the back of elevated e-commerce adoption rates and supply chain restructuring that is enabling landlords to push inflation through to logistics occupiers (**Exhibit 3**). This has transformed logistics from a declining real rental sector into one that can absorb elevated inflation and looks to record further real rental growth on the back of structural tailwinds.

However, while it looks like a strong outlook, we have to ask ourselves what could go wrong. Among key risks, European economies have yet to feel the full impact of higher interest rates and there is also rising supply that is hitting the market just when question marks around occupier market performance are emerging. Another trend we are seeing play out is that rental growth is becoming more selective, focused on the best assets in the best markets, which is set to be reinforced by rising ESG regulation driving market bifurcation and limiting investment opportunities (**Exhibit 3**).

Compared to the other sectors, however, logistics remains in favor among investors who want to allocate capital to real estate as the rental growth outlook remains positive. Even so, the presence of these risks means that we should remain cautious and selective toward acquisitions in the sector, considering only assets that have significantly repriced and offer a significant returns premium.

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QUARTERLY INSIGHTS | INVESTMENT RESEARCH

UNITED STATES

Key Themes

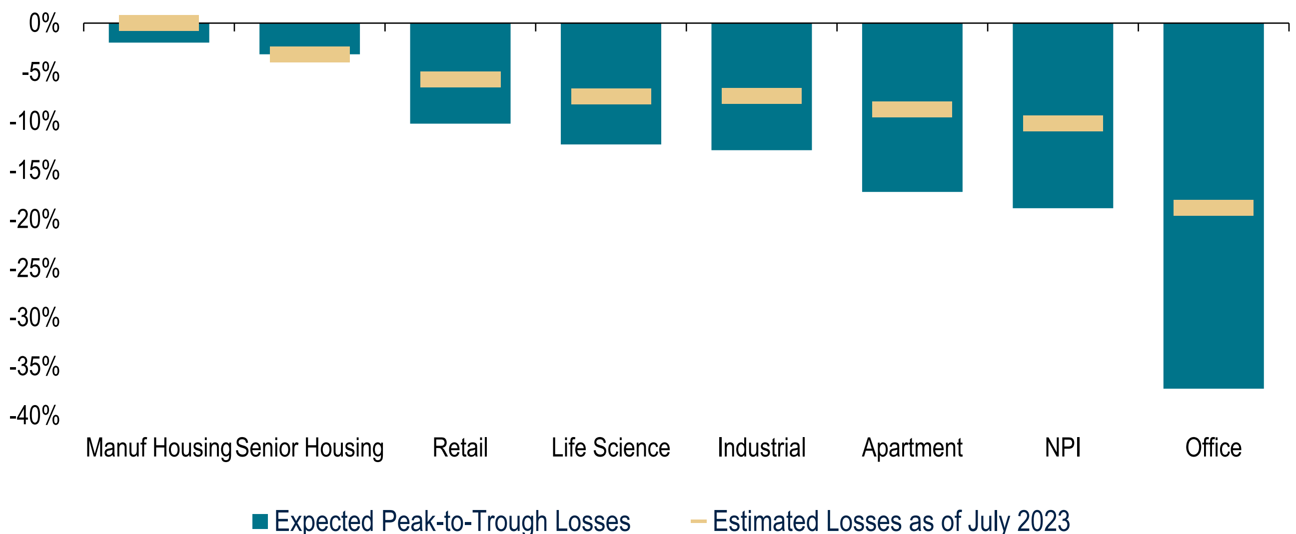
- Are We Past the Bulk of U.S. Value Declines?
- Looking Beyond Supply Risk: What Role Will Interest Rates Play in Relative Apartment Market Income Growth?
- What Insights Does the Senior Loan Officer Opinion Survey Unveil for the Commercial Real Estate Debt Market?

Are We Past the Bulk of U.S. Value Declines?

The prolonged decline in U.S. property values has further to run, but due to a combination of investor discipline and more than a little luck, the bottom is in sight. As shown in **Exhibit 1**, values in the NCREIF Property Index, which measures unlevered core properties, have fallen by 10% since their mid-2022 peak.

Exhibit 1: Getting Closer to the Bottom

Peak to Trough Value Losses by Sector



Sources: CoStar, RealPage, Green Street Advisors, NIC Map, NCREIF, Oxford Economics, PGIM Real Estate. As of August 2023.

