INVESTMENT OUTLOOK

Opportunistic Patience Prevails

SEPTEMBER 2023
CONFIDENTIAL AND PROPRIETARY

CONTENTS

Introduction

As the data from the first half of 2023 continues to be posted, we offer our interpretation of the findings within the context of real estate investing.

First, our Global Chief Investment Officer David Steinbach shares four macro factors that are impacting the sector and shaping how we build, buy, and operate real estate – both now and over the longer term.

Second, our Head of Global Research Josh Scoville provides an update on the more immediate signals he is watching to indicate when we should pivot from a patient, defensive stance to a more aggressive, opportunistic, and offensive one.

We hope the analysis presented in this paper will be a valuable resource to others shaping their own decisions. In our opinion, neither inflation nor the capital markets – central to liquidity in real estate –have yet turned the corner.

Thus, we remain patient and prudent, seeking capital investments with fundamentals that show opportunities for market-beating returns ahead. With a strong cash position and specific views on the type of real estate assets that will likely prevail in each sector, we move confidently into the remaining months of 2023 with strong convictions on where to find compelling real estate investment opportunities.

Get more insights on topics impacting real estate here.

LETTER FROM OUR GLOBAL CIO

The 4Ds

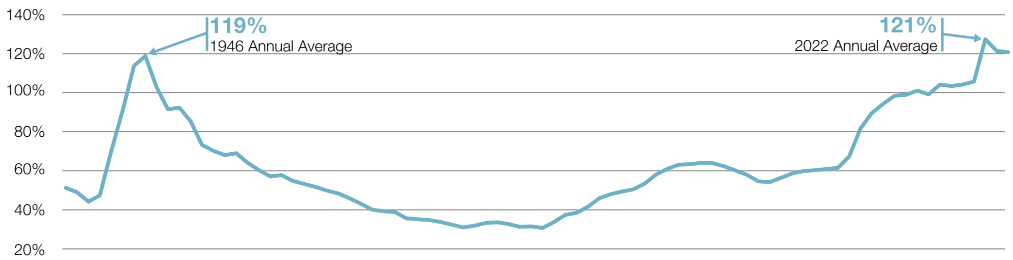
It is hard to believe we are already coming up to 1.5 years of monetary tightening. The good news is the overall economy has digested higher rates relatively well thus far. Still, when significant shifts in economic policy and the investing environment occur, it is important to take a step back to consider what we might face in the next 10 or even 20 years.

The global economy is in the process of reworking itself right now. Hines believes the forces that will reshape the investment landscape over the following decades really come down to **"Four Ds" - De-leveraging, De-globalization, De-carbonization and De-mography**. Frankly, the first three have been occurring for several years, and demographic changes have always been an important consideration in real estate investment. Now, the prevalence of these foundational changes requires us to think afresh, to ensure we do not miss a window of opportunity.

D1: De-leveraging

There are many examples, but to highlight U.S. public debt, leverage has hit a cyclical peak. Can it go higher? We shall see, but governments cannot continually add debt that taxpayers will have to repay downstream. Over time, governments will either need to grow their way out or inflate their way out – just as they did in the post-war era, which means we'd see higher inflation for a longer period. Spoiler alert, inflating it away could be much easier.

De-Leveraging
Federal Debt: Total Public Debt as Percent of GDP (Annual Average)



Source: St. Louis Fed as of Q1 2023

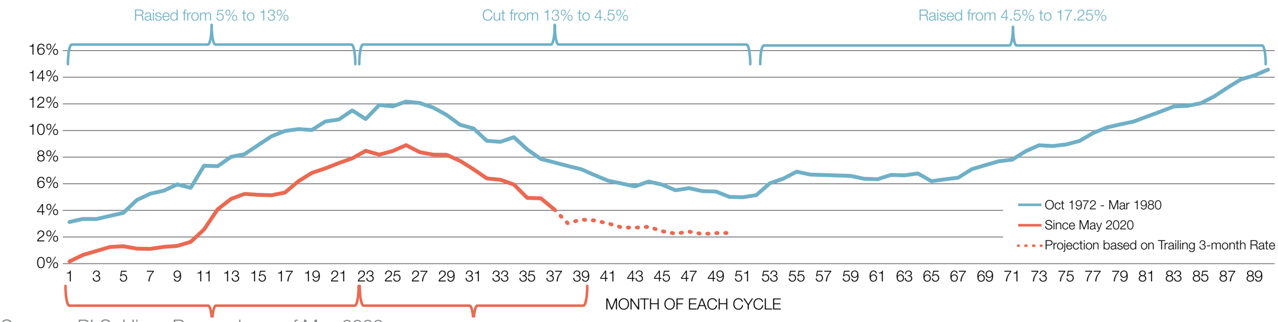
Either **grow our way out** of this

OR

Inflate our way out of this, **higher inflation for longer**

The central banks of the world must remain vigilant against greater inflation. Some hopeful headlines have come out, but we can see from the 1970s how easy it would be to give back recent gains in the fight against inflation and mess this up significantly. Hopefully, we do not repeat the mistakes of past cycles.

