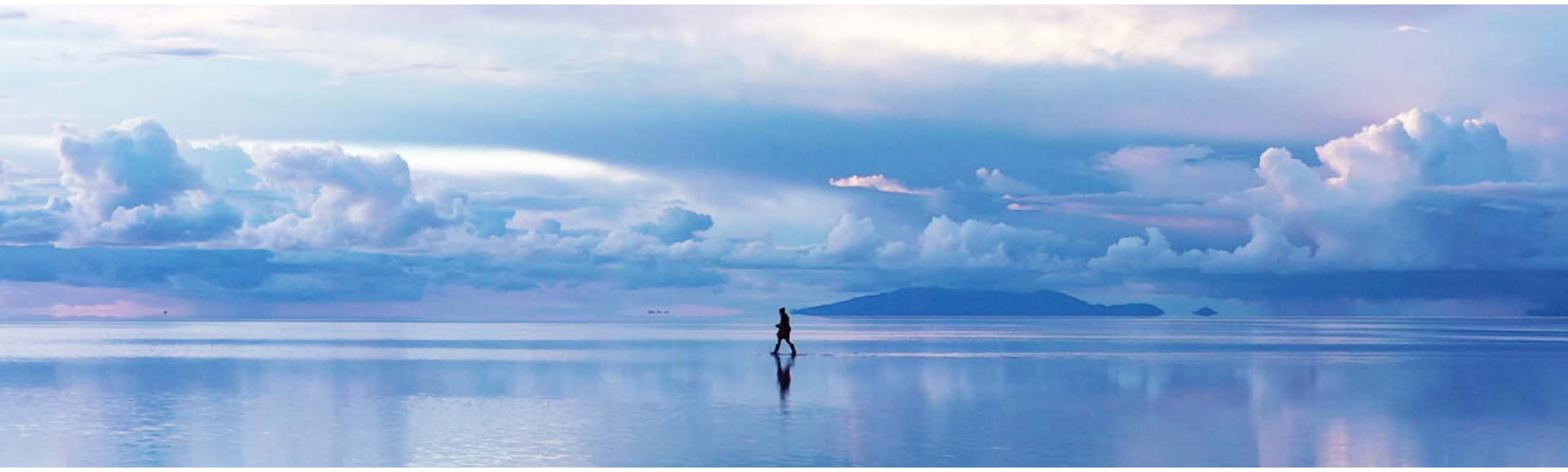
2024 OUTLOOK | PROPRIETARY RESEARCH

Disciplined Capital, Prospects Ahead

DECEMBER 2023
CONFIDENTIAL AND PROPRIETARY



CONTENTS

Introduction

Real estate sectors and geographies typically behave differently because of varied fundamentals, but this year higher interest rates made for greater, disparate investment environments.

While we entered the market facing the same short-term headwinds as others, including the near-routine deal repricing that occurred both in public and private transactions on the table this year, we're now uniquely positioned compared to most investment houses. We have seen some remarkable investment opportunities that made us a net buyer this year- but on a very selective basis.

Due to our early restraint in holding back deployment in 2022, we now have more liquidity than at any other time in our 66-year history as a firm. That decision put us at a remarkable point in the cycle to strategically deploy into a steadier market with global fundamentals moderating but generally holding up.

Our analysis goes further in this report, with views from our Global Chief Investment Officer David Steinbach on the market impacts we faced and what opportunities lie ahead.

Then, our Head of Global Research Josh Scoville shares his trend analysis on the shifts in financing costs and the pricing adjustments likely to result from rates "higher for longer", as well as a number of statistically identified green shoots.

Our Chief Investment Officers also contribute regional outlooks on investment in Asia, Europe and the Americas, which are followed by a top-line quick reference guide on the property sectors we track.

Our report concludes with a summary of our investment convictions to find real, long-term tailwinds and counter-cyclicality – globally and by sector.

A Letter from the Global CIO

THE AFTER EFFECTS FOR INVESTMENT

THROUGH THE EYE OF THE HURRICANE

Back in June of 2022, the JPMorgan Chase CEO said “brace yourself” for the possibility of an economic hurricane. Having experienced several in person, I believe the hurricane began in March of 2020 as the world shut down. This systemic shock exposed all the cracks and weak spots (supply chains, geopolitics, institutional trust, etc.) in the existing delicate global equilibrium.

The first act of the storm lasted until lockdowns ended but before the U.S. Federal Reserve tapped its toolkit to combat inflation. Then came the eye – these are deceptively serene, so much so one might think normalcy has returned. The eye gave way to the second half of the storm as the Fed took a hawkish stance on inflation. After more than 18 months of higher rate medicine, the inflation malaise is (arguably) retreating and it appears the storm has almost passed. So, let’s do what everyone does after an actual hurricane – go outside, look around and assess the damage, and plan for reconstruction.

BE HUMBLE AND OPTIMISTIC

Looking around, we see the damage, and not everyone has fared the same. Our view is the picture will become clearer and conditions will likely start to improve in 2024. Yet while the storm will yield to signs of recovery, be prepared for a longer season of volatility. Not for 80 years have there been simultaneous wars in Europe and the Middle East, and as such, current business and government leaders have to improvise. Don’t let lurid headlines sway your day. At Hines, our job is to assess the big picture and make smart, long-term investments that we believe will far outlast and outperform any news cycle.

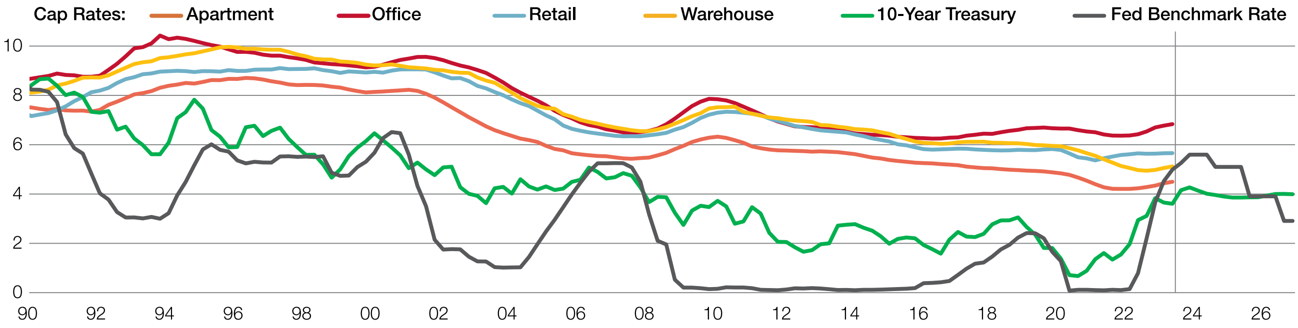
We are in the midst of a unique moment in history featuring a confluence of “once in a generation” events occurring in rapid succession. These times call for humility (particularly when talking to clients), but also optimism. The sun will rise, the world will wake up, go to work, and strive to move forward. I discussed my “4D” framework earlier this year (read here). Today’s conditions continue to reinforce these themes, and I believe they also explain the forces that will shape the investing landscape over the coming decades. The main idea – be able to separate the noise from the deeper signals around us.

UNWINDING THE UNINTENDED

Years of zero interest rate policy became ingrained into the global economy and impacted behavior in ways we still don't completely understand. Obviously, some of these deep-seated distortions will take time to unwind. It is clear now that low rates and cap rate compression bailed out poorly underwritten projects while creating unintended consequences. As an example, in our space the incentive for tenants to take higher tenant improvement allowances (in return for a higher lease rate) is another low interest rate consequence that created additional demand for new office space while making the asset class appear more capital intensive. Employees also got used to the grand scale of services and amenities. Dramatically higher interest rates have made capital much more expensive (Exhibit 1), so these expectations will get unwound (rents and capital inducements will be lower). How many similar situations will be revealed in other industries in the coming months?

Exhibit 1

Rising Interest Rates Will Stress Poorly-underwritten Deals



Sources: RCA; NCREIF; Federal Reserve; Moody's; Hines Research; as of Sep 2023

The current environment is capital constrained and liquidity remains scarce. As such, we believe a unique opportunity exists in credit, which will be an ongoing focus for us. The state of the credit markets, bank tightening, and lack of liquidity provides an opportunity to capitalize on the funding gap in the system at this moment in time. The commercial mortgage market is estimated to see a ~46% decline over 2022 levels and maturities are estimated to exceed $500 billion in 2024[1]. Risk-adjusted returns for credit generally exceed other asset classes and rival those of equity – with the only caveat being duration risk (which comes with an opportunity cost). Credit is, in our opinion, a good play – it's just not the only play. Equity investments will also have a moment, and we are entering a compelling investment window as vintage pricing resets across all sectors.

At Hines, we plan to utilize a balanced approach, seeking investments of varying durations spanning credit, acquisitions and value-add/opportunistic strategies across all sectors, providing a diversified set of options for our investors.

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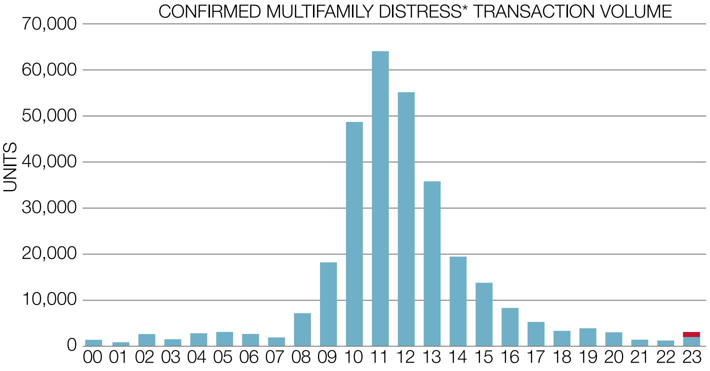
[1] ConnectCRE, MBA Forecasts 46% Drop in CRE Mortgage Volume for 2023, Paul Bubny, October 19, 2023

MARKET AND SECTOR PULSE

Overall, transaction activity remains muted globally as investors grapple with the new realities of higher rates. Due in part to the general reluctance of sellers to sell, the level of distressed assets is being revealed at a relatively slow pace (Exhibit 2). However, Hines projections show it ramping up considerably next year and peaking in 2025. Unlike during the Global Financial Crisis when all sectors crashed in unison, today's distress (driven by higher rates and refinancing risk) is giving developers and investors time to prepare (and plan for sales if needed).

Exhibit 2

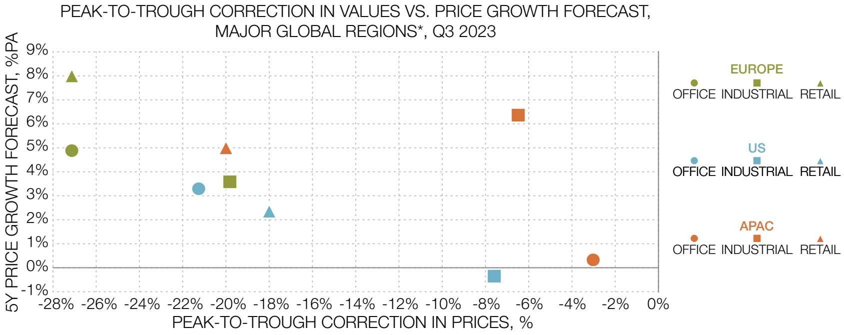
Distress Remains Miniscule in Transaction Records but Potential Looms Large



* Transactions that have been flagged as bankruptcy sale, distressed sale, or REO by CoStar
Sources: CoStar; Hines Research; as of Sep 2023

Exhibit 3

Europe Has Repriced More Than Other Major Global Regions



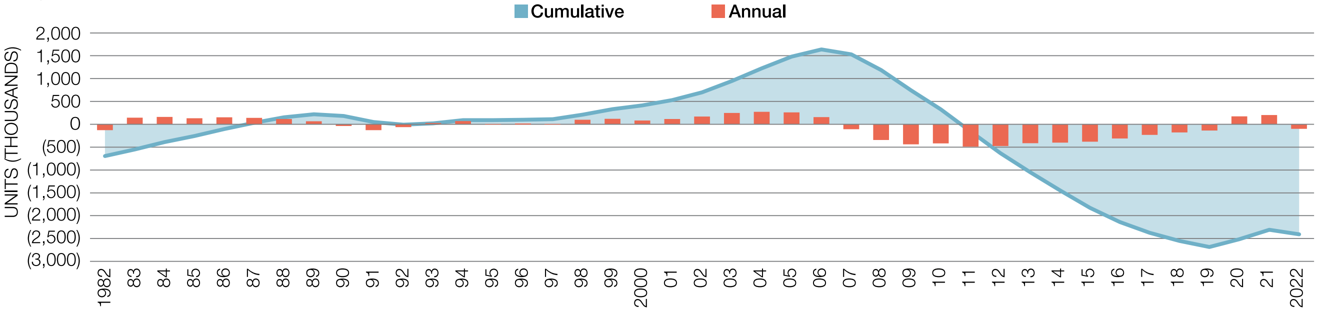
* Used top 10 metros in each global region and sector (90 in total), as measured by total investment volumes over the past 5y, and weighted together using those volumes
Sources: CBRE, JLL, CoStar, NCREIF, Hines Research (Q223)

Hines Research data suggests the greater the pricing reset of a given sector or region, the stronger the five-year outlook (Exhibit 3).

Looking at sectors, the news is somewhat mixed. Hines data suggests there is a housing shortage of some kind in virtually every market we cover (Exhibit 4) across the globe.

