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LGIM America

Investment Outlook

The In-Between Time

Q4 2023

Macro Environment

Jason Shoup
Chief Investment Officer

“As the rates market fully embraces a soft or no landing scenario, paradoxically, the likelihood of a hard landing may be increasing.”

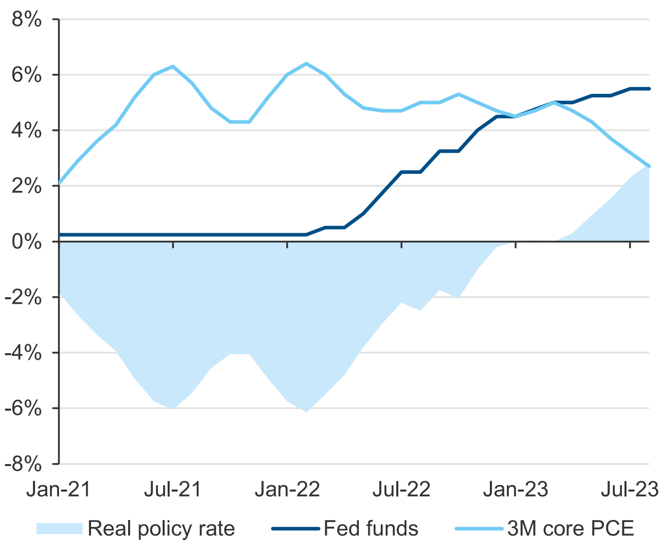
For a cycle that keeps zigging when investors expect it to zag, the past few months have not disappointed. On the surface, the US macroeconomic landscape has been as supportive as one could hope for, with growth surpassing projections and inflation remaining lower than anticipated. However, what should have been an ideal environment for risk assets instead produced the worst quarter of performance of the year. The primary culprit appears to be the rise in long-end Treasury yields. As investors seek to avoid a recession this year, they are awakening to the realization that “higher for longer” might not be just Fed rhetoric.

One explanation for the surge in long-term yields is the growing belief that the economic repercussions of tighter monetary policy are gradually fading. Empirical evidence suggests that monetary policy lags tend to be relatively short, often dissipating within two quarters. It is plausible that economy is now moving beyond the market shocks experienced last year. The unexpectedly robust gross domestic product (GDP) performance this year suggests that the economy is adapting to higher interest rates. Not only have the previous four quarters exceeded potential, but real-time indicators of third-quarter GDP are now indicating annualized growth of more than 4%.[1] Concurrently, the manufacturing sector appears to be on the mend, while the housing sector continues to hold steady in the face of significantly higher mortgage rates.

Despite the resilience demonstrated throughout this year, many remain skeptical that the US economy is completely out of the woods. There are two main reasons to worry that the lagged impact of tighter monetary policy has still yet to be fully realized.

First, monetary policy has only recently turned restrictive, at least by some measures. The Fed's policy rate only surpassed the trailing three-month core personal consumption expenditures (PCE) inflation rate at the start of the second quarter of this year (Figure 1). In other words, the real policy rate has only been in restrictive territory for just two quarters, and in very restrictive territory for merely the last three months. While financial conditions appear to have eased this year, as indicated by the performance of risk assets, if the real policy rate is what truly matters, the drag on economic growth may still be looming on the horizon.

Figure 1 – Real policy rate



Source: Bloomberg. Data as of August 30, 2023.

The second cause for skepticism stems from the unprecedented nature of the post-pandemic economy, rendering historical comparisons less relevant. As well-documented, consumers entered this tightening cycle with substantial excess savings accumulated during the pandemic. Moreover, they were able to refinance their mortgages at rates below 3% just a few years ago. Similarly, companies have displayed remarkable resilience in the face of higher rates, with only those reliant on floating-rate bank debt witnessing a significant increase in interest costs thus far. Finally, it appears that much of the legislation aimed at creating more resilient supply chains after the pandemic has resulted in an unexpected fiscal tailwind this year, contributing to a corresponding deterioration in the US deficit. Consequently, the argument is that the impact of tighter monetary policy has been temporarily obscured by government spending, and it is only a matter of time until consumers and corporates alike exhaust the buffers established during the pandemic.

However, the mistake may lie in assuming that only one perspective on monetary lags is accurate by treating them as mutually exclusive. A better framework likely acknowledges that monetary policy operates through both short and long lags. When viewed in this light, the US economy looks to be in the period after the short lags have hit but before the longer lags have fully manifested. What markets will do during this in-between time and how long it may last is very difficult to predict. The answers will likely depend on when the longer lags materialize and whether they are correlated with each other. If consumers start to falter at the same time the housing and corporate sectors begin to buckle under higher interest rates, then a recession may become unavoidable.