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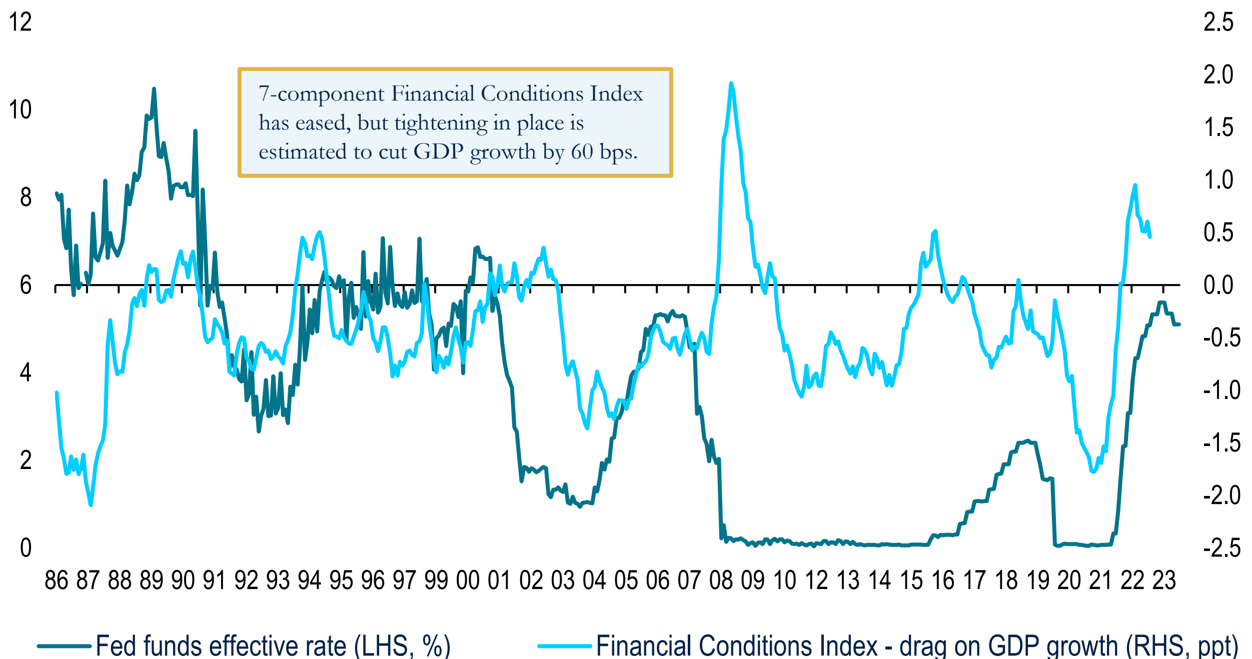
That average masks substantial variation by property type, with office the notable outlier with an additional 18% of decline to go. All other major property types are in much better shape. We forecast industrial and apartment will decline by an additional 6% and 8%, respectively, as cap rates adjust to the current era of higher interest rates. By contrast, we estimate that some property types, including manufactured housing and senior housing, have already been fully repriced.

The most important assumption behind our value decline forecast is the Federal Reserve (Fed) signaling the end of rate hikes. A piece of corroborating evidence is the Fed staff's new financial services conditions index[1], shown in **Exhibit 2**, which captures the combined effects of monetary policy, bank lending standards and other factors.

Right now, the Fed's new index indicates their prior rate hikes continue to work through the financial system. It states financial conditions are now more restrictive than at any time since 2009, the peak of the Great Financial Crisis, with a drag on gross domestic product of roughly 50 basis points. The timing of the release of the new index coincides with their recent messaging that the rate increases since last year are working to slow inflation, and the lagged effects of prior interest rate hikes have mostly worked their way through property valuations.

Exhibit 2: Less Pressure from Interest Rates

Fed Funds Rate vs Financial Conditions Index



Sources: Federal Reserve Board, Oxford Economics, BLS, PGIM Real Estate. As of August 2023.

[1] See https://www.federalreserve.gov/econres/notes/feds-notes/a-new-index-to-measure-us-financial-conditions-20230630.html for methodology.

