The Big Debates



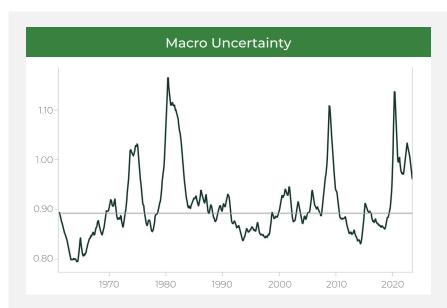
Introduction

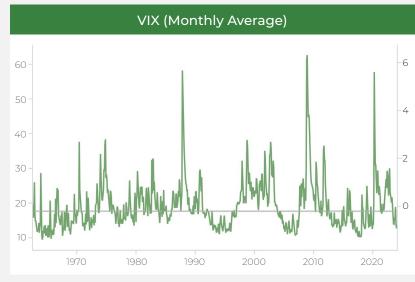
The Narrative Chase

Among other reasons to be grateful this year—economic resilience, slower inflation, the presumptive end of interest rate hikes—it's been a healthy period for references to midcentury Hollywood productions. In our Q2 2023 client letter we referenced the 1960 spaghetti western, *The Magnificent Seven*, analogizing the movie's heroes to that namesake group of technology companies protecting the interests of US equity investors. (It was, admittedly, a stretch.)

Five years prior to that film's release, though, John Wayne starred in *The Sea Chase*, the story of a German freighter ship evading capture by Allied navies as World War II breaks out. Like the British frigates in the film, Wall Street strategists have been on their own unsuccessful "sea chase" for the last 18 months, setting a narrative that's been hopelessly behind economic conditions

In last year's Outlook, we noted the embarassing extent to which many of those prognosticators misread the post-Covid inflationary impulse and the Fed's resolve to fight it. The pace and number of rate hikes and the downdraft in equity and bond markets surprised that group.





Source: Macro Uncertainty from St. Louis Fed; VIX from CBOE; as of 12/31/2023.



Consensus heading into 2023 swung sharply toward an imminent recession. But again, as the year unfolded, economic resilience, persistent labor market strength, and durable consumer spending left egg on the faces of many of the same strategists. Now, embarking into 2024, the chase continues and the pendulum has swung again. Equity valuations are full, volatility is extremely low, disinflation persists, and the base case is a Downy-soft landing.

Therein lies the biggest risk for this year, one that is memorialized as number nine Probability of Recession Four Quarters Ahead

40% - 20% - 10% - 1980 1990 2000 2010 2020

Source: Philly Fed Survey of Professional Forecasters as of 12/31/2023.

of legendary trader Bob Farrell's famed ten rules of investing: "When all the experts and forecasts agree – something else is going to happen." Any good news may already be embedded in prices and the narrative may evade us yet again. In this year's Outlook, rather than discuss variances in economic forecasts which may be trivial and will almost surely be wrong (equity market leadership, geopolitics, relative factor views, etc.), we are tilting more pragmatic. We'll take you through some of the internal debates our Investment Team is having about the current issues impacting portfolio risk and research priorities. These are some of the questions in markets that will drive our Investment Team and allocation activity next year:



Where are we in the artificial intelligence hype cycle?



Is China's equity market cheap enough?



Is Japan's recovery durable or transitory?



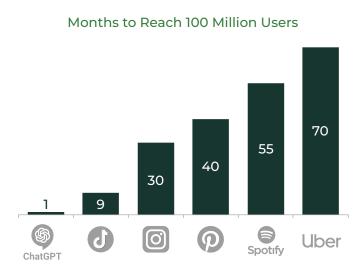
Have real estate valuations reset adequately?

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Where Are We in the Hype Cycle?