Exhibit 4

Single U.S. Family Surplus/Deficit

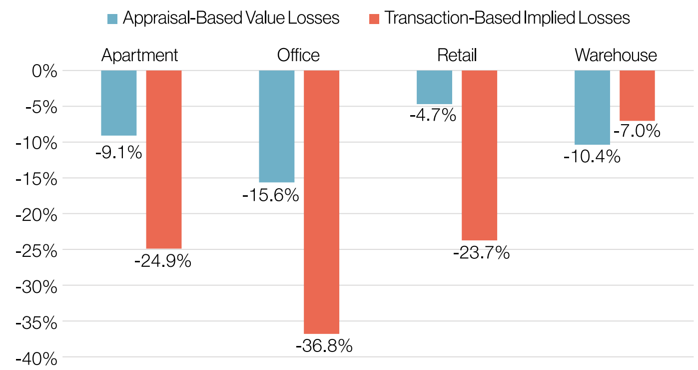


Sources: Moody's, Census Bureau, CoStar, Hines Research. As of Q323, but using last available datapoint for annual series, 2022.

This dearth of supply, combined with ongoing projected demand, should help fundamentals recover more quickly in the living sector. Yet the gap between appraisals and market pricing (Exhibit 5) still remains with apartments. Again, we see non-Hines sellers not yet adjusting prices to what buyers are willing to pay.

Exhibit 5

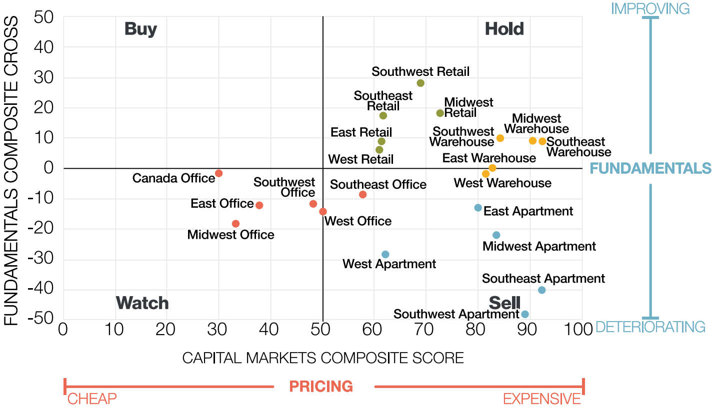
Aggregate Value Correction, Peak to Q323



Sources: NCREIF; Hines Research; as of Q223

Exhibit 6

Americas Markets Cycle Chart



Sources: CoStar; Hines Research; as of Q223

In the U.S., (Exhibit 6) multifamily is taking it on the chin, with retail stabilizing[2]. This makes sense considering how bad retail had been performing, contrasted with years of strong demand and very low cap rates with multifamily. Retail in Asia, along with Industrial, Retail, and Office in Europe have all fallen by 20% or more from the highs, but as noted above, this translates into good forecasts - all now boast five-year price growth projections exceeding 3% annually[3].

Office markets are also mixed – in the U.S. there is a performance bifurcation between trophy properties and the rest. Europe and Asia are mostly healthy, with a few high-profile exceptions. The higher cost of capital keeping supply in check should ultimately speed up the reset.

We all know that, despite all our research and analysis, it is all but certain that next year will bring its own surprises. The hurricane itself will pass, but these storms always leave piles of rubble behind. Perhaps as we continue to clean up, this wisdom from the Stoics might provide some timely guidance. *"The obstacle becomes the path. Optimism is not a denial of the struggles, but a resilience to work through them."*

DAVID STEINBACH
Global Chief Investment Officer
Co-Head of Investment Management, Hines

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[2] The Composite Capital Market Score ("CCMS") is an aggregate score (0-100) derived from the following metrics: Price to Trend, Cap Rate Spreads, Growth-Adjusted Spreads, Trailing Price Growth, and Trailing Total returns. The CCMS is calculated as a percentile relative to each market's own history. Higher scores indicate that the market is expensive relative to its history. Very Expensive - 85-100th percentile; Expensive - 70-85th percentile; Fairly valued - 30-70th percentile; Inexpensive - 15-30th percentile; and Cheap 0-15th percentile. This chart averages the CCMS for all markets covered by Hines Research within each property type shown.

[3] CBRE, JLL, CoStar, NCREIF, Hines Research as of Q223

2024 Outlook:

Searching for Green Shoots

Searching for the green shoots

Residing in Boston, the month of May stands out as one of my favorites, characterized by lengthening days and a noticeable shift towards warmer temperatures. During this time, the once dull winter hues of grays and browns across nature's landscape transform into vibrant shades of spring green.

Similarly, the realm of private equity real estate is navigating its winter season, with frozen capital markets awaiting a seemingly distant thaw as pricing readjusts and the industry assimilates the impact of today's higher financing costs.

While I refrain from claiming the ability to predict the contours of the macro economy, especially concerning future financing costs, I have observed that ongoing repricing appears to have established an enticing investment landscape reminiscent of the early post-Great Financial Crisis ("GFC") years. Though challenging to perceive then, hindsight now reveals that the GFC exhibited a decidedly V-shaped trajectory across almost every measurable metric, particularly in the United States (U.S.) with Europe experiencing a double-dip and Asia falling somewhere in between.

As we approach 2024, our debates may differ from those during the depths of the financial crisis, yet we find ourselves in a comparable moment. While navigating our existing portfolios through the transition from zero interest rate policy (ZIRP) to pre-crisis interest rate norms presents some challenges, we remain enthusiastic about the forthcoming opportunities and are strategically positioned to seize them when the opportune moment arises.

Getting through the trench

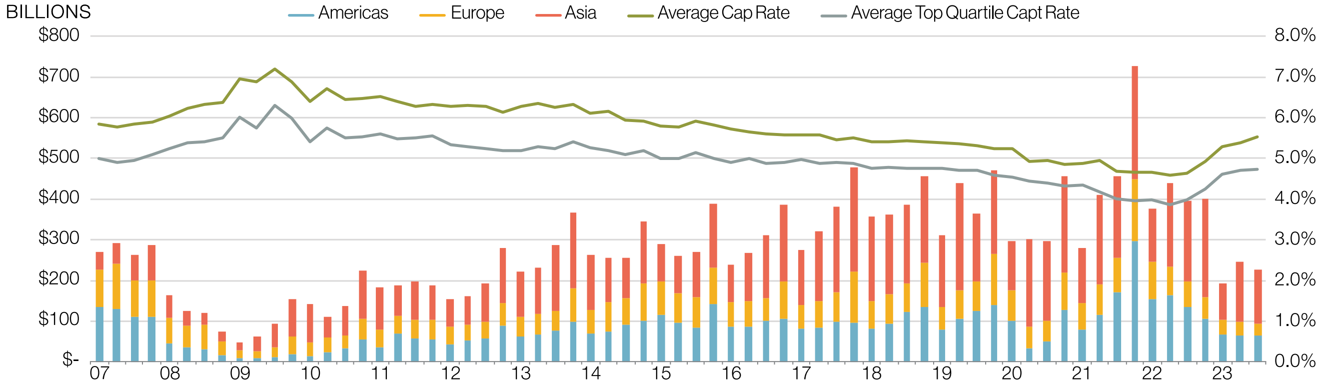
The trench that the industry is currently in consists of many themes with more or less prevalence in certain parts of the global market. I've outlined a few key themes first that acknowledge the reality of today's market before presenting what I see as early signs of stabilization and perhaps even some glimpses of market recovery.

PEAK VOLUME AT PEAK VALUATIONS

Emerging from the pandemic in 2021, there was a notable surge in real estate demand, fueled by the decline in transaction volume and a modest repricing during the preceding year's pandemic. That heightened demand was further amplified by an abundance of available capital eager to enter the market, prompted by the historically low risk-free rates established by central banks in support of the previously shuttered economy. The reopening of the economy triggered a flurry of activity, resulting in over $3.1 trillion in transactions exceeding $25 million globally from the fourth quarter of 2020 through the first half of 2022 according to data from MSCI Real Capital Analytics. This surge, coupled with record-low interest rates, led to unprecedented lows in cap rates in Q222 (Exhibit 1). Among the major regions, Asia-Pacific took the lead with $1.4 trillion in volume, followed by the U.S. at $1.1 trillion, and Europe with a comparatively modest but still notable seven-quarter regional record of $632 billion. Notably, development sites in the Asia-Pacific region contributed just over a trillion to the peak volume, followed by nearly $500 billion in apartments in the Americas (predominantly the U.S.), $220 billion in industrial volume in the Americas, and $204 billion in office volume in Europe.[1]

Exhibit 1

Record Post-pandemic Transaction Volume Combined with Record-low Interest Rates to Drive Cap Rates to All-time Lows



Sources: MSCI Real Capital Analytics; Hines Research; as of Q323

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[1] While Hines made some acquisitions during this period, we were relatively sober despite having significant dry powder. On net, we took advantage of the market's frothiness and were net sellers of existing assets of more than $1 billion globally.

In the United States, where MSCI Real Capital Analytics also monitors refinancings, they documented an additional $843 billion in refinance volume over the same seven-quarter period.[2] This effectively expanded the pool of assets transacted during the post-pandemic, zero-interest-rate-policy (ZIRP)-driven period in the U.S. by more than 75%. Although the data is not available to precisely quantify these figures, a similar trend likely exists in non-U.S. markets to varying degrees. Subsequently, central banks have responded by aggressively increasing rates to counter inflation, disrupting many of the underwriting assumptions employed by both borrowers and lenders in their proformas.

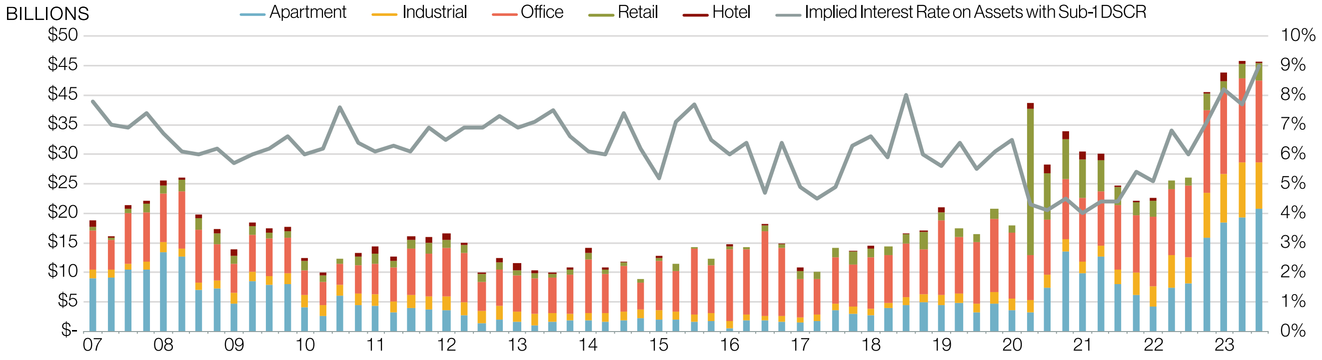
A RAPID RISE IN INTEREST RATES

In the heightened activity of the post-pandemic transactions market, auction participants are inclined to employ assertive assumptions and financing strategies to meet their required returns and secure successful bids. In the U.S., the transparency of the securitized markets enables us to observe that a substantial portion of the debt utilized during this period comprised aggressive two-year floating-rate securitized instruments, often featuring three, one-year extensions. The clarity has been limited regarding whether these extensions are subject to tests and whether borrowers implemented long-term hedges to cap their interest rates beyond standard requirements. However, the securitized financials unmistakably reveal that numerous loans now bear interest rate figures in the 6s or even 7s, leading to a corresponding deterioration in debt service coverage ratios (DSCRs). Moreover, the unparalleled surge in apartment and industrial rents coinciding with the peak in transaction volume likely prompted many successful bidders to underwrite ambitious rent growth. With rent increases now moderating, especially in U.S. apartments and even in U.S. industrial markets, these assumptions may be failing to materialize as anticipated by buyers and lenders.

Elevated property values coupled with a deceleration in rent growth and a swift surge in floating-rate debt expenses have started to create challenges for numerous property owners. Once again, we draw from the relatively transparent U.S. market, using data from the NCREIF Property Index (NPI) to illustrate this point, although it is likely applicable to other less transparent global regions. Exhibit 2 depicts the notable rise in leveraged properties within the NPI that exhibit less net operating income than interest costs, resulting in sub-1 debt service coverage ratios.

Exhibit 2

Value of U.S. NCREIF Properties with Sub-1 DSCR



Sources: NCREIF; Hines Research; as of Q323

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[2] MSCI Real Capital Analytics as of Q420 to Q222

During the pandemic, the volume of properties facing this negative cash-flow situation escalated as net operating income was temporarily disrupted, especially in the retail sector due to government-mandated store closures and the apartment sector where rent collection moratoriums were implemented in various jurisdictions. However, the ZIRP led to a historic low average interest rate of 4% on these loans, and lenders were particularly cooperative with borrowers during this unprecedented period.

Shortly after, transaction volume experienced a significant surge, prompting many buyers to adopt bold underwriting assumptions, while the Federal Reserve initiated a series of rate hikes in response to inflation proving more persistent than anticipated. With the average interest rates on these potentially problematic NCREIF properties reaching around 9% in the third quarter of 2023, the value of these sub-1 DSCR properties has reached a record $45 billion. Within this total, the apartment sector accounted for over $20 billion, office properties for $13.8 billion, and the industrial sector for $7.8 billion.

During 2023 the net operating income (NOI) shortfall on these properties, insufficient to cover interest expenses entirely, amounted to $1.1 billion, in contrast to a total NOI of $1.4 billion. This implies the owners of these properties would need to grow NOI by more than 75% to meet their debt obligations. It is crucial to note that NPI is overseen by some of the largest, most sophisticated institutional managers in the U.S., if not the world. Still, it represents only a fraction of the capital invested in U.S. commercial real estate. If these challenges are manifesting within the confines of NCREIF, the question arises: How is non-institutionally managed real estate faring?