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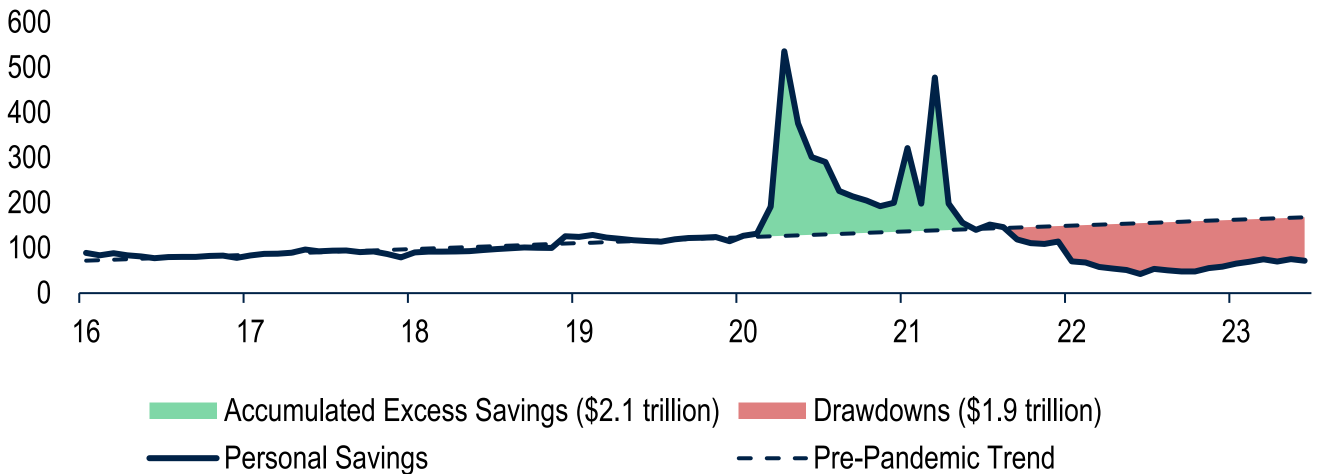
That leaves us with another component of property values – income growth expectations. This is where we may be on shakier ground. Consensus has largely coalesced around a "soft landing" for the economy and, by extension, income growth in commercial real estate. That's a plausible but by no means high confidence scenario. Notably, as shown in **Exhibit 3, on the top chart**, consumers have been spending down the savings they built up in the 2020-2021 period. It's unclear how willing they will be to spend once those checking account balances shrink.

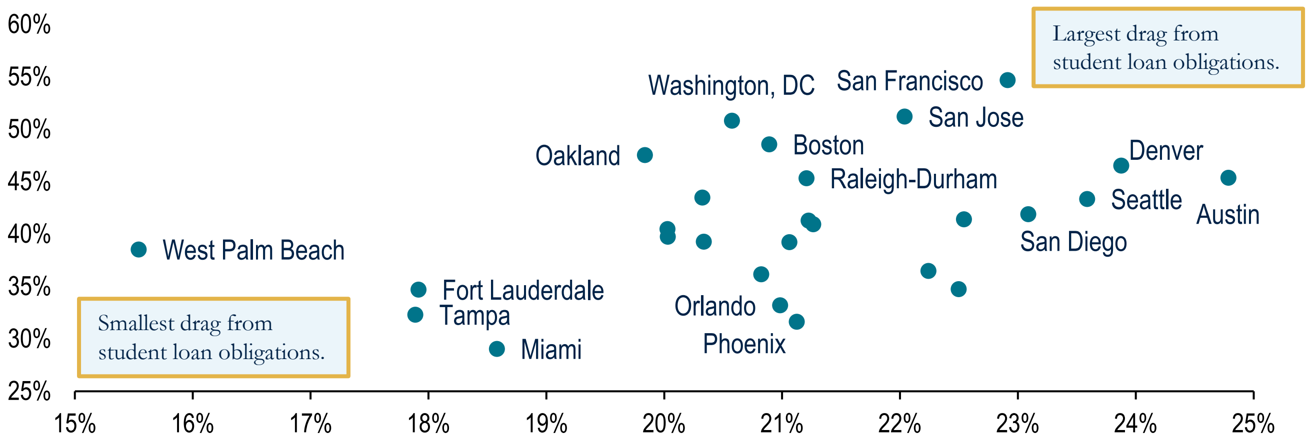
Coincident with the savings drawdowns, the moratorium on student debt repayments is coming to an end in October. This will leave many households that have spent down savings accumulated a couple of years ago with additional debt burdens. In particular, we are paying close attention to the metro areas in the upper right corner of the **bottom graph in Exhibit 3**, which have high concentrations of college graduates and 25-34 year olds, both of which have the highest propensity to carry student debt.

Exhibit 3: Though a Soft Landing is Not Guaranteed

Aggregate Personal Savings vs the Pre-Pandemic Trend (Billions)



Education Attainment vs 25-34 Age Group as % of Adult Population (% of Population With Bachelor's Degrees or Higher)



Sources: U.S. Bureau of Economic Analysis, PGIM Real Estate. As of August 2023.

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Despite these risks to the tenant demand outlook, labor markets remain supportive of a soft landing scenario. As shown in the left chart in **Exhibit 4**, 25-64 year olds are rapidly replacing older workers who may have left the labor force permanently. The former age group supports both residential and commercial leasing, whereas retirees may fuel leisure spending that supports hospitality and some retail formats. A recent increase in legal immigration, shown in the right chart, is also responsible for labor force growth, providing additional capacity for expansion at a time when unemployment is very low.

While risks remain tilted to the downside, the most likely path forward for property values is for only moderate declines over the next few quarters. That is an upgrade from our forecasts in May[2], as we now expect interest rates to have peaked and property incomes to gradually grow in an economic soft landing.