After years of promise, 2023 was a breakthrough year for generative artificial intelligence which captured the public imagination with the broad release of its first consumer applications. In January, OpenAl's ChatGPT reached 100 million monthly active users in record time.² The frenzy impacted the entire tech stack—from GPUs and infrastructure to models and apps. In May, Nvidia—a pioneer in Al-enabling computer chips—reported an upside earnings surprise and issued revenue guidance more than 50% above analysts' expectations.³ The company then appreciated 25%, adding \$236 billion to its market cap (more than the entire market cap of Bank of America, McDonald's, or Pfizer) in just two days.⁴



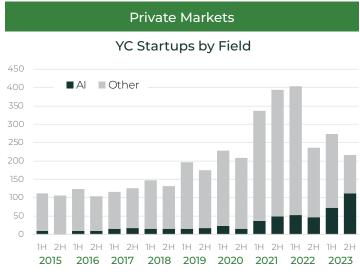
Source: Company data, Yahoo Finance, Goldman Sachs GIR.

Why does it matter?

In 2023, public markets were led by optimism around AI. As recently as the end of October, the equal-weighted S&P 500 was down over 2% while a basket of Alrelated stocks was up more than 55%, contributing 20% of the S&P's 26% gain for the year. That basket of roughly thirty stocks, led by six of the Magnificent Seven, now comprises almost one-third of the S&P 500's market cap.⁵ In private markets, venture capitalists are salivating over AI given its promise and its soothing of some of 2022's venture scars. While new VC investments declined 31% in Q3, AI-related deals rose 27% and accounted for one-quarter of all venture financing.⁶ At least half of Y Combinator's most recent batch of companies is pursuing an AI angle (see chart below). The contribution of the trend on portfolios and returns is inescapable.







Source: Y Combinator as of 12/31/2023.



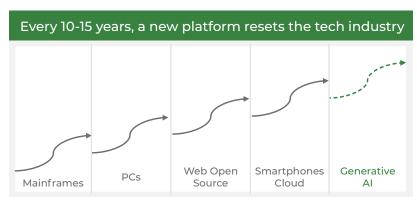


At its simplest, Al is a next logical innovation around our human limitations. Most technological advances through history have amplified our physical form: from wheels and levers, to heavy machines and precision robots. The more recent information revolution and now this Al megatrend target our cognitive limitations. The implications for productivity gains from Al seem nearly limitless, touching large and growing addressable markets. For example, one of the most visible Al applications before 2023 was autonomous vehicles, which amounted to only a \$100 billion industry in 2021. Today, Next Move Strategy Consulting forecasts that market will grow more than twenty-fold over the next decade, reaching \$2.3 trillion in 2030.

The *pace* of progress is also extraordinary and unrelenting. Less than one year after the introduction of ChatGPT, Google released its chatbot, Bard, and Microsoft recently released Copilot, which it dubs "your everyday AI companion." ⁸ All of the bots advance with successive upgrades, accepting more varied prompts

and delivering answers to more complex questions. The models and data to feed the AI infrastructure are equally incipient and progressing rapidly. These types of tech platform shifts tend to be durable, ten-to-fifteen-year processes of broadening scope and deeper impact. AI has the potential to solve real-world problems (unlike crypto's occasionally hallucinatory ones), and penetration across most sectors is still low.

The principal objection to AI enthusiasm is not about the tech or the arc of progress (though there's legitimate skepticism and fear there too), but that we've gone too far, too fast in valuing it. Despite its long-range promise, capital has quickly poured in via venture investors and in public markets. The Magnificent Seven account for almost 30% of the S&P 500's market cap, and 2023's spectacular gains have lifted valuations from 22x one year ago to nearly 30x forward earnings.9



Source: Benedict Evans, December 2023 Newsletter



Source: GEM, Bloomberg, and Goldman Sachs as of 12/31/2023.





Comparing the current concentration of the top five stocks in the index to prior bubbles, they account for nearly one-quarter of the total market cap compared to just mid-teens percentages in both the tech bubble and the Nifty Fifty era of the 1960s and 1970s.