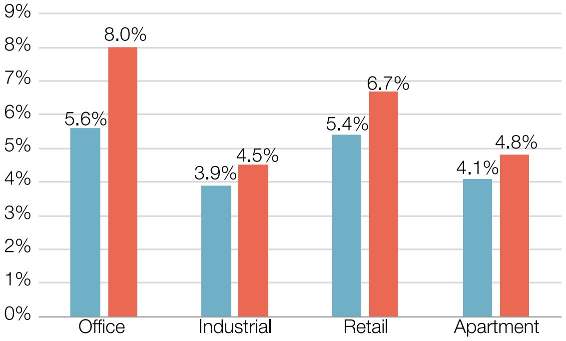
STICKY VALUATIONS AND LOW TRANSACTION VOLUME

Book valuations have undergone adjustments to align with current market realities, although only to a limited extent. The bid-ask gap, despite narrowing in certain market segments, remains notably wide. Consequently, recent transaction volumes have remained relatively low, even when compared to pre-pandemic standards, as illustrated in Exhibit 1. Compared to the 2015-19 average, trailing annual volumes have experienced a decline of 28% in the Americas, 50% in Europe, and 10% in Asia Pacific. Overall, office transaction volumes are subdued across these three global regions, while residential and industrial volumes have fared better, particularly in the U.S. and Asia Pacific.

In the absence of concrete transactional data, some appraisers have been conservative in marking down assets, a trend especially prominent in the U.S. This can create a problematic cycle where the disparity between book value and potential market value perpetuates, leading to a scenario where transaction volumes remain low, and markdowns remain restrained. Returning to NCREIF, Exhibit 3 illustrates the variance between appraisal and transaction cap rates in the NPI database.

Exhibit 3

NCREIF Transaction and Appraisal Cap Rates by Property Type



Sources: NCREIF; Hines Research; as of Q323

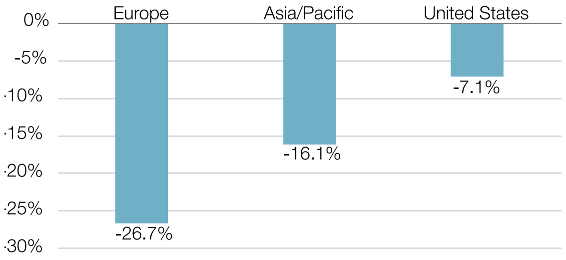
Office properties within the NPI database are currently valued at an average equal-weighted appraisal cap rate of 5.6%. In contrast, the 23 office properties that were sold out of the database in Q323 achieved an average equal-weighted transaction cap rate of 8% based on in-place income. In the industrial and apartment sectors, there remains a discernible gap between the two rates, albeit narrower. Unsurprisingly, these sectors have experienced relatively better liquidity.

A similar trend has unfolded beyond the borders of the United States. In Europe, CBRE reports appraisal cap rates of 4.6% for prime pan-European office markets, while MSCI RCA notes transaction cap rates at 5.9%.[3] In developed Asia, encompassing Australia, Japan, and South Korea, JLL discloses a stock-weighted average cap rate of 4.1% for the office sector and 4.7% for the industrial sector. In contrast, MSCI RCA's average stock-weighted transaction cap rates were 5.0% and 5.4%, respectively.

To date, Europe has been at the forefront of global market valuation adjustments, outpacing the United States in corrective measures. Exhibit 4 illustrates a market-cap-weighted aggregate of regional pricing for the 15 largest markets in each region. According to this index, the pricing adjustment in Europe has been over three times that of the U.S. This holds true across various sectors, with European office valuations experiencing a 27% decline compared to 15% in Asia Pacific and 11.5% in the U.S. Similarly, in sectors with stronger fundamentals like industrial, Europe has seen a 24% decrease compared to 5% in the U.S. and 2.3% in Asia Pacific. Despite potentially greater economic uncertainty, Europe seems to be approaching a bottom and subsequent recovery more closely than the U.S.

Exhibit 4

Cumulative Valuation Adjustments Since the Peak

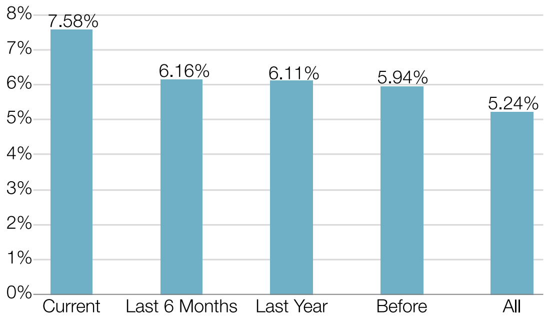


Sources: NCREIF; CBRE; JLL; as of Q323

EMBEDDED FINANCING AT WELL BELOW TODAY'S MARKET RATES

Exhibit 5

Average Interest Rate on Levered Properties in the Major Property Types in NPI



Sources: NCREIF; Hines Research; as of Q323

In the United States, most properties in the NPI were incorporated into the database before the onset of the Federal Reserve's hiking cycle, reflecting the decline in transaction volume since then. Specifically, out of the $481.8 billion of leveraged properties in the NPI, $402.8 billion had already entered the database before Q222. According to Exhibit 5, the most recent third quarter saw an average interest rate of 5.24% on all leveraged properties across major property types. However, the average interest rate for properties entering the database in the third

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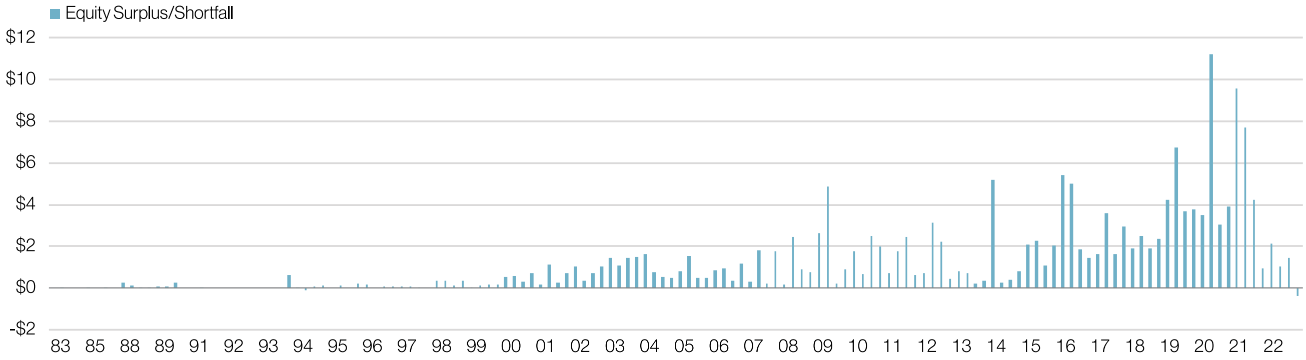
[3] To better align with CBRE's prime cap rate, we used RCA's top quartile cap rate for transactions.

quarter was notably higher at 7.58%. It's worth noting that this data is skewed, as only the more favored apartment and industrial sectors contributed to the properties added in the most recent quarter across the four major property types. When expanding the analysis to include all properties across various sectors in NPI, the average interest rate for those added in the most recent third quarter was an eye-popping 8.7%.

The differential between in-place interest rates on debt and market interest rates upon maturity has the potential to create an equity shortfall. In Exhibit 6, we assume levered properties in NPI need to refinance every five years. Up until the third quarter 2023, that refinance event usually occurred at lower market rates than in-place rates, often providing borrowers with the opportunity for cash-out proceeds should they choose to take them. But, for only the second time since this data start in the first quarter of 1983, this analysis suggests an equity shortfall in the most recent quarter.[4]

Exhibit 6

Refinance Math on Levered NCREIF Properties Bought Five-years Prior



Sources: NCREIF; Hines Research; as of Q323

While quantitatively pure, this illustration makes a number of consistent assumptions but is for illustrative purposes only. To give you a sense of this analysis, consider the following for the 71 levered properties bought five years ago (i.e. entered the NPI database in Q318) with a book value of just over $8.4 billion:

- The collective in-place interest rate (aggregate quarterly interest payments divided by the aggregate loan balance in the previous quarter times four) is 5.4%.
- With an aggregate loan balance of $3.95 billion, the in-place LTV is 46.9%.
- Aggregate NOI divided by aggregate interest payments at the in-place interest rate yields a DSCR of 1.82.
- The aggregate interest rate of the 19 properties entering the database in the most recent quarter across all property types is 8.7%, which is a 23-year high.
- If the properties bought five years ago need to refinance at today's rate of 8.7%, the average interest payment would increase 60%.
- With a 60% increase in interest expense, the DSCR would drop to 1.14.
- Assuming a minimum DSCR floor of 1.25 on the refinance, aggregate loan proceeds drop to $3.7 billion, which creates a $365 million equity shortfall, or about 9% of the existing loan balance.
- Over the past five years, 2,238 levered properties have entered the NPI with an average in-place interest rate of 5% and a book value of $179 billion. If rates were to remain elevated, admittedly a big if, the equity shortfall on refinancings could approach 20% of the existing loan balance.

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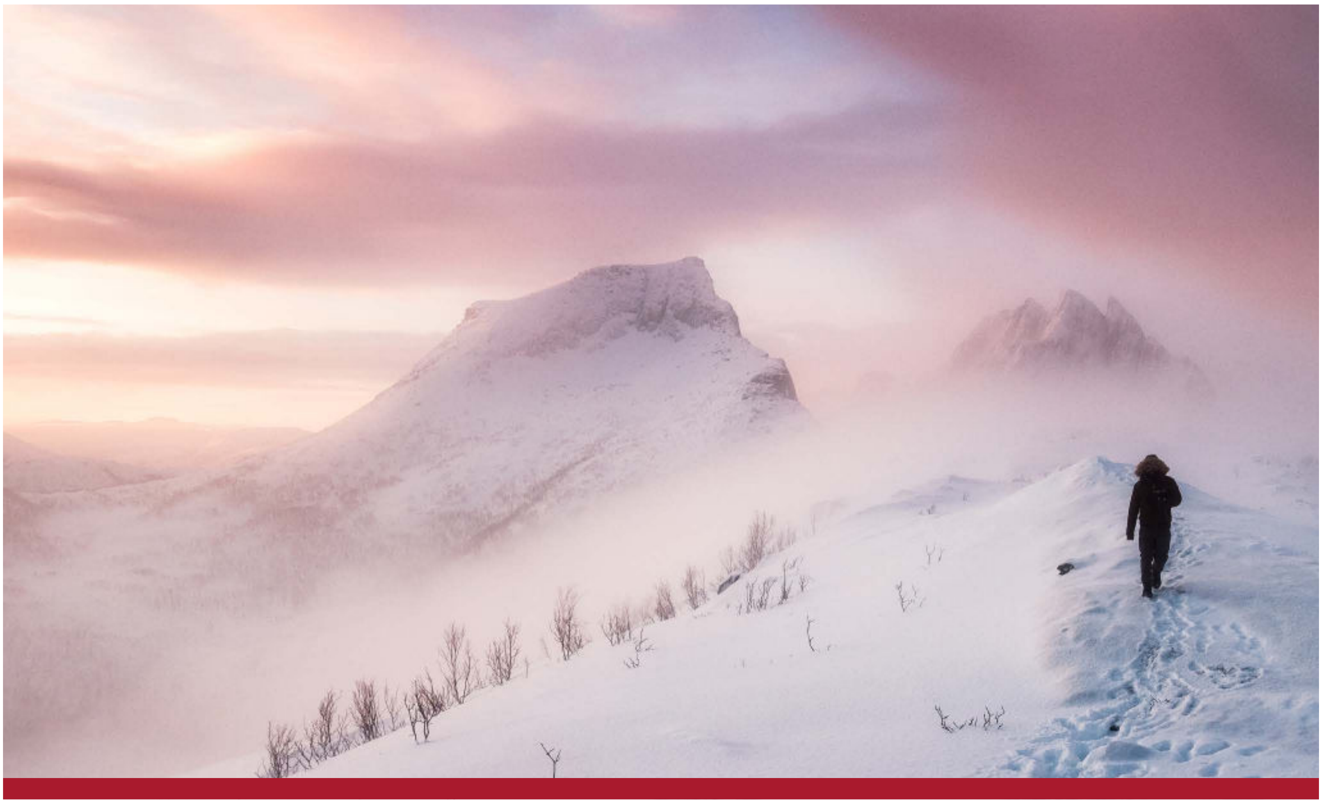
[4] While we can take this analysis as far back as Q383, there are quarters where there were no levered properties added to the database five years prior and/or quarters where no new levered properties were added in the quarter, thereby creating gaps in the analysis prior to 1999. But for the periods where the data do exist prior to 1999, an average equity surplus of 96% was derived and only Q394 had a deficit.

Certainly, not all leveraged properties within NPI adhere to five-year debt terms. Although leases on the aggregate index have likely undergone substantial rollovers, individual assets may possess embedded Net Operating Income (NOI) growth, mitigating the risk of a shortfall. Moreover, the potential exists for rates to decline again as inflation subsides, contributing to a partial dissipation of this phenomenon. However, the present circumstances are undeniably unusual compared to the last four decades, and as loans continue to mature, this could serve as a potent catalyst for realizing losses and subsequently resetting valuations.

In addition, among the levered properties underlying the aforementioned analysis,[5] the aggregate book value "cap rate," calculated by dividing NOI by market value, stands at 4.8%. This rate is significantly lower than current transaction cap rates, introducing additional complexities regarding refinancing proceeds.