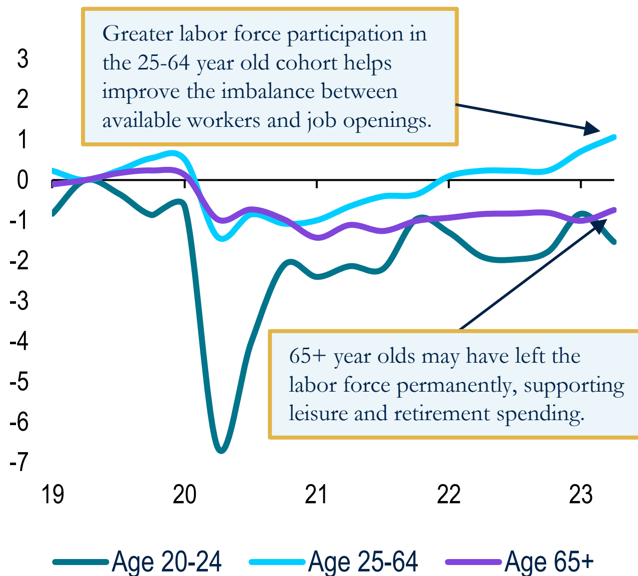
Looking Beyond Supply Risk: What Role Will Interest Rates Play in Relative Apartment Market Income Growth?

After a multi-year period of strong performance, apartment rent growth is decelerating fast and occupancies are on the decline. Surging supply is one reason. But we also have evidence the recent rise in interest rates is responsible for at least some of the market-level differences.

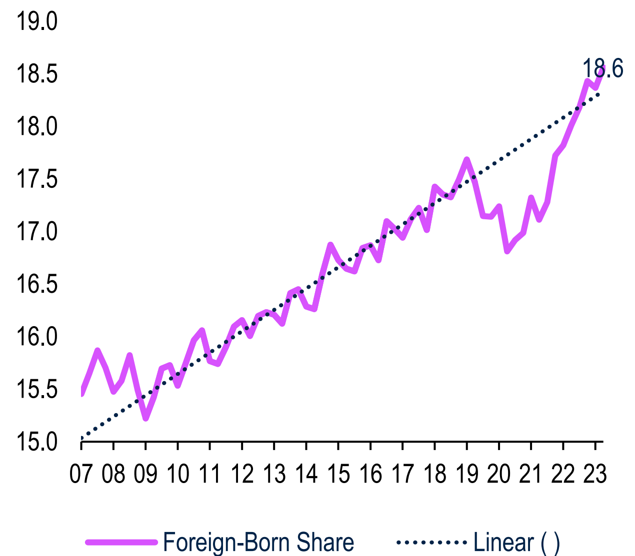
According to RealPage, apartment asking rents were up 2.4% over the past 12 months as of 2Q23, a sharp deceleration from 13.6% as of 2Q22. U.S. apartment occupancy in 2Q23 fell to 94.7%, the lowest second quarter occupancy since 2013.

Exhibit 4: Labor Force Growth Will Boost Tenant Demand

Change in Labor Force Participation by Age



Foreign Born Share of Civilian Labor Force



Sources: Moody's Analytics, Federal Reserve Bank of St. Louis, BLS Current Population Survey, PGIM Real Estate. as of August 2023.

[2] See https://www.pgim.com/real-estate/global-outlook.

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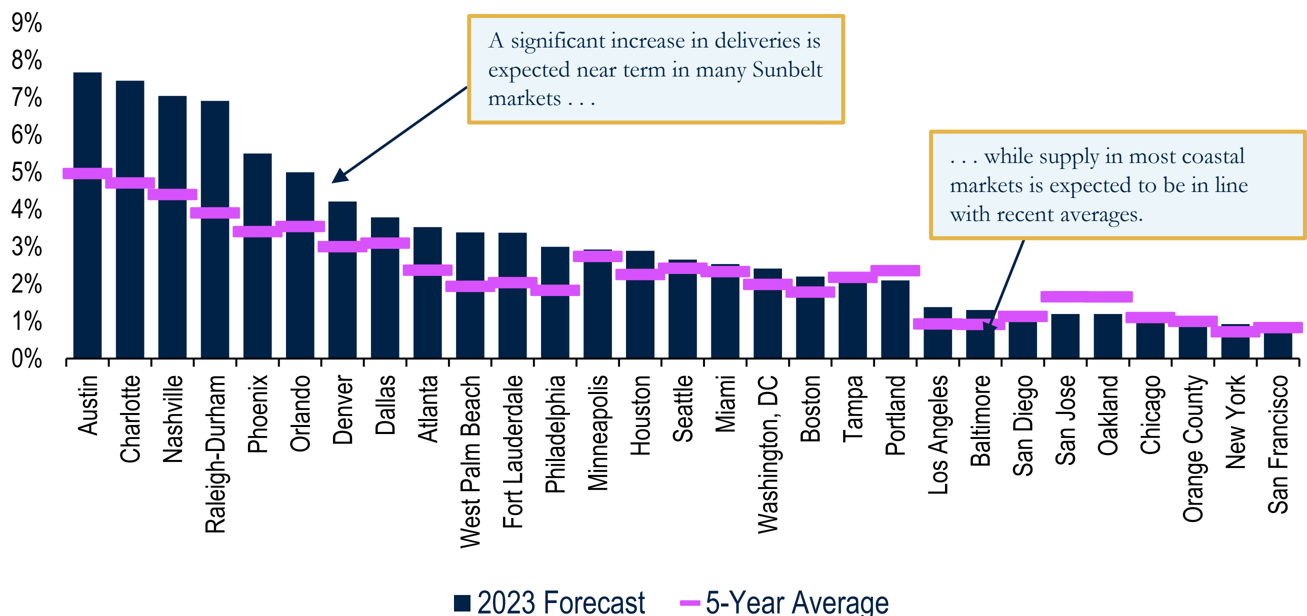
Development activity is a significant near-term headwind[3]. As shown in **Exhibit 5**, this is particularly true in many Sunbelt markets, such as Austin, Charlotte, Nashville, Raleigh-Durham and Phoenix, where near-term supply forecasts are far above recent trends.