Other companies have caught on to the narrative value of AI too, aggravating inevitable mispricings. In September, Bloomberg counted over 7,000 mentions of AI on Q2 earnings calls, nearly five-times-more than the previous quarter. And investors rewarded the hype. S&P companies that mentioned AI saw a post-earnings pop of 4.6% versus 2.4% for those that did not.¹⁰ In private markets, startups struggling with product-market fit are pivoting to AI *en masse*, cheered on by VC backers.

Besides, valuation is the risk of regulatory pressure. Several years ago it appeared that Big Tech had found itself in the regulatory and Congressional crosshairs, but it turned out to be a nonevent for stock performance. Across the pond, the EU has shown more bite on a range of tech-adjacent regulatory issues, and their recent "roadmap EU Al Act" anticipates banning Al tools with "unacceptable" risk and requiring the rest to implement transparency, all by 2025. The US government has yet to act with any such conviction.

Concentration of Top 5 S&P 500 Holdings

	1		
	Size		Valuation
	Market Weight	Market Cap (\$B)	P/E (FY2)
Current Top 5			
Apple	7.3%	2,839	27.1
Microsoft	7.1%	2,759	28.7
Alphabet	3.8%	1,471	19.9
Amazon	3.4%	1,325	40.6
NVIDIA	3.0%	1,152	22.6
Current Top 5 Aggregate	24.6%	9,545	26.6
Tech Bubble			
Microsoft	4.5%	581	55.1
Cisco Systems	4.2%	543	116.8
Intel	3.6%	465	39.3
Oracle	1.9%	245	103.6
Lucent	1.6%	206	35.9
Tech Bubble Aggregate	15.8%	2,040	55.1
Nifty 50			
IBM	7.1%	48	35.5
Eastman Kodak	3.6%	24	43.5
Sears roebuck	2.7%	18	29.2
General Electric	2.0%	13	23.4
Xerox	1.8%	12	45.8
Nifty 50 Aggregate	17.1%	116	35.5

Source: Goldman Sachs. Current as of 12/12/2023; Tech Bubble is late 1990's peak; Nifty Fifty is 1970s peak.





GEM's View:

As a developing and transformative technology, artificial intelligence is in its early days, but markets may be ahead of themselves. Both can be true simultaneously because they will matter over distinct time horizons.

Over a strategic horizon—three years and beyond—we plan to maintain exposure to the mega cap segment of the US tech market, actively managing the risk of being too underweight as the index concentration gets even more extreme. It is a segment too large to ignore anyway, but the market is implying that much of the gains from AI will accrue to the large incumbents.

In private markets, we expect our managers to make the sober analysis of what really constitutes "disruptive AI" rather than latching on to the latest market meme. It has been fraught historically to pick durable winners when innovation moves so quickly. OpenAI has a head start in certain arenas, but so too did Yahoo in internet search. We expect to receive exposure to the companies that are making extraordinary strides and have the best chance of success through our elite VC partnerships.¹²

Over a tactical horizon—within the next year—we are generally cautious on equity valuations, especially given how quickly expectations for productivity-enhancing AI implementation have escalated. The typical pattern with technological innovation is that society overestimates the short-term impacts and underestimates the long-term ones. We expect AI to follow the same path. There will likely be ebbs and flows in enthusiasm that lead to price volatility, but the overarching trend is forward progress.





Long Dispersion? or Long the Market?

Of all the forecasting errors in 2023, those directed at China were some of the most glaring. As the country was poised to re-open its economy after painful and protracted lockdowns, optimism soared and net equity positioning among foreign institutional investors reached a maximum bullish state. The economy and market disappointed on almost every dimension, with real estate sector deflation weighing on demand and growth. Slumping home prices erased roughly RMB 20 trillion in Chinese household wealth, or 2.8 trillion US dollars. Equity markets flagged too, which policy makers addressed through restrictions on short selling.