Although we lack the data to conduct an analogous in-depth analysis in Europe or Asia, we can discern a comparable trend by examining the last five years of publicly traded real estate debt. According to Bloomberg, the aggregate public debt of any company incorporated in Europe and categorized as a real estate company, admittedly a broad search, reveals nearly $200 billion in cumulative debt set to mature within the next five years. This debt carries a weighted-average in-place coupon of 2.84%.[6] Considering that European BBB-rated corporate debt has traded in the mid-4% range, and sub-investment grade debt is notably higher, there is a likelihood of encountering challenging maturities in the coming years if interest rates remain elevated for an extended period.



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[5] NCREIF; Hines Research; as of Q323

[6] Bloomberg: as of November 2018- October 2023

Macroeconomic trends

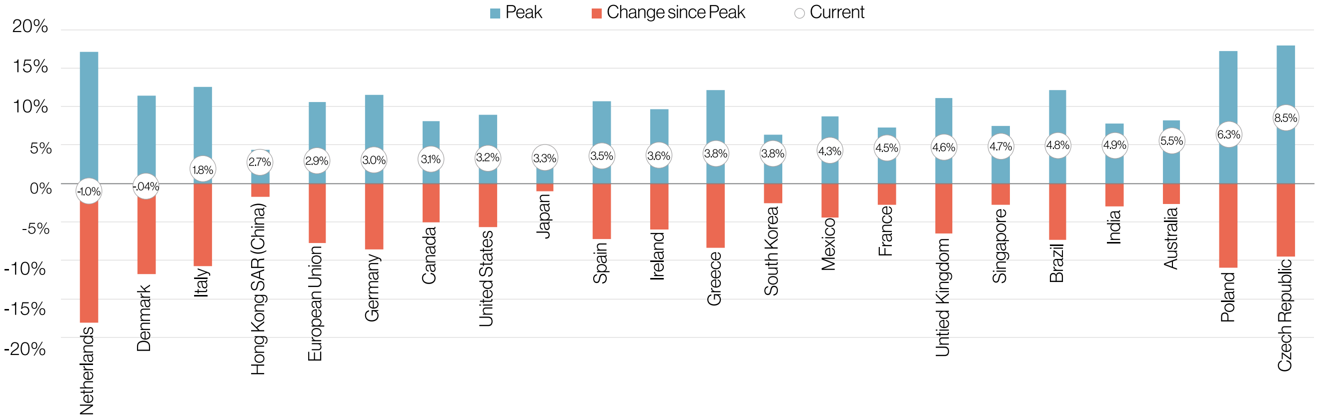
The earlier examination of shifts in financing costs and the resulting pricing adjustments, already evident in some regions (primarily Europe) and potentially looming in the future, especially in the U.S., remains a primary focus. While I've expressed a reluctance to heavily rely on macroeconomic forecasts, stemming from past experiences with a relatively benign forecast just before the GFC, I do closely monitor macroeconomic trends. Within this data, there exists a combination of concerning and optimistic indicators. In this section, we will delve into a few of these that I deem particularly pertinent.

SIGNIFICANT DECLINES IN GLOBAL INFLATION RATES

According to the most recent data, inflation rates in the 22 countries illustrated in Exhibit 7 have substantially decreased from their previous peaks. Across these nations, the equal-weighted average annual inflation rate has dropped to 3.7%, in contrast to the 12.7% recorded at the close of 2022. A significant portion of this reduction in price growth can be attributed to base effects, with higher prices from a year ago providing a less challenging comparison in more recent times. Additionally, the decline in energy prices has been a positive development, although it is worth noting that such changes can be transitory, leading to its exclusion from core inflation. Nonetheless, as we assess the current landscape and attempt to anticipate the future interest rate environment, this decline in inflation is encouraging compared to the trends experienced a year ago.

Exhibit 7

Inflation Rates Around the World



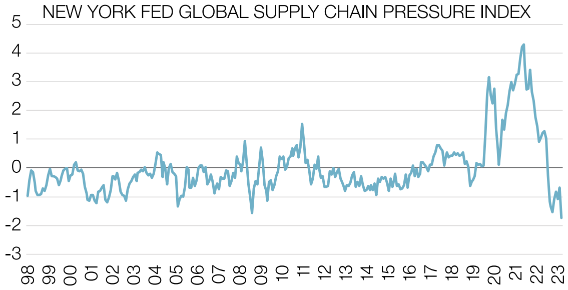
Sources: CEIC; Hines Research; as of October 2023

ONGOING RECONFIGURATION OF GLOBAL SUPPLY CHAINS

In addition to the food and energy crisis stemming from Russia's invasion of Ukraine, general inflation pressures were compounded by supply chain disruptions as economies rebounded from the pandemic, and the unleashed pent-up demand overwhelmed a supply chain struggling to keep pace. As depicted in Exhibit 8, the Federal Reserve's Global Supply Chain Pressure Index demonstrates that this specific source of inflation has largely diminished.

Exhibit 8

Supply Chain Issues Appear Resolved



Sources: New York Federal Research; Hines Research; as of October 31, 2023

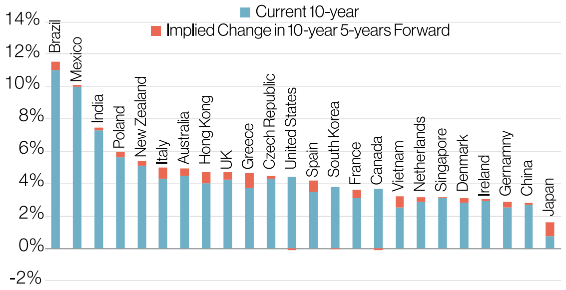
Investments in supply chains are anticipated to persist as companies (and nations) reassess geopolitical relationships, incorporate redundancy, or relocate operations to near-shore and/or friend-shore critical processes. However, the considerable supply chain pressures experienced in 2022 are mostly in the past. The supporting evidence lies in the fact that during the peak of the NY Fed's index in the first half of 2022, there were more than 100 containerships waiting to be offloaded outside U.S. ports, some for weeks. As of the latest data at the end of October 2023, this number had dwindled to only eight, further underscoring the improvement in the supply chain situation.

EXPECTATIONS OF HIGHER FOR LONGER LONG-TERM INTEREST RATES

Despite the recent decline in inflation figures, the forward curve continues to anticipate 10-year sovereign bond rates to hover around their current levels. In areas where yield curves exhibit inversion, there might be a reversion, but the bond market indicates that such a reversion would likely stem from a decrease in short-term rates, possibly due to weaker economic growth prompting more accommodative policy rates, while long-term rates would likely persist at their elevated levels. Exhibit 9 outlines the current expectations for 10-year sovereign bond yields five years from now. Clearly, the once-prevailing "lower for longer" perspective of just a few years ago has transformed into "higher for longer." The realization of this expectation remains uncertain, but it seems unlikely for long-term rates to revert anywhere close to the lows observed in recent years. Moreover, while lower short-term rates may alleviate floating-rate debt costs, higher long-term rates exert a more pronounced impact on cap rates as real estate competes for capital with other income-producing assets, namely bonds.

Exhibit 9

Future Long-Term Rates as Implied by the Forward Curve



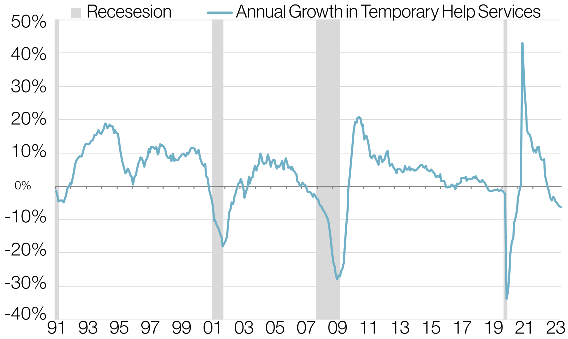
Sources: CEIC; Hines Research; as of October 2023

CRACKS IN THE U.S. LABOR MARKET

The U.S. labor market has displayed remarkable resilience thus far, but the overall strength may be concealing vulnerabilities in certain sectors and markets. Given its flexibility in expanding and contracting due to the short-term nature of contracts, the temporary employment sector has historically been a bellwether, deserving particular attention during potential economic turning points. As depicted in Exhibit 10, this indicator has signaled more recessionary conditions than the top-line indicator often quoted in the popular press dose.

Exhibit 10

Declines in Temporary Employment Indicative of U.S. Recession

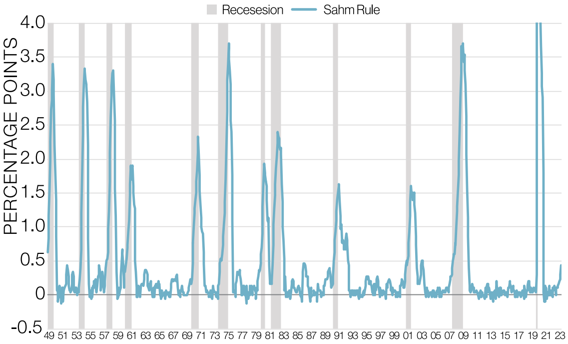


Sources: BLS; Hines Research; as of October 2023

Alongside the downturn in temporary employment, the annual growth in U.S. transportation and warehousing employment turned negative in August, with losses intensifying through the latest data point in October. This trend aligns with a deceleration in warehouse leasing activity. The information sector, which is heavily tech-focused, has witnessed job losses in nine of the past 11 months, with annual employment losses approaching 2.9%. Concurrently, national office-using employment has slowed to an annual pace of just 0.6%, with over half of the major U.S. metropolitan areas we monitor experienced declines in office-using jobs on a year-over-year basis.

Exhibit 11

Uptick in U.S. Unemployment Rate Nearing Recessionary Territory



Sources: BLS; Hines Research; as of October 2023

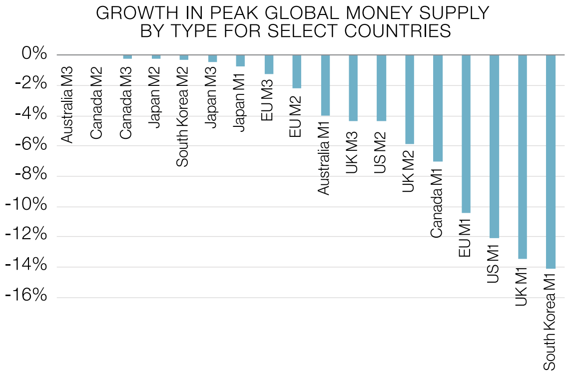
A rise in the U.S. unemployment rate is on the verge of triggering the Sahm rule, a recessionary rule-of-thumb. The Sahm rule is calculated by averaging the trailing 3-month unemployment rate and subtracting the low unemployment rate from the previous 12 months. Historically, when this measure has exceeded 0.5 percentage points, it has signaled a national recession. As of the latest data point in October, the Sahm rule registered at 0.43, marking its highest level since the end of the pandemic, as depicted in Exhibit 11, and just below the threshold historically associated with a recession.

DECREASES IN GLOBAL MONEY SUPPLY

In many developed economies, the increase in interest rates has prompted a shift of funds from overnight deposits in the M1 money supply towards longer-duration instruments in the broader money supply, encompassing M2 and M3. However, in certain countries, even M2 has experienced a decline since reaching its peak (refer to Exhibit 12) due to ongoing quantitative tightening by central banks. While M1 supply remains notably elevated compared to its pre-pandemic trajectory in the U.S. and other regions, it is the changes in overnight deposits that historically have influenced trends in bank lending. As long as bank deposits decrease, bank lending is likely to remain relatively constrained, all other factors being equal. This shift is one of the mechanisms central banks have utilized to slow down the economy, and indications suggest that it is proving effective. The lagging effects of this adjustment may become more pronounced in 2024.

Exhibit 12

Decreases in Global Money Supply



Sources: CEIC; Hines Research; as of October 2023

Signs of green shoots

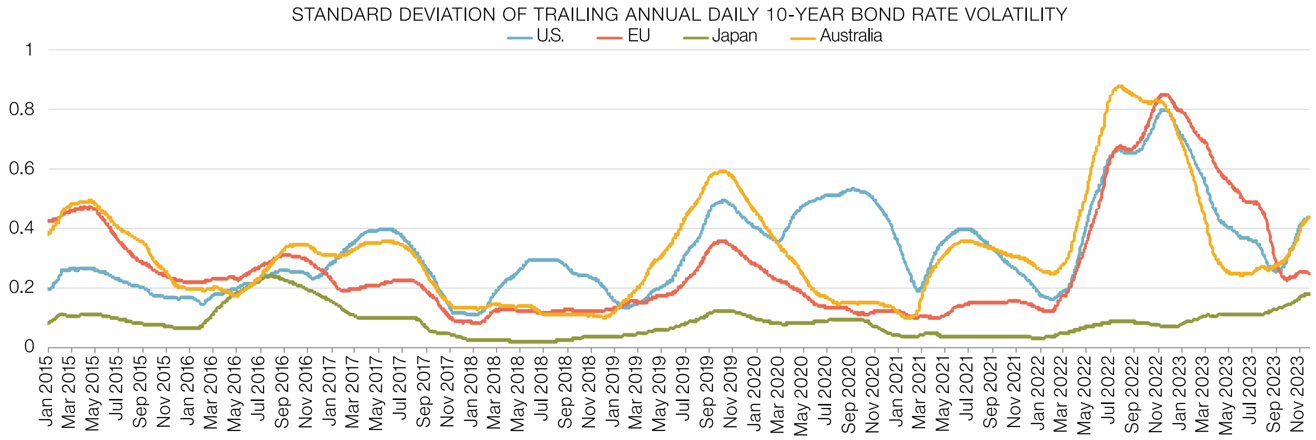
I've named the 2024 Outlook "Searching for Green Shoots" but have spent the first half of the paper acknowledging the challenges the broader industry faces. Let's turn our attention to some more optimistic signs.