Annual U.S. Inflation Rate
Comparing Inflation Cycles

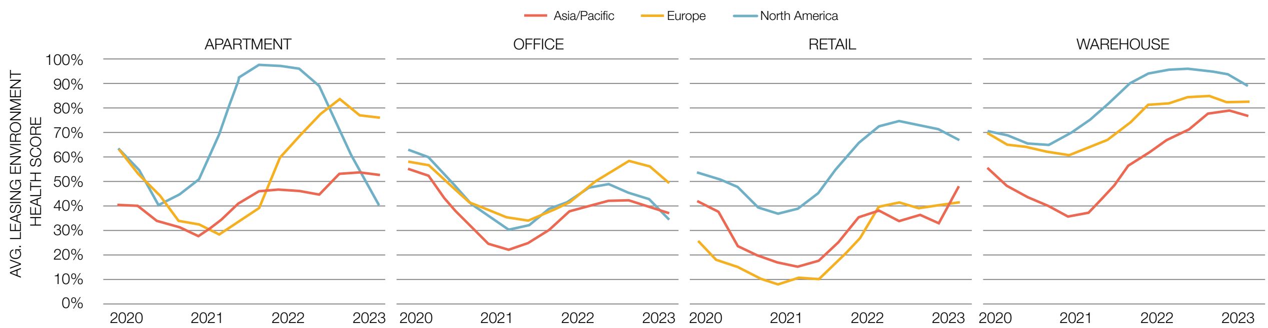


Sources: BLS; Hines Research; as of May 2023

The anticipated shift in monetary policy implied by forward markets could create renewed volatility in key financial markets. There are already signs that investors are holding more of their funds in assets with higher liquidity and lower volatility, refraining from locking their capital into specific asset class positions that could prove difficult to unwind should market conditions markedly shift.

As a result (and as expected), transaction volumes and fundamentals have been weakening. We anticipated the recovery would be bifurcated, with capital markets improving before fundamentals, but for now, both have yet to turn a corner. It is more evident that the 40-year run of declining interest rates is over and we will likely be working through higher costs of capital for much longer than most might think. The unwelcome news is we need to be patient, as this process will take time to play out.

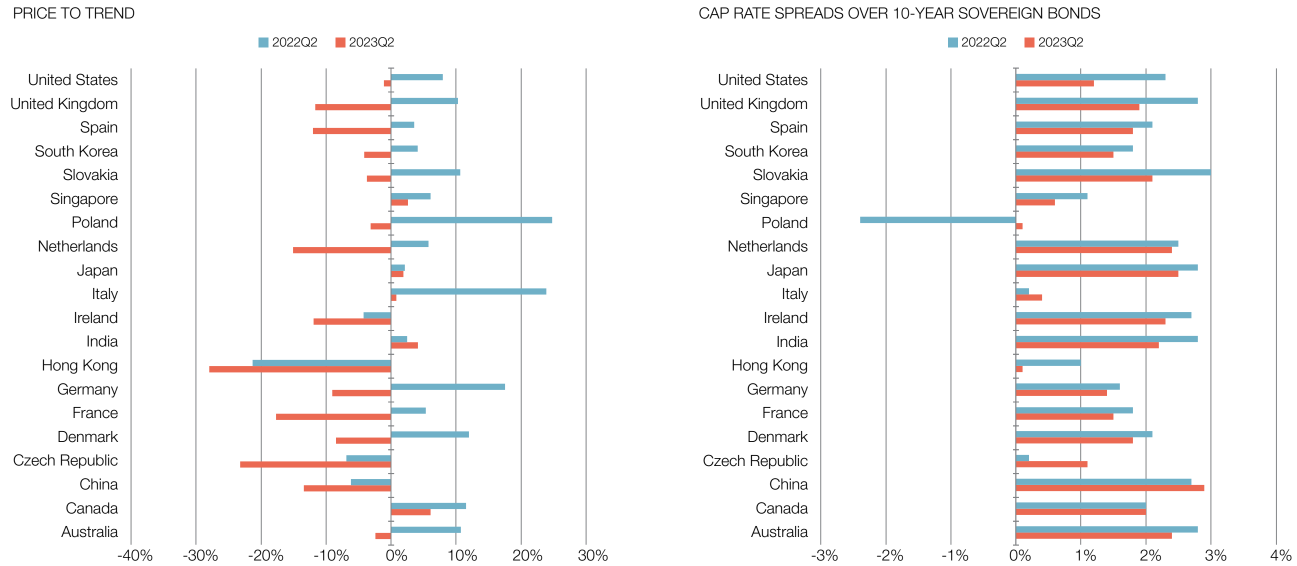
Global Property Fundamentals
A Mix of Fundamentals but Momentum Mostly Down



Sources: CoStar; CBRE; JLL; as of 2023Q1

There are two bright spots – transactions have occurred, and liquidity has improved. We have seen interesting deals on a global scale, and they are getting done despite the current environment. Second, the development pipeline has shrunk – which should support better fundamentals in the future. The market appears poised for rent growth, specifically, as replacement costs exceed asset values in many markets. This pattern, supported both by the lack of future supply as well as the functional obsolescence of many assets, should lead to a better picture for property fundamentals down the road.

Global Changes in Pricing
Prices Have Fallen but Spread are Skinnier



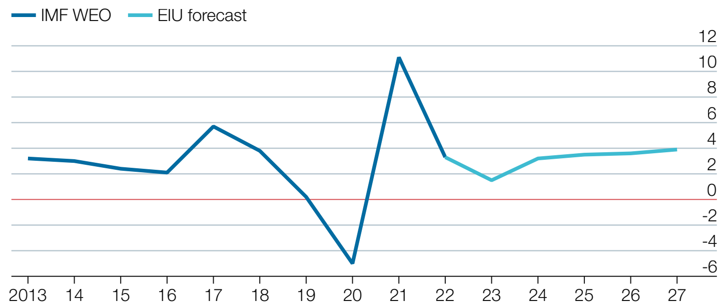
Sources: NCREIF; MSCI CBRE; JLL; Oxford Economics; as of 2023Q1

D2: De-globalization

The headlines have sent a consistent message that globalization has slowed, but have we really thought through the implications of the re-industrialization of the West?