Still, the Chinese equity market is a vast opportunity set for stock pickers with over 2,000 publicly traded companies. It is home to three of the seven largest stock exchanges in the world, and it has been a growing contributor to global growth and allocation in investment portfolios for nearly three decades.¹⁵

A decision whether to take on China exposure is consequential. After peaking at more than 43% of the MSCI Emerging Market Index in October 2020, China now accounts for approximately 30% of the index, a still-significant amount. That is nearly double the next-largest constituent, India, at nearly 16%. Adding Taiwan and Hong Kong to create the so-called "Golden Dragon Index" brings the weight to more than 50% of EM market cap. Within the ACWI broadly, that Golden Dragon cohort holds a 5% weight, down from a peak of 7.5% in 2021, but still meaningful in the benchmark. ¹⁶



Source: MSCI as of 11/30/2023.

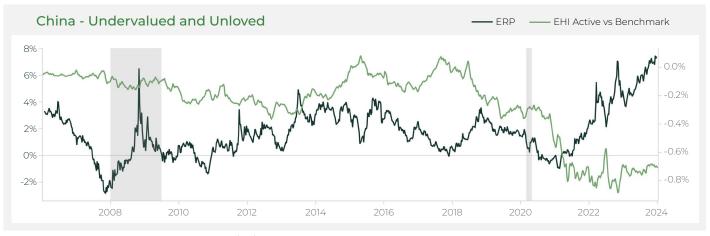
It is not necessary to have a view on future Chinese equity returns to have an allocation to a China-focused investment manager. In 2012 we made the decision to shift our focus in China to long/short managers because the opportunity to exploit cross-sectional volatility seemed more persistent than a generalized tailwind in the country's equity markets. But with Chinese stocks losing half their value in the last three years, it is worth considering whether the "two-fer" is back and additional long-only exposure is warranted.





Long China

After a calamitous stretch of stock losses arising from heavy-handed government action and slowing growth, China's stock market is cheap and unloved. China's forward P/E is below 10x and ranks in the bottom quintile of history since 1995. China's equity risk premium (ERP) recently hit a spread of 7% higher than the US ERP. Active managers were last overweight Chinese stocks in mid-2018 and reached a record-level underweight a year ago. Current active positioning remains in the bottom decile of history back to 1998 (according to data from SSGA), though one observation from GEM's Investment Team presence in Asia during the summer of 2023 is that some fund outflows from US investors are being replaced by inflows from European and Middle Eastern allocators.



Source: MSCI, Bloomberg, and SSGA as of 12/24/2023.

China's scale, resource base, and innovativeness should lead to an economic recovery. Despite the recent challenges, it is worth remembering that it is still an emerging superpower and the second-largest economy in the world. Already, they have some advantages:

- The country accounts for 70% of rare earths mining, elements that are key components in a myriad of consumer products.¹⁷
- It has been a leader in renewable energy with more than 80% of the world's solar manufacturing capacity through 2026.¹⁸
- It is also a powerhouse in the electric vehicle (EV) market, producing three times as many EVs and hybrids in the last five years as the number two player (Germany). One out of every four cars sold in China is a full electric vehicle. One
- It also continues to innovate its way around US trade barriers. For example, US foreign policy had aimed to stall China's semiconductor development at 14 nanometers (nm), which is about 10 years older than the latest technology. This Fall, Huawei released a new phone with a second-gen 7 nm process technology (equal to Intel's current tech), and recently listed a laptop with a sanctions-defying 5 nm technology.²¹

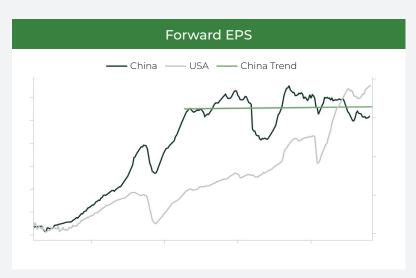
Although the London Business School's Elroy Dimson proved conclusively years ago that a country's GDP growth and its equity market returns are *negatively* correlated—said differently, faster economies have worse-performing stock markets²²—China is in the opposite situation today, with a slowing economy and dreadfully performing equity market. That may portend progress on both fronts.