LOWER BOND MARKET VOLATILITY

I've already discussed inflation and the encouraging trends observed in that regard that have led to a rally in bonds, and despite the ongoing perception of relatively high interest rate volatility, the trailing annual daily standard deviation of U.S. 10-year treasury rates has actually decreased by 45% from its cyclical peak in 2022. Similarly, the trailing annual daily volatility of EU AAA-rated 10-year government bond yields was 71% below its 2022 peak. In the Asia Pacific region, Australian volatility was 50% lower than its cyclical high in 2022, although Japan's 10-year bond rate volatility was currently at a seven-year high by the same measure, given that its rates began rising later than in most other countries. While daily volatility in Australia and the U.S. has experienced a recent uptick, it still remains well below cyclical peaks. Generally, lower bond rate volatility is expected to introduce more stability to the market, providing greater certainty in the execution of underwriting and pricing potential investments (Exhibit 13).

Exhibit 13

Bond Market Volatility Generally Lower than Cyclical Peaks from Last Year



Sources: CEIC; Hines Research; as of October 2023

TRANSACTION VOLUME NEARING A BOTTOM

There are various ways to gauge transaction volume, with many opting for currency-based measures, as demonstrated in Exhibit 1. However, currency-based volume measures have a couple of drawbacks. First, during corrections, such as the current one, these measures incorporate lower valuations, artificially deflating the reported level. Second, when using a single currency, like USDs, as demonstrated in Exhibit 1, FX movements over time can impact the analysis. To address these issues, the total volume of properties transacted, either by the number of properties or total square footage traded, can be a beneficial measure.

Analyzing the change in trailing annual volume by total square footage transacted across the office, retail, industrial, and apartment sectors revealed that, according to MSCI RCA's third-quarter 2023 data, the decline in the Americas and Asia was still ongoing, but the rate of decline is less than half of what it was at the end of 2022. In Europe, volume (by this measure) continued to decline at a similar pace as last year, but the declines have not accelerated significantly.

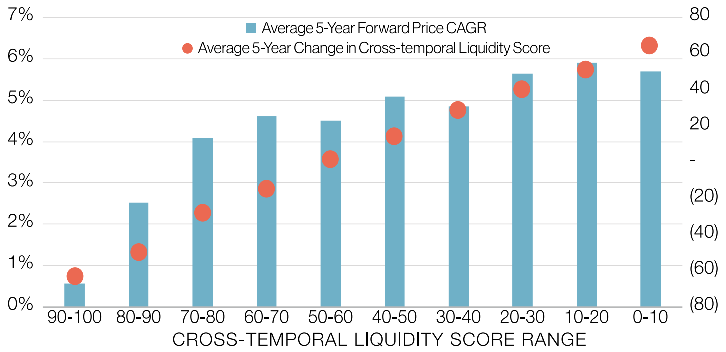
Examining major property types, retail stands out as a universal winner when considering total square footage transacted, with trailing annual volume measured by square feet increasing by 2.6% quarter-over-quarter in the Americas, 13.4% in Asia Pacific, and down by just 2.3% in Europe, compared to an annual decline of 18.7% in the first quarter. Office liquidity in the Americas and Europe remains challenging, although there has been some improvement in Asia Pacific. Industrial volume in the Americas may be approaching a bottom, though it continues on a downward trend in Europe and Asia Pacific. In the apartment sector, Asia Pacific experienced a significant jump in the third quarter, driving trailing annual volume up by 26.8%, although it continues to decline in the Americas and Europe.[7]

Concerning transaction volume and overall market liquidity, it's essential to remember that when market liquidity is low, future price growth tends to outperform, and vice versa. In other words, it's advantageous to provide liquidity when there is very little and to sell into excessively liquid markets that are likely a bit frothy.

Exhibit 14 utilizes MSCI RCA's Liquidity Scores for all income-producing commercial real estate that they track. Rather than simply using volume as a measure of liquidity, their methodology consists of absolute levels of volume and unique buyers in a market, as well as relative measures across markets of four metrics: the percentage of market transactions involving institutional players, global cross-border capital sources, global market makers, and market makers specific to each global zone (i.e. EMEA, Americas, and Asia Pacific). More volume, players, and larger players results in higher liquidity scores.

Exhibit 14

Cross-temporal Liquidity is a Good Indicator of Future Price Growth and Changes in Liquidity



Sources: MSCI RCA; Hines Research; as of Q323

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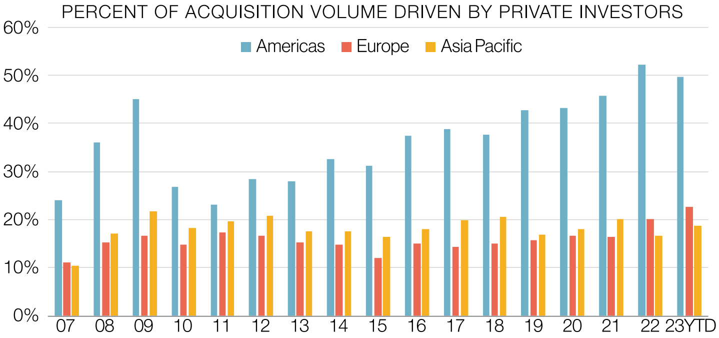
[7] MSCI RCA's third-quarter 2023 data

This methodology aims to quantify relative liquidity across markets, which we believe it accomplishes effectively. However, when considering future liquidity and/or price movements within each market based on an investment made today, the relevance of the fact that Atlanta is more liquid than Adelaide may be limited. To address this, in Exhibit 14, MSCI RCA's raw cross-market scores have been converted into cross-temporal scores for each individual market. This conversion quantifies how liquid or illiquid a market is relative to its own history rather than relative to other markets. For example, while London's raw current score of 74.9 places it in the top 25% most liquid global markets among the 155 markets MSCI RCA scores, when viewed on a cross-temporal basis, the 74.9 equates to a 0.2 for the British capital. In other words, relative to London's own history, it has never been less liquid than it is right now.

In a historical analysis with 3,865 observations, as depicted in Exhibit 14, a robust correlation emerges between cross-temporal liquidity and subsequent changes in both price and liquidity. Instances where cross-temporal liquidity exceeded 90 (116 occurrences) resulted in an average forward price Compound Annual Growth Rate (CAGR) of merely 0.6% over the subsequent five years. During the same period, cross-temporal liquidity declined by an average of 63 points, indicating a tendency for formerly hot markets to cool. Conversely, in instances where cross-temporal market liquidity historically fell below 10—reflecting the current situation in several noteworthy locations such as London, Vancouver, Hamburg, Warsaw, Sao Paulo, Zurich, New York, Washington DC, Seoul, Tokyo, Dusseldorf, and suburban Paris—the five-year forward price CAGR averaged 5.7%. Moreover, there was an average improvement in cross-temporal liquidity of 64 points over the subsequent five years. Therefore, the existing low levels of liquidity in certain markets appear to augur well for future market price growth.

Exhibit 15

Higher Private Capital Activity Usually a Good Sign of a Market Bottom



Sources: MSCI RCA; Hines Research; as of Q323

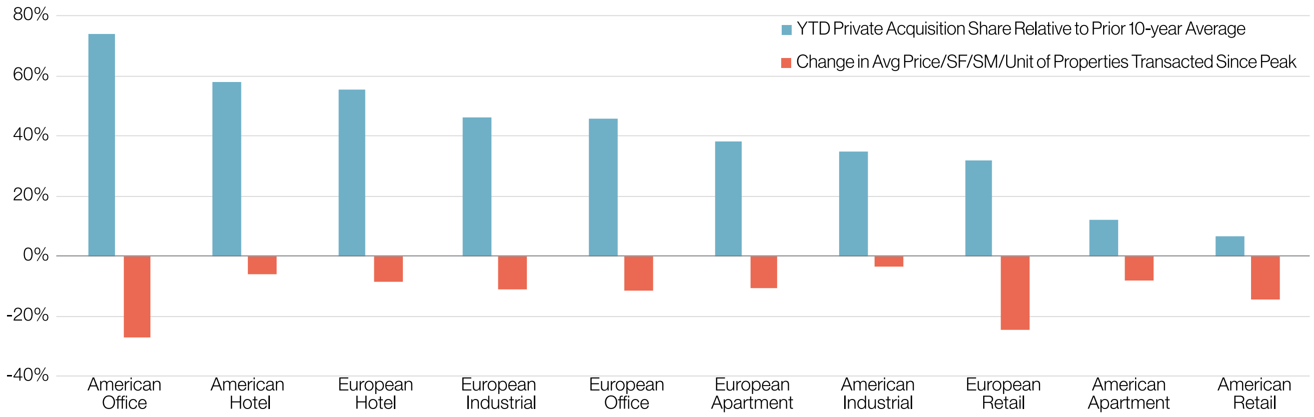
PRIVATE CAPITAL TO THE RESCUE

Private capital has tended to exhibit greater agility compared to institutions and is less constrained by investor sentiments than public REITs. Consequently, private capital has expanded its market share in terms of acquisition volume over the last four quarters, notably in the Americas and Europe (Exhibit 15), as well as in distressed sectors across various regions (Exhibit 16). In previous cycles, notably during the GFC, such a trend often indicated that a market was approaching a bottom.

As depicted in Exhibit 15, private capital has experienced a gradual and consistent rise in its acquisition volume share in both the Americas and Europe over the past 5-10 years. Notably, it reached an unprecedented peak in Europe during the first three quarters of 2023, and with one quarter remaining, there is potential for 2023 to equal last year's record high in the Americas. Although private capital is less active in Asia Pacific, it did witness an increase in its share across various sectors in 2023, particularly in retail. Moreover, it gained market share relative to its 10-year average in the hotel and industrial sectors.

Exhibit 16

Private Capital Not Afraid of Distressed Sectors, Likely at Attractive Valuations



Sources: MSCI RCA; Hines Research; as of Q323

HIGH SHARE OF SINGLE ASSET SALES IN TRANSACTION VOLUME

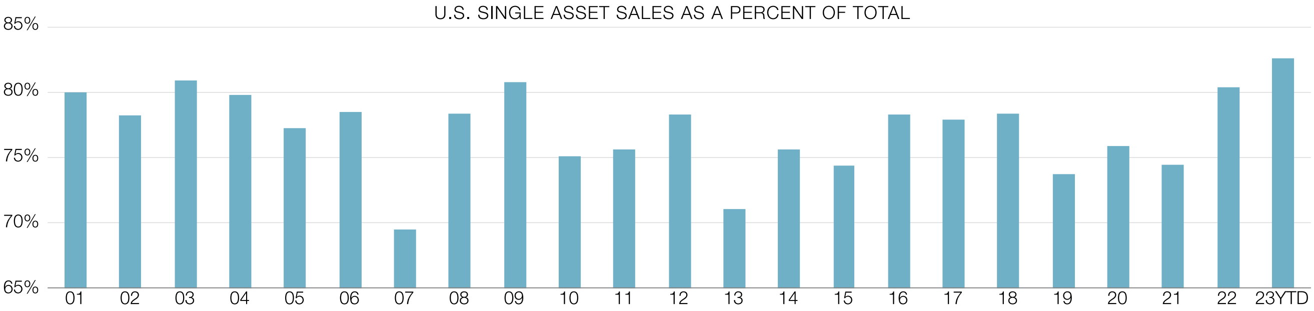
In the U.S., single-asset sales constituted 82.6% of the volume in the first three quarters of 2023 (Exhibit 17). If this percentage holds for the entire year, it will mark the highest recorded figure, surpassing the previous peaks in 2003 (80.9%) and 2009 (80.8%). Notably, both 2003 and 2009 coincided with the bottom of their respective cyclical downturns, preceding market recoveries within the following 12-24 months.

Once single-asset sales set the parameters for pricing in a market starved for information, portfolio sales quickly followed as the market emerged from the GFC in 2010-11. There was less distress following the dot-com bust in the early 2000's but when portfolio sales spiked in 2007, that was a good sign of a market peaking.

Across property sectors within the U.S. (Exhibit 17), the share of individual sales of seniors housing properties surpassed its long-run average by 29 points, retail by 16 points, hotel by 13 points, office by six points, and industrial by four, while apartments were right on top of their long-term average through the first three quarters of 2023.

Exhibit 17

Surge in Single Asset U.S. Sales Volume Share Could Signal Market Finding a Bottom



Sources: MSCI RCA; Hines Research; as of Q323

A comparable trend was evident in Europe, where individual sales as a percentage of the total have surpassed their long-run average by 4.1% in 2023.[8] Within Europe, apartments have exceeded their average by 18 points, hotels by 16 points, seniors housing by 10 points, and offices by eight points. Only the industrial sector aligns with its long-term average, while retail was slightly below, signaling further signs of a retail recovery.

In Asia, this feature has been less pronounced as the share of single-asset sales is slightly below its long-run average. However, seniors housing (46 points above its long-run average), as well as offices and hotels (four points above for each), exhibit similar trends.[8] Single-asset sales, being less influenced by portfolio premiums or discounts, have proven in past corrections to be particularly instrumental in establishing market valuations, thereby setting the stage for recovery.

SLOWING CONSTRUCTION STARTS

I have primarily delved into capital markets, given the dislocation caused by the sudden surge in financing costs. However, it's crucial to touch on fundamentals. In essence, a global real estate fundamentals cycle doesn't exist. Although I can generate an average global leasing environment health score, it's somewhat impractical as different markets and property sectors exhibit significant disparities. While some U.S. multifamily markets, especially in the Sun Belt, may be overbuilt, there is a secular shortage of housing in nearly all the regions and countries where we invest. The industrial sector might have peaked, but years of robust rent growth have generated substantial embedded NOI growth as leases roll. After a decade of challenges, exacerbated by the pandemic, the retail sector has largely sorted out winners and losers, with the winners beginning to perform well. Meanwhile, the office sector is a bit complex in many markets, particularly in the U.S. Alternatives such as data centers and student housing boast strong fundamental conditions, while seniors housing has recovered in various locations, primarily due to several years of minimal new construction coupled with pent-up demand.