Geopolitics has driven a change in investment destinations in 2023. Foreign direct investment flows are diverging across regions with Asia losing market share in terms of number of investments while Europe and North America are gaining.[1] New currents of change have swayed governments, CEOs and investors toward resilience rather than efficiency with a stronger preference for reshoring in 2023.

World trade growth
(goods volumes; % change)

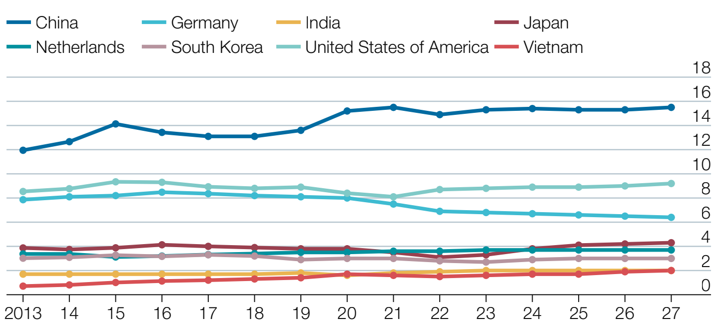


Sources: IMF; EIU. As of 8/2/23.

[1] *EIU, IMF data: staff calculations of FDI from 2015 to 2022. Hines confirms that, to the best of its knowledge, more updated information is not available and what appears above remains materially accurate.*

Global trade conditions are expected to gradually improve from the fourth quarter of 2023 aided by a reduction in higher inventory levels and a rebound in global electronics.[2] According to the Economist Intelligence Unit (EIU), worldwide trade is expected to rebound meaningfully in 2024 as China's economic recovery gathers pace following policy stimulus measures, and economic growth in the European Union picks up momentum.

Share of world goods exports
(%)



Source: EIU. As of 8/2/23.

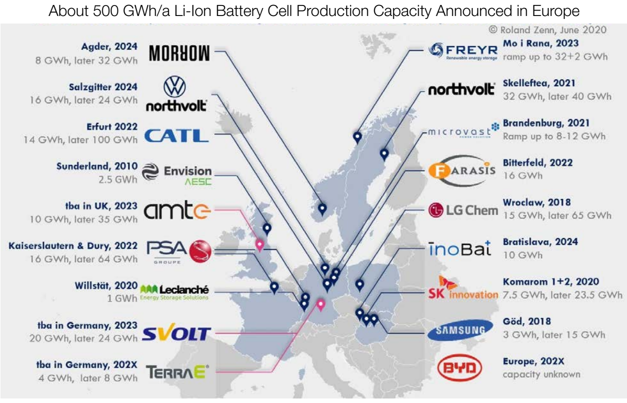
Even with supply chain diversification, major markets may struggle to replace China as the world's manufacturing hub. Although we don't know how long these changes will take, the improvement in global trade expected to occur in 2024 could lead to evolving supply chains and dynamic demand for not only warehouse facilities but also emerging growth sectors.

We're considering where the new supply chains will be, how will new labor be engaged, and what new imbalances and opportunities this will create. More fundamentally, how much will all this cost, what will the impacts be to the cost of goods along with broader inflation? And importantly, what will the impacts to real estate be?

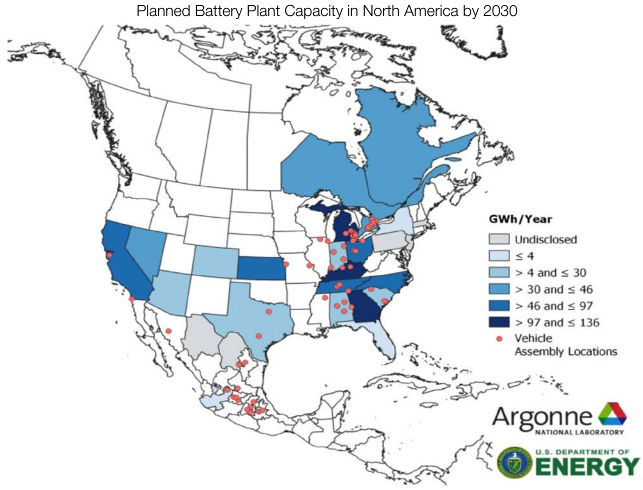
One industry impact could come from the emerging 'Battery Belts' of the world that are being dramatically altered by massive investment. The list of follow-on impacts is exhaustive and expands across sectors and industries involving new logistical requirements due to evolving supply chains and data centers– even spanning into housing needs.

De-Globalization
Battery Belts Emerging

EUROPE
About 500 GWh/a Li-Ion Battery Cell Production Capacity Announced in Europe



NORTH AMERICA
Planned Battery Plant Capacity in North America by 2030



We are in active discussions on how to capitalize on this trend that we believe will greatly impact real estate.

[2] *World Trade Organization: Data as of April 2023*

D3: De-carbonization

Regardless of political views, energy transition is going to change the global economy. Climate change will fundamentally affect all economies as it causes more incidents of flooding, fire, severe storms, and drought. Spending on resilience efforts should rise but could also be inflationary and strain public finances. The insurance sector has started to feel the strain and increasingly views certain assets as uninsurable, increasing financial risk.

For most developing economies, emissions are forecast to continue to rise, expecting to peak only in the 2030s and 2040s.[3] The "right to develop" is a key priority for major emerging economies, yet emissions-intensive growth in emerging markets has had an adverse impact on climate change worldwide, and rich countries are not going to subsidize big middle-income developing markets like China and India.