But this only considers supply-side dynamics. On the demand side, a key risk moving forward is the potential impact to metro economies, and thus the incomes of apartment renters, from higher interest rates. Here we look to the body of academic literature on regional economics, where evidence indicates that the vulnerability of metro area economies to interest rate changes increases based on four key factors:

1. Level of household indebtedness (through higher debt service costs)
2. Proportion of GDP generated by the manufacturing sector (due to being capital intensive and from import/export exposure through the exchange rate)
3. Proportion of GDP generated by the construction sector (due to being heavily capital intensive)
4. Proportion of GDP generated by small and mid-sized businesses (due to reliance on short-term financing)

Exhibit 5: Beware Near-Term Overbuilding

Inventory Growth Forecast 2023 vs 5-Year Average (2018-2022)



Sources: Moody's Analytics, Federal Reserve Bank of St. Louis, BLS Current Population Survey, PGIM Real Estate. as of August 2023.

[3] See https://www.pgim.com/real-estate/commentary/united-states-part-1-shifting-apartment-winds-whats-outlook-relative-market-performance.

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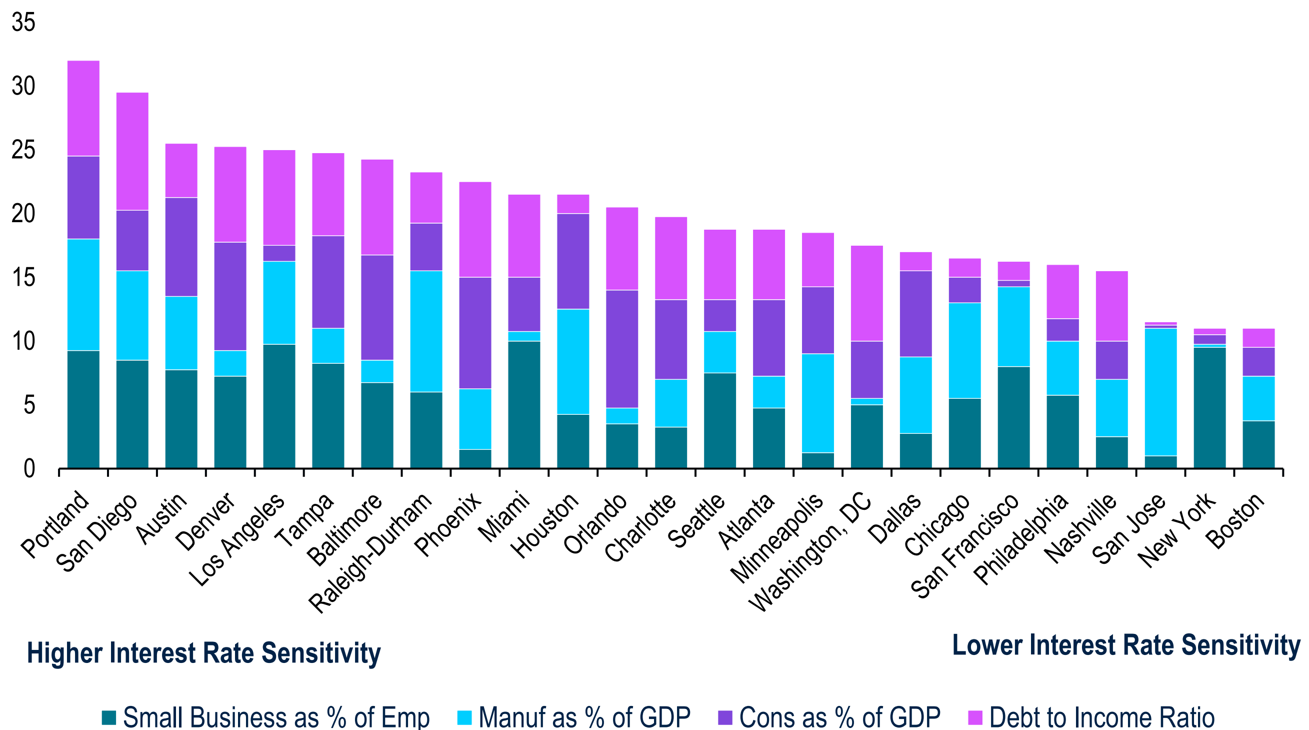
Using these factors, we create an index ranking major U.S. metros by their sensitivity to interest rates, as depicted in **Exhibit 6**[4]. Those that demonstrate lower interest rate sensitivity should prove more resilient on a relative basis in the face of higher interest rates. Given the Fed's current tightening cycle began in early 2022, we might expect to see some impact in the apartment rent growth data already. We look at a simple relationship between year-over-year rental growth versus our interest rate sensitivity index in **Exhibit 7**.