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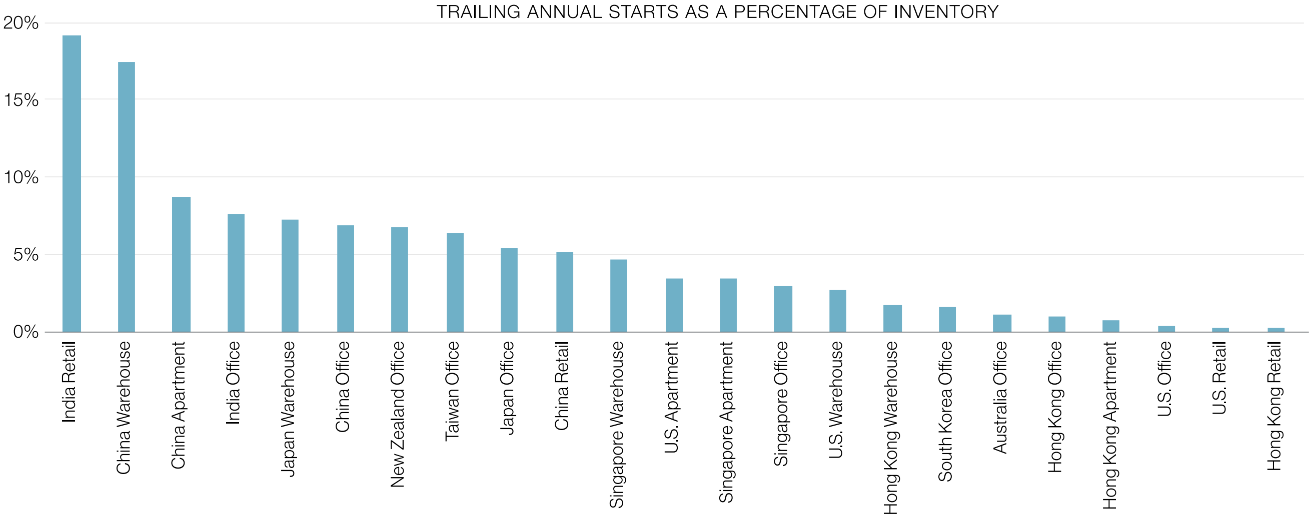
[8] MSCI RCA; Hines Research; as of Q323

Irrespective of current fundamentals, the recovery narrative is likely to hinge significantly on the dearth of new construction due to the recent upsurge in construction and financing costs as well as general risk aversion, particularly amongst lenders. Exhibit 18 illustrates trailing annual starts through Q323 as a percentage of inventory across various countries and sectors where such data is available. In the U.S. office market, including owner-occupied and build-to-suit projects, starts totaled less than 30 million SF during that period, representing merely 0.4% of the total U.S. office inventory. U.S. retail was even lower at 0.3% of existing inventory, with a growing trend of repurposing or redevelopment of existing retail into other uses.

Exhibit 18

Construction Starts are Depressed in Many Markets



Sources: MSCI RCA; Hines Research; as of Q323

Even in arguably one of the healthiest office markets globally, there's surprisingly minimal space under construction in Seoul, with total starts amounting to less than 2% of inventory. As the economy gains firmer footing in the future, there will arguably be a shortage of high-quality, modern space in many markets. While it might be premature to label this a green shoot, we believe it will undoubtedly contribute to stronger future fundamentals in various markets, including the office sector.

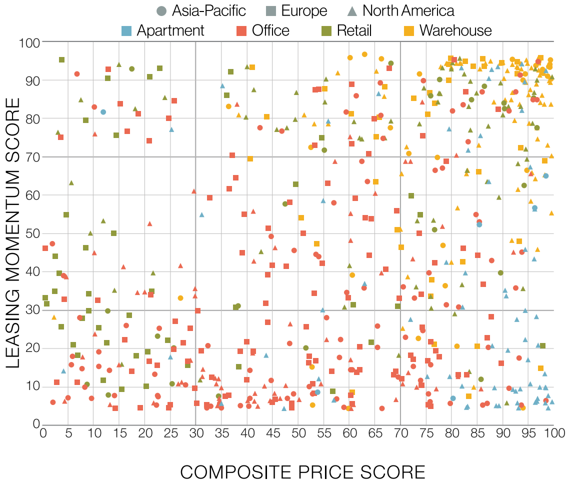
In closing

As we approach 2024, our focus will persistently be on identifying signs of stabilization and the eventual recovery, as we seek to position ourselves to seize opportunities as they inevitably arise. While early signs of recovery may be fleeting, susceptible to the chilling impact of a potential recession, a shaking of the transaction tree is anticipated with the onset of loan maturities, prompting lenders to tidy up their balance sheets.

It's crucial to grasp the diverse market conditions prevailing across regions, countries, and property types. To illustrate this diversity, we conclude with Exhibits 19 and 20, mapping each of the 656 real estate markets we monitor globally, plotting prices on the x-axis and fundamentals on the y-axis.

Exhibit 19

Market Conditions Vary Significantly



Sources: Hines Research; as of Q323

For those not familiar with Hines Research's methodology, the Composite Price Score ranges from a scale of 0-100 with 50 equal to the long-term average (Exhibit 20). Anything under 30 is deemed inexpensive while anything over 70 is deemed expensive with values between the two considered fair value. The leasing momentum score uses a composite index of three fundamental factors: occupancy rates, trailing annual demand growth, and trailing annual rent growth, also on a scale of 0-100, and looks at the change in market fundamentals over the past year relative to its three-year average. When it is above 50, leasing momentum is above average, above 70 is considered excellent and below 30 poor. As is clearly evident global markets are all over the place in terms of pricing and fundamentals!

Back testing all of the historical data for each square in this rubric to see how market conditions inevitably change over the following five years yields the following real estate cycle guide. While every investment and market has its own unique characteristics at any given point in time, I believe it is prudent to heed the lessons of the 77,638 observations underlying this guide.

Exhibit 20

Hines Research's Buy Sell Framework

STRONG BUY

- Price Score <30, Leasing Momentum >70
  - Market still inexpensive but fundamentals clearly on the mend
- 8.5% average 5-year forward price CAGR
  - Prices have rise 83% of the time over following 5 years
- Avg trailing annual rent growth of 6.7% accelerates in year 1 but begins to slow and has averaged 5.6% over the following five years
  - Highest of any category

LATE BUY

- Price score >30 but <70, Leasing Momentum >70
  - Positive fundamentals are now being more fully priced but market still fairly valued
- 5-year Price CAGR slows to avg of 4.2%
  - ...but prices still rise 71% of the time
- Trailing average annual rent growth of 7% in year 0 slows throughout the five-year hold and averages 2.7% over the five years

PREPARE FOR SALE

- Price score >70, Leasing Momentum >70
  - Solid fundamentals but market overpriced
- Prices generally flat in year 1 but begin to fall in year 2 and the average 5-year price CAGR is –1.5%
  - Nearly 3 out of 4 observations have negative price CAGRs
- Despite the full data set being dominated by cap rate compression, the prepare for sale, early sell, and sell categories are the only ones where cap rates have expanded on average
  - By about 40 bps in total over the first 3 years
- Trailing average annual rent growth of 9.5% in year 0 slows to an average of 2.8% in year 1 before rents fall on average over the following 4 years
  - 5-year forward average is –0.3%

BUY

- Price Score <30, Leasing Momentum >30 and <70
  - Market is cheap but fundamentals are starting to show some signs of life
- Strongest average 5-year forward price CAGR of 8.6%
  - Prices have risen 83% of the time
- Avg unlevered returns of 14.4%
- Trailing average annual rent growth of 2.3% accelerates through year three and has averaged 5.1% over the following 5 years historically

WEAK SIGNAL

- Signals aren't very strong one way or the other
- Performance metrics are fairly similar to the Hold category

EARLY SALE

- Price score > 70, Leasing Momentum <70 and >30
  - Prices still high but fundamentals beginning to soften
- 5-year forward average price CAGR is –1.2% with losses occurring in years 1-3 and peaking in year 2
  - More than 2/3 of observations experienced negative 5-year price CAGRs
- Avg trailing annual rent growth of 2.2% slows to 0.6% in year 1 with rent losses in the following 3 years and flat avg rents over following 5 years

EARLY BUY

- Price Score <30, Leasing momentum <30
  - Market is cheap but fundamentals are moving in the wrong direction
- Avg forward 5-year price CAGR: 8.4%
  - Prices have risen 89% of the time
  - Annual price growth peaks in year 3
- Avg unlevered total returns of 14.8%
  - Highest of any quadrant
- Modest average rent growth of 1.8% accelerates through year 4 and has averaged 4.2% vs. trailing average annual rent growth in year 0 of –2.3%

HOLD

- Prices <70 but >30, Leasing momentum <30
  - Fundamentals are weak but sell window has closed
- Avg forward 5-year price CAGR of 4% is just below Late Buy category
  - Prices have risen over following 5 years 70% of the time
- Weak avg price growth in year 1 of 1.8% but accelerating into year 3
- Trailing annual rent growth of –2% in year 0 stabilizes in year 1 before averaging 2.2% in years 2-5

SELL

- Price score > 70, Leasing momentum <30
  - Fundamentals have softened significantly but pricing still appears high (at least in the data, which can be a bit sticky)
- -1.1% 5-year forward price CAGR
  - 2 out of 3 observations experiencing a negative price CAGR
  - Price losses front-loaded over first 3 years
- Rents have begun to fall with avg growth of –1.6% in year 0 but losses continue over the following 3 years

About the Author

and Hines' Proprietary Research team

Joshua Scoville, Senior Managing Director – Research, reports to Hines' Chief Investment Officer and works closely with the firm's Chief Risk Officer and Strategy Group. Josh Scoville and his team are responsible for constructing the Hines macroeconomic view and outlook for commercial real estate market fundamentals and pricing; assisting with the development of investment strategies for the firm's investment programs; working closely with the local and fund management teams, clients and partners; and supporting U.S. regional and international country heads in identifying market/submarket opportunities and risks. The views of the local and fund management teams on the latest market developments are exchanged regularly via biweekly conference calls and quarterly market updates and are essential for reviewing investment strategies and fund portfolio allocations.

Hines' Proprietary Research team includes Michael Hudgins, Ryan McCullough, James Purvis, Tim Jowett, Erik Thomas, Michael Spellane, and Anthony Witkowski.

Regional Perspectives

Asia-Pacific

CHIANG LING NG
Chief Investment Officer, Asia-Pacific | Hines

> Economic reviews of Asia Pacific typically lead with the outlook for China. Hines believes there is much more to the regional story in 2024 and beyond. With shifts in global inflation dynamics, nominal GDP growth in developed Asia is ramping up, perhaps most surprisingly in Japan. The shift from globalization to "slowbalization" has likely yielded significant benefits for the country. For over 20 years, input costs in manufacturing centers such as the U.S. and Germany have steadily increased – since 1999, the U.S. Producer Price Index (PPI) has nearly doubled, and its German counterpart is up over 70%.[1] During this same 20-plus year period, Japan's PPI has virtually flatlined, creeping up only about 11%.[1] For companies, production and manufacturing in Japan has become considerably less expensive at the same time CEOs are seeking alternative (i.e., friendly, stable, and reasonably priced) locations for such facilities, and Japan's relative value appears attractive. At the same time, cheap costs of funding, a weak Yen and meaningful prospects of corporate reform have stimulated strong inflows into Japanese risk assets. With economic fundamentals on a positive trajectory, Hines is constructive on improved nominal GDP growth in coming years, with gradual reflation positive for real estate rents.
>
> China remains the leading economy in Asia Pacific, but regional dynamics are clearly shifting. While its expansion has slowed from the blistering (17+%) annual pace of the 2000-2010 decade, China's nominal GDP growth is still expected to exceed 7% annually[2] through 2032. The size of China's economy and the depth of trading relationships means incremental gains cascade throughout the region and the world, while the increase in corporations investing in "China +1" strategies is benefitting other Asian economies (both developed and developing). Ongoing geopolitical tensions will create redundancy requirements outside of China as the ex-China Asian countries evolve to become even more intra-regionally entwined. Hines believes this will propel Asian economies to become even more interdependent, resulting in an increasingly Asia-centric economic universe, less correlated and reliant on the economies of US and Europe.

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[1] CEIC, OECD, Hines Research as of Q422 using annual data.
[2] Oxford Economics and Hines Research as of Q223.

Within this regional context, secular growth opportunities in developing Asia, such as Vietnam and India, appear attractive. While urbanization continues to drive demand for real estate across the globe, Hines believes this trend will have the most impact in selected areas of Asia. The urban population of Vietnam is projected to increase by nearly 19%, or 20 million people[3] between 2022 and 2050. Similarly, the number of urban residents in India is likely to rise about 11% (160 million[3]) over the same period.

These new inhabitants will need to live, work, and shop nearby, likely creating opportunities for infill and new development. With lower correlations with China than most of developed Asia, real estate investing in Vietnam and India appears to offer the benefits of regional diversification, with access to differing demand drivers from developed Asia. However, deep local expertise is critical to navigate the specific risks inherent in less developed markets.

INVESTMENT OUTLOOK

One of the most dangerous statements in investing is "it's different this time." However, this may very well be true if referring to the evolving policy of global central banks in response to inflation. Hines believes real estate in Asia will benefit if central banks choose to inflate their way out of these debt loads, due to rental growth acceleration. There is a strong historical correlation between trailing annual rent growth and inflation in developed Asia (R^2= 0.77[4]). Contributing to the argument for rent growth is reduced supply, driven by higher costs for materials, insurance, labor, and financing. Combined with the likelihood of long-term Asian currency appreciation against the U.S. dollar,[5] Hines sees positive tailwinds for real estate in Asia.