Fossil fuels' share of global electricity capacity is expected to fall from 43% to 32% throughout the G7 in the next decade. But even so, emerging market growth means that fossil fuels will still account for 78% of global energy consumption in 2032.[4]

More reform is needed to reach 2030 and 2050 emissions targets, but major green industrial subsidy packages in the U.S., EU and elsewhere should drive growth in key sectors. The energy transition will be capital intensive and take time.

It is important to remember that real estate is a long-dated business. The projects we are acquiring or building today have 10-year business plans, and the market will likely view this topic very differently a decade from now. As we all know, a discounted cash flow needs to include future capital expenditures. Do today's models include a plan to decarbonize? They should. Regardless, an energy transition will be expensive and adds to the question of long-term inflation.

D4: De-mography

The last, but certainly not the least, is de-mography. I am purposely making up an unfamiliar word by splitting the "de" from "demography" to create a similar theme of deconstructing how we think about the populations we serve.

For all of us that have been investing over the last 20 or 30 years, it is hard to wrap our heads fully around the changes that are coming. Given health care innovations, in artificial intelligence (AI) and elsewhere, I am skeptical of dire predictions of populations massively shrinking. Many could, but likely not to the degree some estimate. Health care has changed exponentially. In our lifetime diseases we never thought curable will be cured.

That said, regardless of size, the composition of working-age populations will likely change, and this could have a direct impact on real estate.

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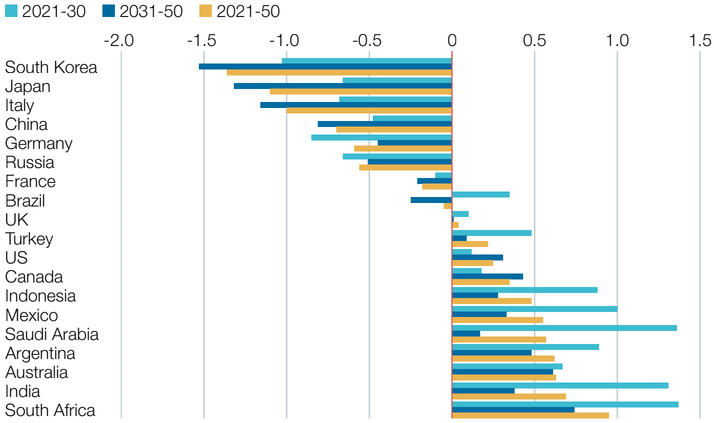
[3] *Economist Intelligence Unit*

[4] *Economist Intelligence Unit*

The working age population is set to decline in 2031-50 in eight of the 19 G20 countries including China, which is likely to cause a significant realignment in GDP (see EIU projection chart). However, United Nations projections show significant growth occurring in the 15-24 and 65+ cohorts[5] (with obvious implications for student and senior housing).

Most global population growth through 2050 appears to come from Africa, and South and Southeast Asia. That growth should bring Africa's total among the 20 fastest growing economies through 2050 to six.

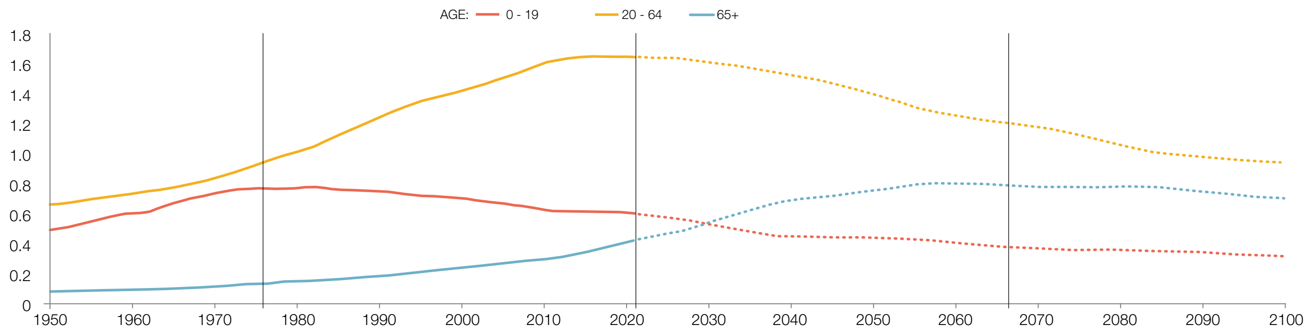
Working-age population in G20 countries
(% change, annual average)



Source: EIU. As of 8/2/23.

India has already overtaken China in total population and will likely continue to grow faster both in GDP and population, although fertility rates are declining quite fast in India.

De-mography
The World will be different too...



Source: The Overshoot, "Inflation In The *Very* Long Run," Matthew Klein, May 13, 2023

Aging populations, particularly in Europe, should cause economic growth to slow through two channels:

- Slowing population growth (and in many countries, negative growth)
- Higher tax burdens amid rising healthcare and pension obligations, as well as higher debt service burdens brought on by higher interest rates

A younger worker demographic likely causes behavioral shifts in how and where labor wants to work. In-office attendance has ebbed since the pandemic, but worker power is likely to wane in 2024 as slower growth pushes up unemployment.