A noticeable negative relationship exists between rent growth over the past year and how sensitive a metro's economy is to changes in interest rates. Generally, we see that many economies in the Northeast and Midwest show less sensitivity to interest rates and have outperformed over the past year. Indeed, the 10 metros ranked as least sensitive to interest rates have recorded rental growth of 3.1% over the past year through July; conversely, the 10 metros ranked as most sensitive to interest rate increases have seen rents decline 0.9%.

Exhibit 6: Concentrate on Metros With Less Interest Rate Sensitivity . . .

Interest Rate Sensitivity Index



Sources: Oxford Economics, OECD, PGIM Real Estate. As of August 2023.

[4] Note: Factor #1 is proxied by using debt to income ratios in each metro. Given data limitations, we use small business employment as a percent of total employment as a proxy measure for factor #4.

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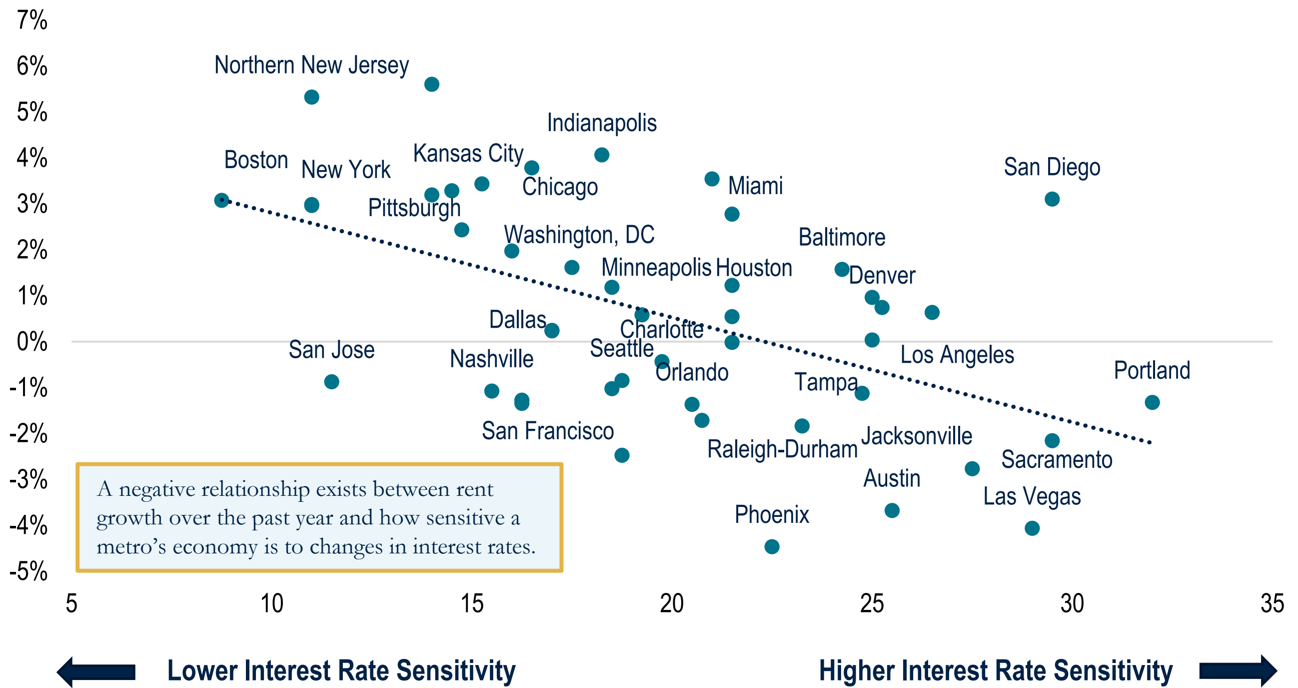
Exhibit 7: Concentrate on Metros With Less Interest Rate Sensitivity . . .