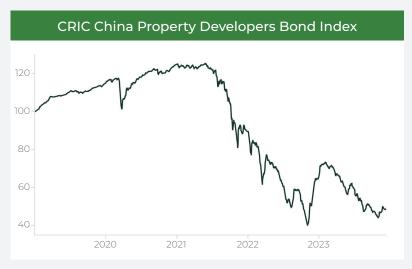
Long-China dispersion

While China's economic growth remains among the highest in the world, China is a textbook example that the economy is not the stock market. Since 2011, MSCI China earnings are flat with Chinese real GDP growing at almost 5.5% per annum. One of the reasons for that disconnect is assuredly politics: the Chinese Communist Party has proven itself to be hostile to public equity investors, relenting episodically for tactical gain. The prospect of escalating trade wars or punitive capital controls or fullfledged kleptocracy is never out of the question. Private equity investors may find it especially challenging to access China's innovation economy, where several important subsectors have been declared national security priorities by President Xi.

Meanwhile, China's epic property bubble continues to unwind, and over 70% of property bonds were in default by late October. China bulls often cite low levels of sovereign debt, but that ignores all of the implicit guarantees the national government supports. China's four large state-owned banks have an asset base nearly equal to the US GDP.²³



Source: MSCL as of 12/31/2023

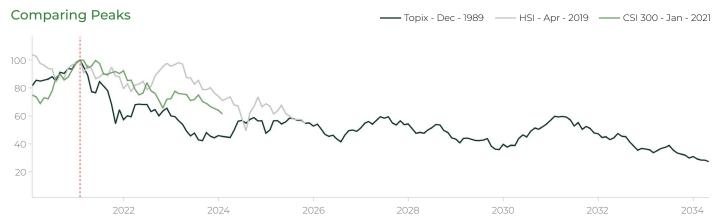


Source: China Real Estate Information Corp. as of 12/31/2023.





It is not likely the growth story will turn around anytime soon, even with meaningful stimulus. As China's wealth has grown, some economic slowing was to be expected. China benefitted from the easy gains of cheap exports and high productivity investments. Over time, China's neighbors gained competitiveness in their export sector, and national savings exceeded productive investment opportunities. Another factor weighing on China's growth is its aging population; the 1.7% annual growth in the working age population in the 30 years ended 2010 will flip to a negative growth rate between now and 2050.²⁴ Aging demographics combined with low interest rates and recent deflation have raised concerns of "Japanification." While stocks are down significantly from their peak three years ago, if markets followed the pattern of Japan's asset bubble we could be in the early stages of the decline.



Source: Bloomberg; all indices indexed to January 2021.

GEM's View:

The question is not *whether* China deserves a risk premium, but how big of one. Avoiding Chinese stocks has become such a strong consensus that they are due for a bounce in 2024. In November, a Bank of America manager survey ranked short China equities as the second-most crowded trade idea (22%) behind long large-tech stocks (38%).²⁵ Even many China long-only managers have shifted portfolios toward the US or other Asian markets. Nevertheless, we maintain a neutral view on a China allocation, and within public securities prefer a long/short approach where market direction is less important than dispersion and the opportunity for managers to express skill remains substantial given the scope of the opportunity set and the prevalence of retail investment.

The private market opportunity is almost certainly degraded relative to the pre-Covid period due to the increasingly firm and unpredictable hand of the CCP on policy and moribund IPO activity. However, we think the market is too substantial to exclude entirely, and will continue to pursue it with a small, highly-select list of venture capital partners.



Is the Japanese Recovery Real This Time?

A quick history lesson: In 1985, leaders of the major economies agreed that the US dollar was overvalued. Following the Plaza Accord, the US eased monetary policy and the appreciation of foreign currencies hurt the major current account nations like Germany and Japan. Japan—which had been growing at over 8% for the prior decade—responded to the economic slowdown with large fiscal stimulus and by slashing interest rates, actions that stoked asset prices. In response to rising inflation, the Bank of Japan began raising interest rates in 1989 which initially popped the stock market bubble, and land tax reform in 1990 was the final death knell. The loss of wealth led to two "lost decades" for Japan, and the Topix Index today remains below its 1989 peak. Now, post-pandemic inflation has raised the hopes that Japan might finally escape the clutches of persistent deflation, and the country's equity markets were some of the best performing in 2023.²⁶

Why does it matter?