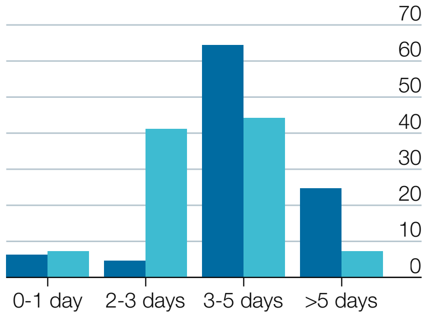
[5] *United Nations, "Global Issues - Youth" and "Leaving No One Behind in an Ageing World," UN.org/en/global-issues/youth, and Department of Economic and Social Affairs, 2023 Edition*

With higher unemployment, workers generally will have less bargaining power over wages, as well as remote and flexible working arrangements. Higher unemployment would allow employers to set firmer ground rules for in-office work.

Reduced job security is also likely, especially in those industries being disrupted by energy transition, automation, lower investment, and the adoption of new technologies. Exceptions to this prediction could be fast-growing emerging markets (e.g., India) and in-demand skills, including those leading the artificial intelligence revolution.

We have seen these dynamics in the office sector today and will be attacking the battered sector from the credit side as well as traditional equity. But more fundamentally we have a sharp vision for what the future of the office will look like and will aim to execute that vision in the decade to come.

How many days per week are staff working in your office?
(% of responses)



Source: EICN As of 8/2/23.

The current declining relative appeal of the office sector has been closely connected to these 4Ds. Over the last decade we have reduced our office exposure by half and increased our multifamily and industrial by three times, strategically diversifying across product types. However, we have significant and historic experience in the office sector and strong views of what tenants want.

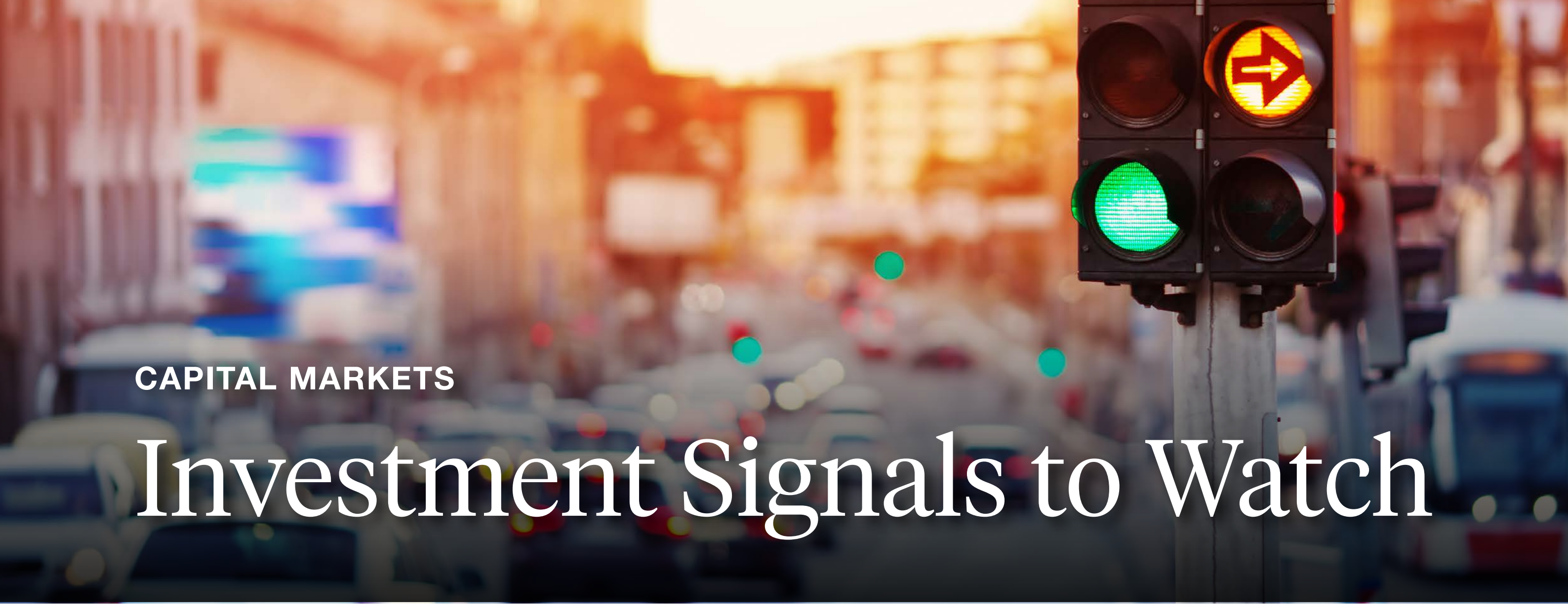
We believe there is a lesson to be learned on office values from the performance of the retail sector over the past decade. Capital markets painted the asset class with a broad brush due to secular changes stemming from e-commence. But in examining the data, the best assets did quite well, stealing market share from those that failed, and investors who wrote off the asset class entirely would have missed a compelling window of opportunity.

We hold a similar view on the future of the office and believe it is too early to dismiss the potential of a whole asset class under a massive transition in use. In our view, disruption introduces the opportunity for property re-inventions to help deliver the desirable destinations of tomorrow. Those winning destinations will likely be a set of magnetic, well-located office buildings with flexible offerings and purpose-driven experiences and amenities that attract actual occupancy.

Conclusion

The Four Ds provide a backdrop for formulating our investing theses across property types. There is much to consider in the quarters and years ahead and there will surely be additional implications that arise from these broad forces. We look forward to navigating them with our current and future partners.