Across the region, trailing rental growth over the last 12 months has been almost uniformly positive. In developed Asia, Warehouse rents are up 8.7% year to year as of Q3 2023, and Retail rents up 4.3%. Office rents are the laggard at -0.9% y/y but this masks strong growth in certain cities, particularly Seoul (up 7.4% y/y). Investors are still concerned about the Office sector, but it is worth repeating that the impact of work-from-home in Asia was fleeting. Since the first quarter of 2021, net office absorption in the region has been consistently positive, in stark contrast to North America (where 12 of the last 13 quarters have been negative[6]). This trend can be seen in the sector health scores calculated by Hines Research – Asia Office has been on the upswing since year-end 2020.

Looking just at developed Asia, Hines Research believes demand is running at around 90% of the long-term average. Excluding Hong Kong (still very weak due to structural changes), demand is tracking above average. Vacancies are very low in Singapore, Japan, and South Korea, and solid rental growth is reflecting a limited supply pipeline. Australia (where WFH is having the most impact regionally) will likely need some time to absorb new supply, but with new starts falling due to inflated construction costs and the challenges of securing construction financing (and at higher interest rates), we expect supply to tick down over next two to three years.

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[3] Oxford Economics, World Bank, Hines Research as of Q422 using the most recent data for 2022 as the base year.

[4] Oxford Economics, JLL, CBRE, Hines Research as of Q223. The period covers 1981 to present, though data availability differs by market. Developed Asia excludes China, India, and Vietnam. The R^2 represents the percentage of the response variation reflected by the model – the higher the percentage, the higher the correlation.

[5] Oxford Economics, Hines Research as of Q223.

[6] JLL, CBRE, Hines Research as of Q223, Asian markets include the developed economies of Australia, Hong Kong, Japan, Singapore, and South Korea.

Multifamily fundamentals remain positive in the region's key markets of Japan and Australia. In Japan, Hines Research's view is that inflation is going to maintain, with positive wage growth leading to continued rental growth. In Australia, healthy population growth, underpinned by immigration and a structural undersupply of housing has supported very strong rental growth. Opportunities to develop into these tailwinds remain attractive.

Industrial fundamentals have eased from 30-year highs.[7] Medium term demand and supply fundamentals seem balanced, but near term we have observed some supply challenges in Korea, China, and to a lesser extent, Japan. Australia warehouse demand has been incredibly strong with rents up 15% year to year. This pace will likely ease but we don't anticipate a major slowdown. In Singapore, a combination of high yield and healthy rental growth is attracting increased investor interest.

The strength of rents has mitigated regional price corrections though 2023, even as regional cap rates have continued to move out. Aggregate moves are modest at around 35 basis points year-over-year as Q3 2023 but this masks significant variations across economies due to different interest rate environments, with cap-rates flat or falling in Japan while cap-rates in Pacific markets have risen around 75 bps. We expect some further cap-rate increases into 2024 and for pockets of value to increasingly emerge in those markets where cap-rate corrections were greatest.

In this inflationary environment, development strategies are likely to remain somewhat challenging in 2024 and we see the best relative opportunity in value-add strategies, given potential price corrections, the ability to acquire existing assets at below replacement costs, and positive expectations of rent growth. We see structural support for the industrial sector in developed Asia, some near-term supply challenges in certain markets and cap rate corrections starting to create better entry points for acquisition. In the office sector, we believe improving demand and contained medium term supply will create compelling opportunities in "brown to green," and in finding undervalued buildings in excellent locations to take advantage of flight to quality. With repositioning and upgrading, we expect good performance leasing into (what we expect to be) improved 2025 and 2026 markets.

CONCLUSION

Asian real estate markets enter 2024 boasting several strong growth drivers. Regional growth is robust and urbanization continues to drive demand for real estate in Asia. Indeed, according to the International Monetary Fund, growth in emerging and developing Asia will be three times the rate of the G7 nations.[8] With COVID (and work-from-home) fading from view, and inflation expected to be higher for longer, the case for real estate in this region, in our view, becomes even stronger. In developed Asia, particularly Australia, South Korea and Japan, a positive combination of healthy demand and supply fundamentals supporting rental growth and price corrections will, in our view, provide compelling opportunities for investors to increase their exposure to this dynamic region.

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[7] JLL, CoreLogic, ARES, Hines Research as of Q223. The Leasing Environmental Health Score measures the relative health of a market's current leasing conditions compared to its own history.

[8] International Monetary Fund, Real GDP Growth, October 2023

Europe

ALEX KNAPP
Chief Investment Officer, Europe | Hines

> The series of shocks and ‘Black Swan’-type events that have hit financial markets and economies over the past few years have not been unique to Europe. Yet for a variety of reasons their effects have been stronger here than in other global regions[1]. For example, Russia’s invasion of Ukraine hit close to home (directly impacting vital supply chains), while Europe’s dependence on Russian gas left it exposed to the spike in global energy prices. The global monetary policy response to high inflation has also impacted Europe more than elsewhere, as higher rates and quantitative tightening have sent shockwaves through the money supply and credit flows[1]. Combined, these events have dealt a sustained blow to investor sentiment, economic growth, and overall risk appetite. Given this backdrop, it is not surprising (in our opinion) that of the three global regions covered by Hines Research, Europe is perhaps closest to falling into a mild recession. It may already be there – according to Eurostat, Euro Area real Gross Domestic Product (GDP) contracted by 0.1%[2] in the third quarter.
>
> However, there are some silver linings to these relatively dark clouds. Inflation is slowing faster in Europe than in other developed regions, with the headline rate now tantalizingly close to the European Central Bank’s (ECB) 2% target. Growth was weak, but sentiment was not far off average levels. And fixed-income traders are increasingly betting on rate cuts coming sooner and deeper in Europe than was thought possible just a couple of months ago[3] – after all, with inflation under control, the ECB will be less encumbered than other central banks and better able to support growth with lower rates. Although the economic backdrop to such a policy move would unlikely be a strong one, falling interest rates (and a cheaper cost of debt) may breathe life into real estate valuations. This is one area where Europe stands out – this market appears further along in its pricing correction than other regions. Aided by a muted supply cycle leading into this downturn, we anticipate any further price weakness should be limited moving forward. While it is not possible to “call the bottom” of the market with precision, we think the next year or two may prove to be strong vintages for European real estate investment.

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[1] globalEDGE, Recession in Europe: How the Continent’s Top 3 Economies are Faring, Cameron Levis, September 28, 2023
[2] Eurostat, EuroIndicators, November 14, 2023
[3] Bloomberg, Traders Bet on ECB Rate Cuts Next Year, Alice Gledhill, November 17, 2023

INVESTMENT IMPACTS

From a real estate investment perspective, what has really changed in the past year? European markets are still working through a major cyclical reset on par with those of the Global Financial Crisis (GFC) and the early 1990s recession. Hines Research expects the number of distressed sales to accelerate in 2024 and remain elevated through 2026. Yet vacancies remain low by historical standards, in part because Europe did not participate in the post-GFC building boom.[4] Permits for residential and commercial builds fell between 2007 and 2009 and have remained at those below-trend levels ever since.[4] Further support to real estate is likely provided by the historical growth of knowledge-intensive employment (particularly in larger cities like Paris, Berlin, London, and Madrid[5]), combined with a low level of construction employment that has never rebounded from the GFC and Eurozone debt crisis.

While pricing remains in flux, there are signs of an impending recovery. Liquidity may soon show signs of improvement as bid-ask spreads narrow, and the number of banks tightening lending standards to corporate enterprises, the drivers of real estate demand, continues to fall.[6] Hines Research has calculated the relative health of the European leasing environment by sector – warehouse and multifamily are strong (although off the 2022 highs), and retail is on the upswing. Only office seems to be in a new downturn, and of course, this varies by class. Looking at pricing, the amount of "very overvalued" property has fallen by about half, with "undervalued" now making up about 30% of the total.[7]

This valuation data supports the Hines belief that Europe has adjusted much more quickly than the U.S., and to a lesser degree, Asia. Comparing public versus private real estate price growth as of November, year-over-year public prices have stabilized over the past 12 months, while the private market continues to decline, but at a slower rate.[8] Public markets generally lead private markets by four to six months, so this would likely bode well for selective investments in the near to medium term. Other factors favoring the region also include the design of lease terms – in Europe it is very common for lease terms to be indexed to inflation. This contributes to a strong correlation between the two (R^2 of 0.69, the highest of the three major regions[9]). With the likelihood of inflation staying higher for longer, European assets would then likely experience stronger rent growth. Correlation also supports Europe as a diversification play against the U.S. – Hines Research found the average correlation between total returns of the top ten cities in each region was just 8% in U.S. dollar terms[10]. Using these same cities, Hines also found a 30% allocation to European real estate improved risk-adjusted return by 14.6%[10] over a U.S.-only portfolio, and for this hypothetical 70% U.S./30% Europe asset blend, downside risk was reduced by more than 25%.[10]

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[4] Hines Research, Eurostat as of Q223

[5] Hines Research, Oxford Economics as of Q123

[6] European Central Bank, U.S. Federal Reserve as of Q323

[7] CBRE, Hines Research as of June 2023. The Composite Capital Market Score ("CCMS") is an aggregate score (0-100) derived from the following metrics: Price to Trend, Cap Rate Spreads, Growth-Adjusted Spreads, Trailing Price Growth, and Trailing Total returns. The CCMS is calculated as a percentile relative to each market's own history. Higher scores indicate that the market is expensive relative to its history. Very Overvalued -- 85-100th percentile; Overvalued -- 70-85th percentile; Fairly valued-- 30-70th percentile; Undervalued -- 15-30th percentile; and Very Undervalued -- 0-15th percentile.

[8] Refinitiv, CBRE, Hines Research as of October 2023

[9] CoStar, Hines Research as of Q422. The R^2 represents the percentage of the response variation reflected by the model – the higher the percentage, the higher the correlation.

[10] MSCI, Hines Research as of December 2022 – measured by weighted average of the ten cities over the past five years. The top ten European cities referenced were Amsterdam, Berlin, Dublin, Frankfurt, Hamburg, London, Madrid, Munich, Paris, and Vienna. The top ten U.S. cities were Atlanta, Boston, Dallas, Houston, Los Angeles, Miami, New York, Phoenix, San Francisco, and Washington, D.C.

CONCLUSION

Europe is further along in its cyclical reset than other regions, with public real estate prices stabilizing over the past 12 months. It is generally acknowledged that the ECB tightening campaign is over, and that fewer and fewer banks are tightening lending standards. Adding support to the case for the region – the adjustment has been tempered by relatively low vacancies against a supply pipeline that never rebounded from the GFC or debt troubles of 2007 through about 2014. Combined with a depleted construction workforce, continued growth of knowledge-intensive employment, and the benefits (on risk and return) of diversification, Hines believes quality opportunities in Europe will continue to grow.

Represents subjective opinions of Hines. Other market participants may reasonably have differing opinions.”

Americas

ALFONSO MUNK
Chief Investment Officer, Americas | Hines

As 2023 began, we were keenly interested in a number of macroeconomic indicators, including U.S. employment trends, discretionary spending, real estate transaction volume, and lending activity. As the end of the year approaches, using only the most recent data for the first two indicators puts the U.S. economy in good health. Unemployment dropped from 4.2% in Q4 2021 to 3.6% one year later – as of October it stands at 3.9%[1] – about where it was pre-pandemic when the economy was booming. Consumption in 2023 far outpaced many forecasts, increasing 2.4%[2] through October. So, the U.S. consumer hasn't been having many concerns with employment or spending, and the economy itself has arguably been among the strongest performers in the developed world. The story is different in Canada – even though it borders the U.S. and should benefit from its proximity, the country has already slipped into a "technical" recession.[3] And according to Oxford Economics, Canadian GDP will likely contract by 0.4% in 2024, with the unemployment rate rising to 7.2% by the end of the second quarter.

Signs of moderation in the U.S. are starting to show – job growth is slowing, unemployment has crept up, and credit card debt is up, suggesting a segment of consumers may have exhausted their pandemic-related savings. This fiscal stimulus party (totaling about $5 trillion just in the U.S.[4]) had to end eventually, but the economic soothsayers continue to discount the odds of a recession[5] in the next 12 months. While the economy continues to chug along, both transaction volume and lending indicators (critically important from a real estate perspective) remain problematic.

The total value[6] of U.S. real estate transactions fell 53% during the 12 months ended September 30, 2023. We view falling transaction activity as a sign that sellers are not yet willing to accept lower valuations, and while the year-to-year result is bleak, there are signs of a turnaround. Office, Industrial, and Retail volumes all increased in the third quarter, and Apartment volumes rose in the second quarter and are up nearly 8% from the first quarter low. It's a similar Q3 volume rebound story in Europe in Asia, possibly showing that transaction volume may have or is near to bottoming globally.

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[1] Bureau of Labor Statistics, The Employment Situation – October 2023, November 3, 2023
[2] Council of Economic Advisors, As the U.S. Consumer Goes, So Goes the U.S. Economy, October 20, 2023
[3] Oxford Economics, Shallow Recession Now Underway Expected to Deepen, Tony Stillo, November 14, 2023
[4] New York Times, Where $5 Trillion in Pandemic Stimulus Money Went, Alicia Parlapiano, Deborah Solomon, Madeleine Ngo, Stacey Cowley, March 11, 2022
[5] Goldman Sachs, Goldman Sachs Cuts U.S. Recession Odds to 15% as Economic Optimism Grows, Matt Egan, September 5, 2023

Hines Research has developed a metric comparing trailing annual sales as a percentage of the NCREIF Property Index – when trailing annual sales exceed the 3-year average, this has typically signaled a turnaround. In Q3, this figure fell to 4.5%, well below the 6.1% 3-year average calculated by Hines Research.[6] There was also a 100+ basis point difference between appraised capitalization rates and transaction cap rates across major U.S. sectors during the third quarter, perhaps reflecting continued reluctance on the part of sellers to sell. Canada has an additional problem related to residential housing. Home prices never took that post-GFC breather one might have expected – per the Canadian Real Estate Association, prices have been heading up almost uninterrupted for decades. Unlike elsewhere, Canadian mortgages generally have a fixed term of five years or less, which will mean payment shock for homeowners as rates reset.