Japan is the third-largest economy in the world and its stock market is the second-largest in the ACWI benchmark after the US. The stock market has one

of the highest concentrations in value stocks at 70%—about twice the level of ACWI, providing valuable style diversification—with a full 50% of companies trading below book value. A pivot in global investors' perception of the opportunity in Japan could lead to sustained outperformance.

A renaissance is here

Japanese stocks have traded at a discount to ACWI on a forward P/E basis for nearly ten years due to lower profitability. But despite a much smaller weight

to information technology and double the exposure to industrial stocks relative to the ACWI, Japan has narrowed its profitability gap with the rest of the world. Although Wall Street forecasts for growth next year are tepid in absolute terms, the current consensus expects Japan to grow faster than both the UK and the Euro zone.²⁷

Besides some of the factor imbalances and stagnating economy, much of what's held Japan back for years is poor corporate governance. That too is improving slowly.

The Japanese government launched a series of corporate governance reforms in 2014 that have continued to improve and evolve. This year, the Ministry of Economy, Trade, and Industry (METI) issued updated "guidelines for corporate takeovers" which placed greater emphasis on value maximization at the expense of entrenched management. There have been some early signs corporates have taken notice. Evidence of change can be seen in Nidec Corp's unsolicited takeover of Takisawa Machine Tool Company, for example, which resulted in gains of over 100% for the target's shareholders. Takisawa's CEO said in an interview that given M&A guidelines, the board had "no choice but to accept the offer." The stock exchanges are also encouraging companies to improve returns on capital by distributing excess cash to shareholders, categorizing companies by tiers as a carrot to induce better behavior.

Economically, the picture is modestly brighter as well. Japan's recent 2.8% inflation rate was the highest for the country since 1992, a welcome sign of life. Through decades of listless deflation, consumers became accustomed to falling prices, and were incentivized to delay purchases and save, further undermining economic growth.²⁹ This year's Shunto wage negotiations, however, resulted in the highest jump in base pay since 1993 with an average increase of 3.9%.³⁰



Yet another head fake

Japanese stocks have been on an impressive run since the Covid bottom, but we've seen this movie before, most recently during the "Koizumi Rally" from

2003-2007. Like the recent recovery, that pre-GFC episode came with its own dose of optimism that activist investors would spur reform in corporate boardrooms. Prime Minister Junichiro Koizumi's reforms included postal privatization, restructuring the banking sector, deregulation, and tax incentives. That period also coincided with easy monetary policy globally and a steady weakening in the value of the yen, which boosted profits for Japanese exporters. However, when policy turned and the yen strengthened the rally fizzled, and at the 2009 lows the real value of the Topix Index was below where it began in 2003.

Toward the end of the rally, companies also reverted to their old, value-destroying behaviors. By 2007 cross-shareholding—the shared web of ownership between corporates to forestall scrutiny—saw its first increase since the 1990s.³¹

Japan still also has a "super-aged" society—the oldest in the world—with nearly 29% of the population 65 or older, almost 6% aged 85 or older, and little immigration.³² They have fought against their demographics by offshoring industrial production and leveraging workforces in other locales, but are mostly doomed to low potential growth without extreme productivity gains.

The revulsion many have for equity investment in China at the moment has led to strong equity inflows into other more stable Asian regimes like Japan and India, but how long that lasts is an open question.

GEM's View:

While there's some hope that normalizing inflation will break the deflationary mindset of consumers, Japan will remain plagued by low potential growth due to its aging population and restrictive immigration policy. Equity valuations are discounting this low-growth path, however, with an elevated equity risk premium relative to its history and well above the US ERP. Still, we are being selective with allocations. Corporate Japan presents a target-rich environment for activist investors, and we believe the prospects for corporate engagement and privatizations have improved materially, especially among established activist firms with the scale and reputation to be effective. That makes Japan an attractive opportunity for adding active equity managers in 2024.