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



CAPITAL MARKETS

Investment Signals to Watch

BY JOSH SCOVILLE
Global Head of Research,
Hines Proprietary Research

At mid-year 2023, the commercial real estate market unsurprisingly remained in transition mode from a lingering near standstill in transaction activity to a market with distinct green shoots. While neither interest rates nor the broader capital markets have turned a decisive corner, Hines Research noticed two key indicators that signal positive market momentum in certain sectors and regions: transaction volume and bank lending standards.

Investment Signal #1:
Transaction Volume Beginning to Increase in Some Markets

A re-start to active property trades is one of the early signs that sellers have capitulated to adjusted valuations. According to published data from MSCI Real Capital Analytics, transaction volume may have bottomed out globally. Consider the following year-to-year and quarter-to-quarter data on June 30, 2023:

- Total U.S. transaction volume this year was down 63% with office volume declines comparable to the Global Financial Crisis (GFC). While the office sector is still sluggish, an uptick occurred in apartment volumes (measured by units); these rose nearly 10% in Q2 compared to Q1 2023.
- A similar pattern occurred in the European office sector, where volume as measured by square meters fell 58% year-over-year, including the lowest transaction activity ever recorded in the region in the second quarter of this year. However, European volumes in industrial, retail, and apartments as measured by square meters or units all rose significantly during Q2 compared to Q1 (up 12.4%, 11.5%, and 81%, respectively).
- In Asia, total volume dropped 40% year-over-year, but Q2 office volume held steady, and industrial and retail recorded gains of 22.4% and 15.9%, respectively.

While quarter-over-quarter data can be volatile and we prefer to see a more sustained increase in transaction activity before calling a bottom, the gains we did see in Q2 are encouraging.

U.S. Recovery May Be Lagging Other Regions

While the United States has typically been a bellwether for market sentiment, the country's recovery seems to be trailing other regions.

In past corrections, when the trailing annual number of U.S. sales as a percentage of total properties from the NCREIF Property Index (NPI) has risen above the 3-year average, it signaled that the downturn had ended, and the next cycle had begun. In past cycles, this phenomenon occurred in Q4 2020, Q3 2010, Q4 2003, and Q2 1993.

In Q2 2023, the percentage of properties sold out of the NPI fell to 4.1% of the total, the lowest level since 2009, well below the 3-year average of 6.1%, and less than half the long-term average of 9.1%. Hines Research has calculated the relationship between the two and the resultant forward one-year returns:

- When the trailing annual number of sales as a percentage of properties in NPI is above the 3-year average, unlevered NPI returns over the following year have averaged 10.8%.
- When the trailing annual is below the 3-year average, returns over the following year have averaged 5.5%.
- In the 34 quarters where it has been more than two points below (as it was in Q2 2023), forward one-year returns have averaged just 3.5% and nearly one-third of those observations had negative forward one-year returns. As such, we're likely still in a market where prudence and patience prevail in the short term.

See the table below for additional return detail, and please note that the $R2$ of 0.96[6] indicates this model is nearly a perfect explanation of variance.

Difference between Trailing Annual Volume and 3-year Average	Count	Average Difference	Average Forward 1-year NPI Returns	Percent of Observations with Negative 1-year Forward Returns
>5%	6	6.2%	16.9%	0%
>3%	20	4.6%	14.3%	0%
>1%	50	3.0%	12.3%	0%
>0%	74	2.2%	10.8%	3%
<0%	78	-2.1%	5.5%	22%
<-1%	54	-2.8%	4.4%	28%
<-2%	34	-3.6%	3.5%	32%
<-3%	18	-4.7%	-0.2%	50%
<-4%	10	-5.7%	-4.5%	60%
<-5%	8	-6.1%	-5.1%	63%

Sources: NCREIF; Hines Research as of Q2 2023

[6] *The R2 (R Squared) is defined as the coefficient of determination ranging between 0 and 1, reflecting the percentage of the response variation represented by the linear model/factor. The higher the number, the higher the correlation, with 1 equaling a complete correlation.*

On the bright side, 104 properties traded in the initial Q2 2023 NPI report – this was up 27% from the 82 sales reported in the first quarter. Book values are slowly adjusting, but appraised capitalization (cap) rates are still well below transaction cap rates. In fact, there is more than a 100-basis point difference between the two across the major U.S. property sectors. In contrast, European appraisal cap rates have adjusted more significantly, and are more reflective of the changes in transaction cap rates. This may be one reason why the European market seems to be thawing more quickly.

Investment Signal #2
Bank Lending Standards – U.S. vs Europe

In the U.S. and Europe, surveys of bank lending standards have existed for more than 20 years. By back testing the data on bank actions, we found a clear relationship between changes in bank lending standards and real estate investment performance.

Both regions continued to see more banks tightening underwriting standards than loosening, but the European market[7] appears to be further along in its transition.

- The net percentage of Eurozone banks tightening standards (measured by the ECB Q2 2023 bank lending survey) fell by nearly half in the second quarter (14% in Q2 from 27% in Q1 2023).
- The percentage readings for Spain and Germany fell into the single digits.
- Standards in France are still elevated but the bank tightening percentage fell 25 points to 25%.
- The percentage for Italian banks was also halved (falling from 35% in 1Q to 18% in 2Q 2023).

While quarter-to-quarter data in Europe can be volatile due to the fewer number of banks, the trend for real estate has been positive.[8] Unfortunately, this cannot yet be said for U.S. banks:

- Lending standards remain very restrictive, with 67.8% of banks tightening across the three commercial real estate categories surveyed by the Fed.[9]
- Q2 was the third quarter in a row with average tightening across the three categories in excess of 60% for just the second time in the history of this series (dating back to 1990).
- The only other time restrictive readings were this persistent occurred during the GFC when 60%+ average readings were reported for six consecutive quarters.