Back testing by Hines Research[7] also shows a clear relationship between the direction of U.S. lending standards and real estate performance as measured by Federal Reserve lending surveys. The third quarter survey shows that U.S. lending remains very restrictive, with nearly two-thirds of banks tightening their lending standards across the three real estate categories surveyed by the Fed. This is the fourth consecutive quarter of 60%+ readings – a streak that has only happened one other time since 1990 (six consecutive 60%+ quarters during the Global Financial Crisis). We will continue to watch these important metrics for additional signs of a turnaround.

INVESTMENT IMPACTS

As noted, the U.S. economy is among the performance leaders across the globe. The gross domestic product read for the third quarter blew by estimates, up 4.9% annualized. Growth in other countries in the Americas is also accelerating – Oxford Economics recently raised its Q3 GDP forecasts for Brazil and Mexico. In part because these central banks raised rates early and often, their monetary policy is now leaning toward easing, with predictable results. The U.S. Federal Reserve has communicated at least a sustained pause is warranted to allow rate hikes to work through the economy, and this has contributed to a "split personality" between capital markets and fundamentals. Equity exchanges like the Dow and S&P 500 are posting gains year-to-date while economic metrics look strong, but other measures (home sales, real estate indexes, etc.) are signaling problems.

In Latin America, industrial real estate is demonstrating remarkable resilience. The combination of low vacancies, rent growth, and growing demand paints a promising picture for long-term investors.[8] In markets like Brazil, Chile, and Mexico, demand is perhaps most concentrated in high-quality, modern warehouses catering to e-commerce and industrial output. Office in the region, however, is experiencing some strong headwinds. Hybrid work, high inflation, slowing tenant demand, and other factors make for investment challenges in the short-term. The residential outlook in the region is mixed – rents are up strongly, but optimism is tempered by high interest rates and escalating construction costs. The regional trend towards larger, modern living spaces does remain a significant demand driver for high-quality apartments. We believe longer-term, Latin American residential may present an intriguing opportunity for patient investors.

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[6] MSCI Real Capital Analytics, Hines Research as of Q323

[7] Back-tested results are calculated by retroactive application of strategy-based model constructed using historical data based on assumptions integral to the model which may or may not be testable and do not include adjustment for fees. The results reflect performance of a strategy not historically offered to investors and do not represent actual returns to any investor. Actual results may differ materially from back-tested results and are subject to losses. Back-tested results do not guarantee future performance. Model assumptions are subject to continuous updating.

[8] MSCI Real Capital Analytics, Hines Research as of Q323

Among the three major regions, one could argue that the U.S. is experiencing the most traditional cycling of fundamentals. For years, apartment construction boomed in the sunbelt in response to growing demand, but this now is undergoing a correction in vacancies, demand, and rent levels. This process has progressed to the point where apartments are showing signs of recovery in demand growth, and in fact, more than half the markets covered by Hines are posting positive year-over-year rent growth. The Industrial sector seems to be exhibiting a softening in its fundamentals – possibly portending a slowdown among the larger sized (one million SF and up) facilities. Smaller projects, particularly those catering to e-commerce, are holding up better.

This is an unusual correction for real estate, due partly to the absence of a "normal" recession (at least so far). The broad deceleration that one would expect is playing out in a much gentler fashion. One profound example is how prices are down substantially, but rents continue to increase year-over-year. Some U.S. appraised values are marking to market at a much slower pace than during the last (2008-2010) correction. Appraised values by less conservative managers may not be capturing the level of current opportunities, as many properties are changing hands below their appraisals. More visibility on market-clearing prices will develop – it has begun as there are signs suggesting the correction is finding a bottom. Hines Research forecasts that the total amount of distressed sales will increase next year and peak in 2025. We believe savvy investors should be ready to strike during this period as financing liquidity slowly improves.

CONCLUSION

The investment signals we were following in 2023 are providing a mixed message. Most economies (the U.S., Latin America, and parts of South America) in the region are generally doing well by traditional measures, but real estate is experiencing a cyclical reset. The U.S. recovery is lagging Europe and Asia, but seems to be showing signs of life, with transaction volumes possibly on the rise and bank lending standards ready to relax. In Canada, we expect some pain as the economy continues to contract and high mortgage rates take a toll on consumers. The U.S. Fed seems content to let its long series of rate increases soak in throughout the economy, which may facilitate the acceleration of the current reset. Signs of life in certain sectors and regions, combined with projected distressed sales peaking in 2025, might be a call to action for long-term investors with capital. ”

PAIRING GLOBAL PERSPECTIVES WITH LOCAL INSIGHTS

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PROPERTY SECTORS IN OUR SIGHTS

In our Sights

Our investment decisions are predicated on both evident macro and micro market signals, not market noise, using a differentiated approach to forecast that weighs historically proven factors against cyclical bias. That said, here are our generalized global views on the property sectors we carefully watch:

- Living faces structural supply and demand imbalances
- Logistics has long-term tailwinds
- Office is facing secular demand shifts and quality assets will win
- Retail is proving counter-cyclical with 50% of global developed markets showing positive rent forecasts
- Self-storage and data centers are alternative opportunity areas

Top-line summaries of our regional views on investment per property sector follow as quick reference guides.

Asia

INDUSTRIAL FUNDAMENTALS

- On softening trend but from historic highs
- Vacancies have accelerated, from 4.1% to 7.3% in Japan and 3.5% to 13.3% in Korea as Q223.
- Regional rental growth has been strong, led by Australia, with rents +35.0% Q419 – Q223. In the same period, rents were +7.9% and +6.8% in Japan and Korea respectively

Investment Insights

- *Rental growth likely to decelerate into 2024 but remain positive*
- *Capital demand should remain steady and focused on Developed Asia. Singapore likely to remain a bright spot*
- ***Potential further modest upwards pressure on cap rates into 2024 as rent growth eases***

OFFICE FUNDAMENTALS

- Steadily improving trajectory. Regional net absorption was +4.9% year-on-year as Q223
- Seoul a bright spot with vacancy at 2% and rents +7.4% y/y as Q323
- Disparity across the region with positive rental growth in Australia, +10.4% Q419 to Q323, but down -15.5% in Japan and -21.1% in Hong Kong in the same period

Investment Insights

- *Investment appetite for Office in Asia Pacific held up better than other regions, down -40% year-over-year as Q223, in USD terms*
- *Distress more likely in this sector*
- *Repricing most evident in Australia with cap-rates expanding 80bps to reach 6.1% as Q223*
- ***Demand for premium versus commodity space should intensify providing more opportunity for managers able to effectively reposition buildings***

LIVING FUNDAMENTALS

- Vacancies remain very low across Japan and Australia
- Only modest slowing of post-pandemic demand with strong immigration into Australia and New Zealand supporting demand
- No evident new construction concerns and structural under supply in major Pacific cities

Investment Insights

- *Robust investor demand with 12-month trailing volumes down only 7% YoY per Q323*
- *Demand focused on Japan with defensive cash flows supported by accretive financing*
- *Increased allocations to Build-to-Core strategies in Australia and New Zealand*
- ***Weight of capital likely to limit price corrections in 2024***

RETAIL/MIXED-USE FUNDAMENTALS

- Improved from low base
- Regional net absorption was +3.7% year-over-year as Q223 on a trailing 12-month basis
- New supply remains very contained, particularly in Australia
- High street retail in cities such as Tokyo may exhibit improved fundamental performance in 2024

Investment Insights

- ***Cap-rates remain the highest by sector; may see retail become more favorable in 2024***

Europe

INDUSTRIAL FUNDAMENTALS

- Cooling occupier demand widespread
- Rental growth remains strong, but e-commerce spending points to near-term slowdown
- Anticipate solid mid-term rental growth performance

Investment Insights

- ***Major population centers that are most supply-constrained may be set to outperform, such as Paris, Madrid, Milan and Stockholm.***

OFFICE FUNDAMENTALS

- Different path to U.S. Less reluctance to return to office or give back space
- Sustained net absorption and limited rises in vacancy
- New supply highly constrained (Grade A acute)
- Tenant preferences have shifted decisively toward modern, high-quality assets with top ESG credentials in well-connected CBD submarkets

Investment Insights

- ***Prime market should see supply shortages worsen over the coming years, driving rents higher in markets such as London West End and Paris CBD.***

LIVING FUNDAMENTALS

- Chronic undersupply, particularly for affordable housing
- Policymaker efforts discourage new supply
- Areas serving prestige institutions may have high rental growth

Investment Insights

- ***Shifting demographics primarily due to rising interest rates and worsening mortgage affordability, have created attractive prospects in the burgeoning single family rental sector.***

RETAIL/MIXED-USE FUNDAMENTALS

- Recovery paused with consumer slow down
- Positive sales signs from in-store retailers, while online retailers have struggled with rising fulfilment costs and wafer-thin margins

Investment Insights

- *Investor appetite remains low for now*
- ***Could return with shift to cheap prices, low rents and positive fundamentals***

Americas

INDUSTRIAL FUNDAMENTALS

- Market fundamentals still above average but slowing following a historic two-year run of demand
- Vacancies have trended up as the development pipeline skews toward speculative construction
- Per CoStar 3Q23 data, 68% of the industrial stock under construction in the 54 largest US markets was unleased, up from 37% two years prior

Investment Insights

- *Cap rates remained 80 bps below their pre-COVID Q419 level, which could mean a meaningful repricing event may be in store for 2024 (NCREIF appraisal data Q323)*
- ***Expect more downward pressure on fundamentals and pricing.***

OFFICE FUNDAMENTALS

- In 3Q23, vacancies reached a level unseen since 1992 (CoStar)
- Office construction pipeline fell to near decade-low levels

Investment Insights

- *As of Q323, NCREIF office values fell by a cumulative 19% from their peak in Q122.*
- *NCREIF's data indicate a substantial divergence between newer properties (less than 10 years old) and the broader market, with newer-office vacancies near record lows at mid-year 2023*
- ***Bifurcation between premium and commodity space should intensify going into 2024.***

LIVING FUNDAMENTALS

- Apartment boom appears to have hit a ceiling in 2022 leading to a marked shift in sector performance.
- Per CoStar 3Q23 data, vacancies in the largest 54 U.S. apartment markets increased by 130 bps year-over-year and rent growth has fallen to near zero
- High construction activity but undersupply of housing in Sun Belt

Investment Insights

- *NCREIF's Q323 transaction-based cap rates have risen 90 basis points above their full-year 2022 average implying a 17% value decline after accounting for the subsequent NOI increase (23% decrease without including the NOI growth)*
- ***A shortage of single-family housing expected to continue to support the for-rent sector***

RETAIL/MIXED-USE FUNDAMENTALS

- Re-emerged as an in-favor asset class
- Grocery-anchored favored but recovery in open-air too

Investment Insights

- ***Prospects in 2024 will likely hinge upon the broader macroeconomic outlook***

CONCLUSION

As we move into 2024, we will continue to identify signals that could impact investment values. We're watching carefully for greater dislocation likely to push distressed assets onto the market next year and to a likely peak in 2025. Hines is positioned well with local teams in every market we operate in to identify off-market situations, seize more deals than our share, and to share our future gains with our investors.

Our active asset management approach will remain focused on operational gains with a focus on ESG investment levers that help reduce expenses. Our exposure remains balanced, with carefully constructed debt terms and spanning credit expirations held via strong lender relationships that have seen us through many challenging cycles.

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Past performance is no guarantee of future results. Investing involves risks, including possible loss of principal. The opinions presented herein cannot be viewed as an indicator of future performance.

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- At least 80% of the market value of net assets must be invested in real estate with no more than 20% invested in cash or equivalents;
- At least 80% of the market value of real estate net assets must be invested in private equity real estate properties [no more than 20% of such assets may be invested in, but not limited to, property debt, public company, equity/debt or private company (operating business) equity/debt];
- At least 95% of market value of real estate net assets must be invested in US markets;
- At least 80% of market value of real estate net assets must be invested in office, industrial, apartment and retail property types;
- No more than 65% (± for market forces) of market value of real estate net assets may be invested in one property type or one region as defined by the NPI;
- No more than 35% leverage. Leverage is defined as the ratio of total debt, grossed-up for ownership share of off-balance sheet debt, to the fund's total assets, also which are grossed-up for such off-balance sheet debt.

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The NCREIF NPI, short for the NCREIF Property Index—is a quarterly index tracking the performance of core institutional property markets in the U.S. The objective of the NPI is to provide a historical measurement of property-level returns to increase the understanding of, and lend credibility to, real estate as an institutional investment asset class. The universe of investments: (1) is comprised exclusively of operating properties acquired, at least in part, on behalf of tax-exempt institutions and held in a fiduciary environment; (2) includes properties with leverage, but all returns are reported on an unleveraged basis; and (3) includes Apartment, Hotel, Industrial, Office and Retail properties, and sub-types within each type. The database fluctuates quarterly as participants acquire properties, as new members join NCREIF, and as properties are sold. Sold properties are removed from the Index in the quarter the sales take place (historical data remains). Each property's market value is determined by real estate appraisal methodology, consistently applied. Please note that when returns are computed for the NPI, the returns for the levered properties are computed on a de-levered basis, i.e., the impact of financing is excluded. A benchmark Index is not professionally managed. Investors cannot invest directly in an index.