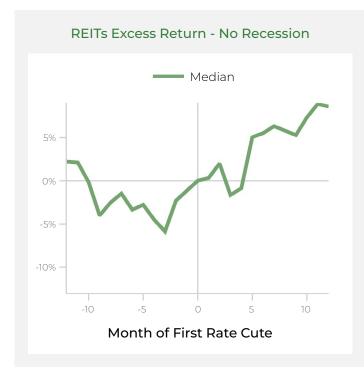




Has Real Estate Bottomed?

Real estate has been one of the central asset class losers from Covid's aftermath. Rent growth has been hard to come by in many property sectors, especially office, which is plagued by work-from-home trends. The balance sheets of many leveraged owners are now impaired by higher financing costs, and the primary lenders to those owners have been forced to retrench to clean up their own balance sheets. Since the start of 2022, public REITs have fallen 20% while private real estate (NCREIF) is down 5% (through September 30, 2023).³³ Clearly the public markets have ascribed a different value to assets than the private market appraisers.

Real estate matters because it's a core part of our asset allocation framework, serving as an inflation-sensitive asset for balanced portfolios. We also face a distinct implementation decision in how to access that exposure via public or private holdings, which dislocate from one another during volatile periods. We believe that real estate is likely to be acutely sensitive to the direction of monetary policy and economic activity in 2024. With the Fed poised to ease monetary policy next year, the asset class could rebound. After rate cuts, and when the economy avoids a recession, REITs have a median excess return of 8.5% during the subsequent 12 months.





Source: MSCI, NBER, Federal Reserve Board, and GEM analysis.



Private real estate may not be the coiled spring that public REITs are, but the troubled segments of real estate (like office) comprise a small part of the opportunity set today (<6%). On the flip side, the same post-pandemic factors that impair office have bolstered the prospects of industrial and data center REITs, which together comprise nearly 30% of public REITs using our MSCI REIT benchmark. Perhaps the index's drawdown is an overreaction.

Green Street's Commercial Property Price Index (CPPI) of institutional-quality commercial real estate is down 22% from its peak, about twice the Covid drawdown. The CPPI fell 36% during the GFC, a period

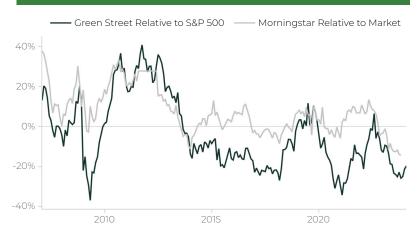
of both steep economic contraction and broad banking sector concerns. As yield-oriented assets, REIT prices have been punished by higher interest rates following the fastest Fed tightening campaign in modern memory. However, with the Fed set to ease monetary policy this year, REIT income will be more attractive to investors. Relative to the discounted growth of equities, public REITs look cheap.

Unlike the GFC, the systemic loss of credit availability via bank failures is not an issue. Credit conditions for real estate are unchanged since March, and real estate loans from banks have grown nearly 3% (according to the Fed lending survey). The private credit market for real estate today also is larger and more developed than it was 15 years ago. In short, credit continues to flow. Public REITs also have manageable leverage with debt/EBITDA at 5x, and investable liquidity equal to 10% of assets.34 Public REITs are cheap relative to the broad US stock market, at a 15% to 20% discount depending on the measure. Cheap valuations and lower interest rates in 2024 should support real estate valuations.

20%-0%-20%-20%-2014 2016 2018 2020 2022

Source: MSCI as of 12/31/2023.

Public REIT Valuation



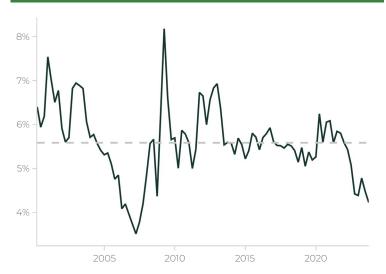
Source: Green Street, S&P, and Morningstar as of 12/31/2023.