Conclusion

While the market is not there on a global scale, the second quarter data illuminates the nascent recovery in some regions and property sectors. The uptick in transaction volume in some markets and less restrictive lending among European banks may be a positive sign of potential recovery.

[7] *European Central Bank as of Q2 2023*
[8] *European Central Bank; Federal Reserve as of Q2 2023*
[9] *U.S. Federal Reserve as of Q2 2023*

Regional Implications on Real Estate

European Outlook

Despite progress in reducing reliance on Russia, energy and wage costs will likely remain higher in Europe than in most other regions, reducing competitiveness. Ambitious goals on emissions reduction are focusing investment on green technologies. The U.S. legislation to secure supply chains (e.g., Chips Act, IRA) has disadvantaged the European Union. In response, EU subsidies are forthcoming.

Elections in 2023-24 will take place amid cost-of-living concerns and strike actions in some countries. The demographic challenge has been felt in the workforce and should act as a brake on long-term growth.

The recession picture is mixed in different corners of Europe. Some countries are on the edge of recession – for example, Germany and the U.K. – but economic stagnation is the broad theme for the rest of 2023. Fortunately, 3M Euribor futures project that the implied policy rate should peak by the end of 2023, leading to the beginning of the easing cycle next year. In addition, the median consensus growth for real quarterly GDP is forecast to be positive and increase all the way through 2024.

For real estate, net office absorption has started to soften, and this has put upward pressure on vacancy rates. Surprisingly, this has not yet led to falling rents – the normal dynamic (higher vacancy/lower rent) seems to have decoupled since COVID. This may be due in part to strength in key CBD submarkets.

Overall, leasing health has fallen but remains strong for logistics and apartments. Higher rates have had a swift impact on transaction volumes, which dropped to a 10-year low in the second quarter of 2023. However, public versus private market data suggests that the worst of the pricing declines may be over.

Asia Outlook

Asia's expected growth of 4.2% this year is still ahead of global growth of 2.2%.[10] Based on data from Hines Research and other sources, the call of recession or not has become increasingly fraught with uncertainty. There are no real signs of stress in the Asian job markets. As an example, Australia added 32,600 jobs in June. With a population about 1/12th the U.S., that is equivalent to a gain of 425,000 new jobs in the U.S.

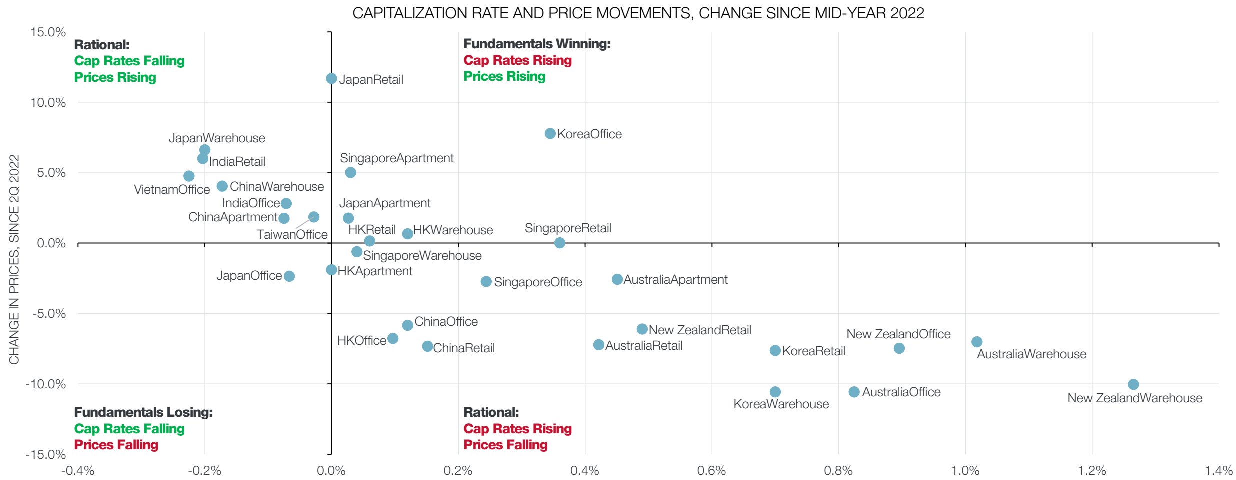
Only China's economy has exhibited some weakness (perhaps due to a weaker-than-expected post-COVID bounce), but this may be partially (if not wholly) offset in the region by increased tourism and migration.

In Asia, central banks remain vigilant, but with inflation trending the right way, the consensus expects policy rates to ease in 2024 and 2025. However, the yield curve for sovereign bonds suggests that long rates in the region could stay elevated or rise over the next five years. Even Japan has "tweaked" its typical accommodative monetary policy to allow for flexibility in its yield curve control.[11]

For real estate, cap rates really started to make discernible moves in mid-2022. Changes, either up or down, differed markedly across economies, but most major markets have experienced cap rate increases. Interestingly, across markets with rising cap rates, most have seen relatively healthy rent growth supporting price gains or muting price declines relative to what would be expected given the scale of cap rate expansion.

Asia Property Research Overview

Cap rate increases paired with value declines concentrated but happening



Sources: JLL, CoreLogic, ARES, Hines Research. As of 2Q2023.