Annual Rental Growth vs Interest Rate Sensitivity Index



Sources: Federal Reserve Bank of St. Louis, RealPage, PGIM Real Estate. As of August 2023.

The end of the tightening cycle appears in sight, yet we know impacts from monetary tightening flow through the economy with a lag. With that in mind, we expect to see these relative impacts continue to play out at least through 2024, and possibly longer should economic growth and inflation surprise to the upside, requiring even more restrictive monetary policy from the Fed. Were that to be the case, current 2025+ rent growth forecasts for the most interest rate sensitive metros are likely to be too rosy.

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REF: 009662

What Insights Does the Senior Loan Officer Opinion Survey Unveil for the Commercial Real Estate Debt Market?

Results from the latest Senior Loan Officer Opinion Survey (SLOOS) indicate that banks are taking a more cautious stance toward commercial real estate (CRE) by further tightening their lending standards across all CRE loan categories: non-residential/non-farm, multifamily and construction (**Exhibit 8**).

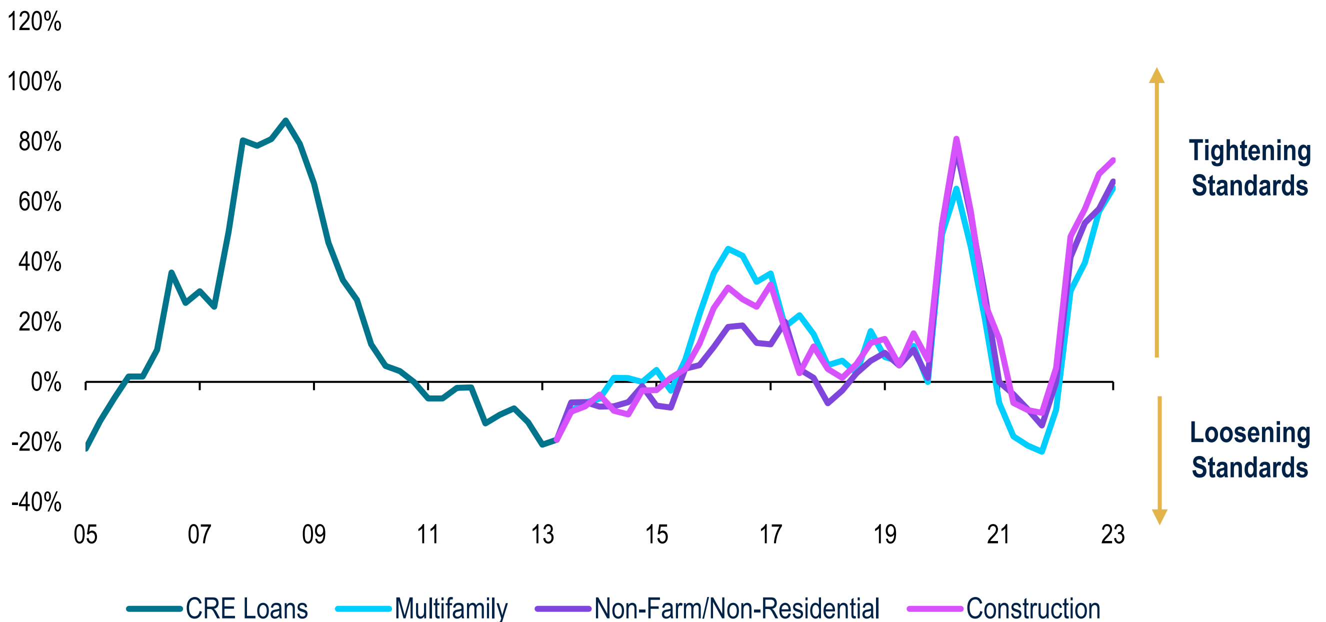
The SLOOS on bank lending practices conducted by the Federal Reserve Board of Governors (Fed) assesses the standards and terms on which banks are granting CRE loans. The latest results point to changing dynamics in the banking sector, particularly regarding CRE lending, and provide key insights into the outlook for the CRE debt market.

Tightening bank lending standards appear to be spurred by an uncertain economic outlook, deterioration in the quality of existing loan portfolios and an anticipated increase in problem assets. The lending environment is also influenced by the Fed's recent decision to continue raising interest rates, bringing the target range for the Fed's funds rate to 5.25-5.5%. Banks indicated that they are experiencing decreasing demand for CRE loans as borrowers face higher debt financing costs.