Much of the private real estate Dusk sector still appears over-marked. The NCREIF property index of core unlevered properties is down just 8% from a peak, which wasn't recorded until Q3 2022. The NCREIF drawdown during 1990's mild recession was only 10% but lasted about three years, while the index lost 24% in the GFC. Leverage levels are also elevated, even in property types like multifamily that have been perceived as safe by reputation, and rising costs plus bank retrenchment make existing lenders less friendly. Not only do small banks account for two-thirds of real estate loans, but CRE lending conditions have been at least 66% net tight for three quarters in a row.35

Nareit Implied Cap Rate less TIPS Yield

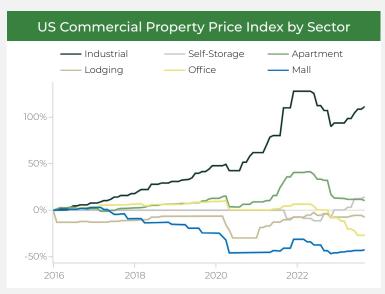


Source: Bloomberg as of 9/30/2023

While lower interest rates may be on the horizon, time is running out for many real estate investors who are upside-down on their cap rates. In many property market segments, debt investments appear more attractive on a risk-adjusted basis than equity investments.

GEM's View:

Certain segments of the commercial real estate market will remain stressed regardless of how quickly the Fed pivots in 2024, and risk-adjusted returns for real estate debt are competitive versus equity. We are mindful of the history of public REIT performance after past episodes of sharp underperformance that left the sector cheap, and have managed the risk of being underweight by adding to passive public investments. In private markets—given debt overhang and the risk of slow appraisal adjustments—we prefer to pick our spots and focus on higher-growth strategies (like co-GP) or sectors (like industrial) with more constrained supply dynamics.



Source: Green Street Research as of 8/312023.



Conclusion

Among the many views on the many topics that the GEM team tests and retests, the four foregoing are some of the most hotly-debated at the moment. Each has a direct impact on how we will manage portfolio risk in the new year, and how the team will prioritize much of its time and attention. In these debates, we always emphasize rigor and clarity—the pursuit of long-term truth over everything else. The quality of an investment process is in the way a team takes in information and adjudicates it to develop a point of view on the right path forward. Controlled participation in the Al wave, caution and balance in China, targeted allocations to active strategies in Japan, and a deep strategy and subsector focus in real estate are the base cases in the new year.

As the economic environment evolves, as price shifts drive sentiment, as consensus swings from left to right and left again, it is easy to forget that the macro merely defines the backdrop for our investing. It is not how or why we invest, but the context. All of the most interesting long-range challenges of perpetual investing require thinking across time scales and enduring the kinds of cross-currents that strategists struggle to predict. We will seek to continue to execute on each client's behalf in 2024, expressing a disciplined set of judgments clearly and effectively.



About GEM

GEM is a leading provider of institutional investment solutions for endowments, foundations, sovereigns, families, and other long-term investors. Since 2007, GEM has specialized in delivering the highest quality service and support to our clients, enabling them to achieve their long-term investment goals. With a global reach, broad investment capabilities, and an experienced team, GEM strategically tailors solutions to meet the unique needs of each investor we serve. For more information, visit www.geminvestments.com.

Endnotes

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- ² Reuters, ChatGPT sets record for fastest-growing user base, February 2, 2023.
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- ⁴ Bloomberg.
- ⁵ Bloomberg.
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- ⁸ The Verge, <u>ChatGPT, Copilot, and Bard: How AI is rewriting the internet</u>, January 4, 2024.
- ⁹ GEM, Bloomberg, and Goldman Sachs as of 12/31/2023.
- ¹⁰ Business Insider, <u>Al's Growing Influence: Over 7,000 Mentions in Q2 Earnings Calls Boost Stocks</u>, September 5, 2023.
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