Looking at sectors, retail is alone in showing convincing signs of improving fundamentals, as vacancies in all major retail markets seem to have peaked. The office sector softened but has recently stabilized as it becomes increasingly clear that work-from-home does not pose nearly the challenge to occupancy as it does in the United States. Warehouses and apartments have weakened, but net absorption is mildly positive overall, which combined with mostly modest supply growth outside of the major warehouse markets has helped keep average rent growth positive so far. Without a recession, this balance of downward pressures from the capital markets on values could persist for the near term but may be partially offset by resilient fundamentals.

[10] *Economist Intelligence Unit, July 2023*

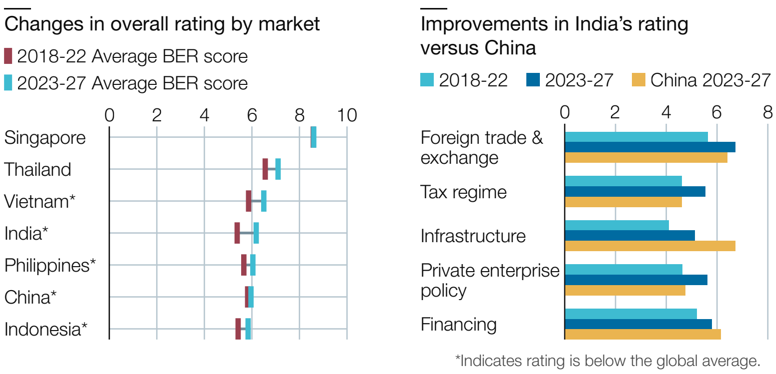
[11] *https://www.cnbc.com/2023/07/28/bank-of-japan-boj-to-guide-yield-curve-control-with-greater-flexibility.html*

“India is having its moment

India is having its moment, as political risk resurfaces in Southeast Asia leading investors and corporations to look to the country as an emerging market (EM) titan and an alternative to the other EM titan, China.

The market has benefited from improvements to its business environment and progress in bilateral trade deals. It increasingly instills confidence as a manufacturing center due to its large and youthful labor market, progress in transport infrastructure, taxes, and trade regulation.

India's business environment now competitive with China and South-east Asia



Source: EIU. As of 8/2/23.

Americas Outlook

Moody's recent data predicts 1.9% growth in 2023 and 1% in 2024,[12] as still-high inflation and interest rates strain household and corporate finances. A deep recession (with a year-on-year contraction in GDP and high unemployment) remains unlikely. Also, the Fed is expected to begin loosening sometime in 2024 given the current expectation that inflation should continue to fall in 2024 and beyond.

The U.S. economy may avoid a national recession, but using the Sahm Rule as an indicator, some East and West Coast markets are already there. Areas like Los Angeles, San Jose, New York, and northern New Jersey have experienced a rise in unemployment that suggests a local recession.

By sector, the fundamental health of U.S. warehouse and retail markets has moderated, perhaps because supply/demand has come back into balance. Both apartment and office fundamentals are falling sharply – the former experienced an entire year of supply growth with shrinking absorption, while office has recorded higher vacancies on weak demand trends.

Unsurprisingly in the face of higher rates, deal volume in the U.S. and Canada is about half the level recorded prior to the commencement of tightening. Cap rates have risen by 1.5 to 3 percentage points across sectors in the year ended June 30, 2023. Despite these conditions, we are monitoring regions (including the East, Midwest, and Canada) with the expectation that general "buy" signals will likely become more widespread.

[12] *Moody's Analytics as of 9/1/23*

Conclusion

We feel 2023 real estate performance is on target with our expectations entering this year. Last year, we predicted that quality properties would outperform, and this has generally proven to be true. Differentiated products beat commodity properties nearly every time, but especially in challenging moments.

Flexibility was also a top concern of ours entering this year given the uncertainty over economic prospects, the initial stickiness of work-from-home, and the overall financial health of global consumers, among other factors. In our opinion, flexibility is an additional amenity that should be used to further differentiate one asset from another.

Decarbonization is going to continue to be a blind spot for the market, but we remain hopeful for a widespread transformation in the acceptance of these efforts. For real estate, this will require solutions for both operational and embodied carbon use. Themes such as the electrification of everything and distributed power grids will help drive innovation across the entire construction process. The need for creative solutions to environmental sustainability should continue to funnel investments into green solutions.

We are seeing opportunities to place capital now that liquidity has become more available internationally. The U.S. lags in this area, with two-thirds of banks still tightening lending standards. Nonetheless, transaction activity has slowly increased. As noted, year-to-year volumes were down sharply across the Americas, Asia, and Europe, but Q2 to Q1 2023 data showed some life in certain regional sectors.

Even with new supply trending down, it is taking considerable time for markets to fully adjust to current demand paradigms. However, the combination of shrinking construction starts, even in sectors with healthy fundamentals, should set the stage for buoyant real estate fundamentals in the future. As capital markets continue to thaw, as they inevitably always do, stronger rent growth combined with attractive valuations should drive prices higher as the next cycle unfolds.

About the Contributors

About Hines Proprietary Research

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, Erik Thomas, Michael Spellane, and Anthony Witkowski.

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Index Disclosure

The NFI-ODCE, short for NCREIF Fund Index – Open End Diversified Core Equity, is a capitalization-weighted, gross of fee, time weighted return index with an inception date of December 31, 1977. Other supplemental data such as equal-weight and net of fee returns are also provided by NCREIF for information purposes and additional analysis. To be eligible for NFI-ODCE membership, each member fund must be marketed as an open-end fund with a diversified core investment strategy primarily investing in private equity real estate. All members funds must adhere to the following index inclusion criteria:

- 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.

Each member fund must also comply with the NCREIF PREA Reporting standards. A benchmark index is not professionally managed. Investors cannot invest directly in an index.

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.

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