Additionally, the Basel III regulatory reforms will increase regulatory capital that banks must hold. While enhanced regulatory reforms are primarily targeted at banks, they will indirectly impact the non-bank lending landscape; pushing banks to retreat from certain types of loans will open up a new lending space for non-bank lenders. Looking ahead, banks anticipate even tighter lending standards for the remainder of the year.

Exhibit 8: Senior Loan Officer Opinion Survey

Bank Lending Standards on Commercial Real Estate Loans (Net %)



Sources: Board of Governors of the Federal Reserve System, PGIM Real Estate. As of August 2023.

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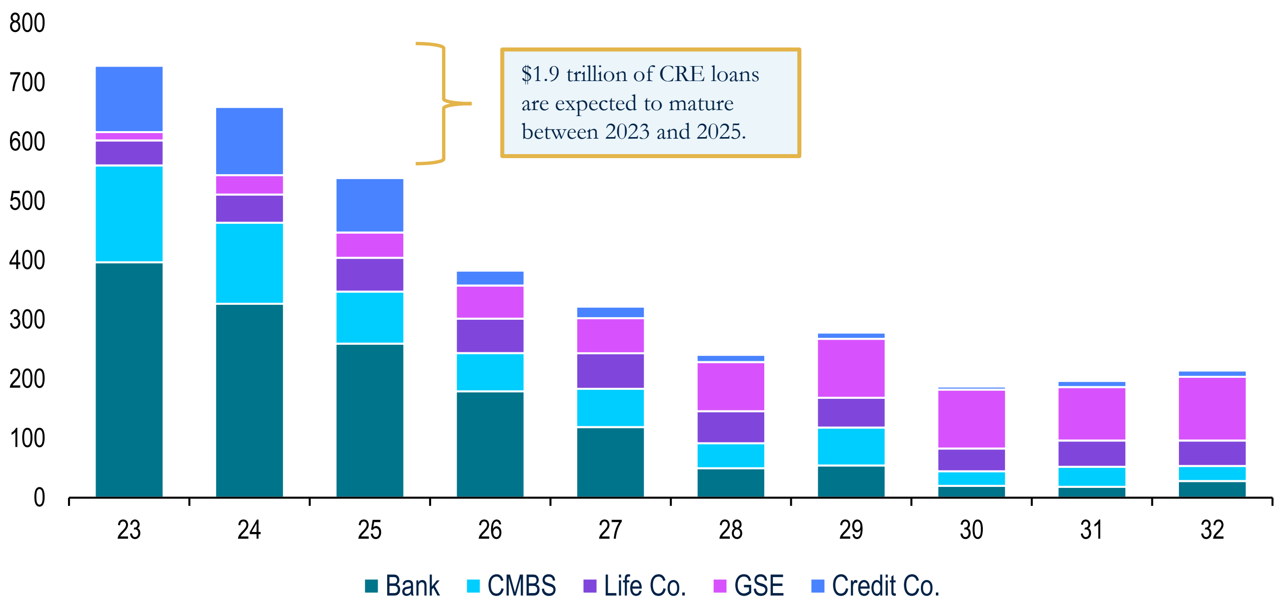
Stricter lending criteria coincides with $1.9 trillion of CRE loans that are due to mature between 2023 and 2025, of which over half, or $983 billion, are bank loans (**Exhibit 9**). Borrowers who obtained loans when interest rates were low will face much higher financing costs, and will no doubt exercise every feasible option to extend their existing loans. However, some borrowers will struggle to secure the needed financing.

This scenario will lead to a gap in the lending market, offering non-bank lenders a chance to step in and meet the underserved loan demand. The increase in interest rates could translate into higher yields on new loans, which would positively impact returns. The flip side will be increased financial burden and an influx of borrowers unable to meet bank lending standards. This could potentially introduce a higher risk profile leading to heightened risk of defaults. While this necessitates more robust risk assessments to avoid potential pitfalls, in the longer term it will strengthen the profile of loans in the CRE debt markets.

The SLOOS acts as an early warning system for potential disruptions or significant changes in the CRE debt market, providing a forward-looking view that reflects banks' internal assessments and anticipations. Therefore, it serves as a valuable tool to gauge the health and future direction of the CRE debt market. Understanding changes in lending standards, demand for loans, interest rate outlook and credit availability help in anticipating market trends and making informed decisions. While these developments suggest a more challenging borrowing environment for CRE, they also create an opportunity for non-bank lenders.

Exhibit 9: Loan Maturity Profile

Commercial Real Estate Loan Maturity by Capital Source ($ Billion)



Sources: Mortgage Bankers Association, PGIM Real Estate. As of August 2023.

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