Meanwhile, the in-between time seems to be a period where monetary policy may appear to have less of an immediate impact on the economy. The recent strength in the labor market is a case in point. Similarly, investors should be prepared for the possibility that the pace of disinflation may slow or even reverse in the coming months. At the very least, the in-between time can create the impression among investors that the economy can endure and adapt to monetary policy at current levels. However, until the long lags come into effect, it seems premature to draw this conclusion.

Nevertheless, a peculiar circularity pervades the markets as we approach year-end. The rise in long-term yields suggests that an increasing number of investors are discounting the possibility of long lags significantly impacting growth next year. Yet, as yields rise, much of this year's easing in broad financial conditions is being undone: equities are well off their mid-year highs, the dollar has appreciated once again, commercial real estate is facing renewed pressure, and mortgage rates have taken another upward turn. These moves risk reintroducing another round of shorter lag impacts to growth, in addition to the longer lags that have yet to appear. In other words, as the rates market fully embraces a soft or no landing scenario, paradoxically, the likelihood of a hard landing may be increasing.

Pension Solutions Monitor[2]

Chris Wroblewski, CFA
Co-head of Solutions Strategy

"US pension funding ratios decreased over the third quarter of 2023."

Our analysis of market movements impacting US corporate defined benefit pension plan leads us to estimate that pension funding ratios decreased over the third quarter of 2023. Based on market movements, the average funding ratio is estimated to have decreased from 103.5% to 102.6%.

Equity markets experienced weak performance over the quarter with both Global Equities[3] and the S&P 500 decreasing roughly 3.3%. Plan discount rates[4] were estimated to have increased approximately 72 basis points over the quarter with the Treasury component increasing 85 basis points and the credit component tightening 13 basis points. Plan assets with a traditional "50/50" asset allocation decreased 6.35%. The weak asset performance along with the decrease in liability values resulted in a 0.85% decrease in funding ratios over the third quarter of 2023.

The theme of higher Treasury yields continued in the third quarter. In contrast to much of 2023, equities were weaker throughout the quarter, resulting in modest declines to the average funding ratio. We continue to see heightened demand for custom hedging strategies as a tool to lock in funded status gains. Given elevated uncertainty ahead across the macro landscape, there has been an uptick in interest in end-game strategies as well as custom LDI solutions to minimize interest rate and equity risk. Plan sponsors continue to explore short and intermediate duration strategies to better align with falling liability durations. We've also seen many plans elect to transition from a blunt hedging approach to a more refined, completion management approach in hopes of reducing the potential tracking error due to interest rate risk.

The Pension Solutions Monitor now assumes a typical liability profile using an approximate duration of 12 years and a 50% MSCI AC World Total Gross Index / 50% Bloomberg US Long Government/Credit Index investment strategy. Our analysis incorporates data from LGIM America research, ICE indices and Bloomberg.

Pension funded status market summary:

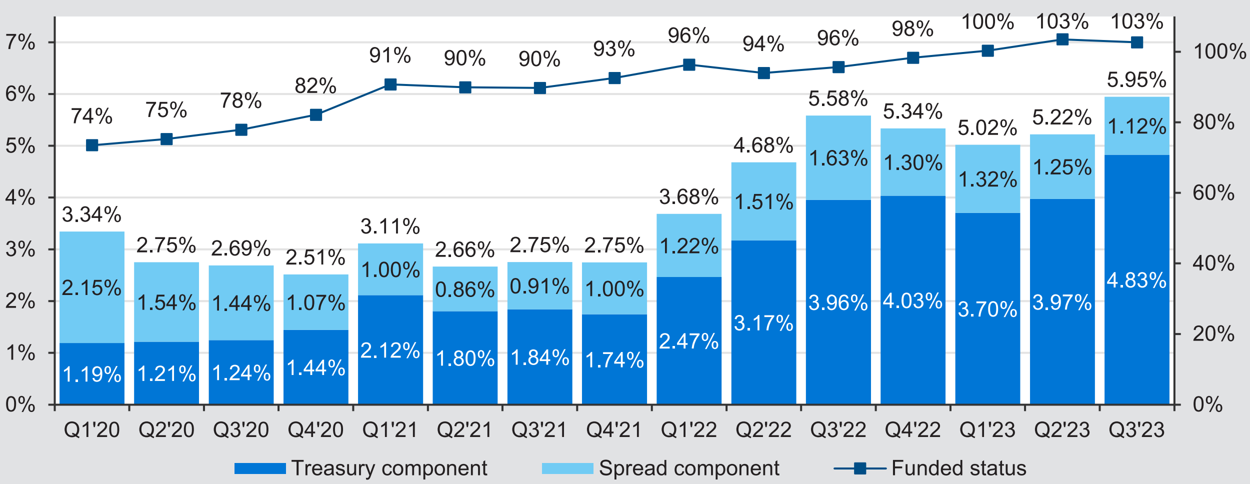
- Equity markets delivered weak performance with Global Equities and the S&P 500 down over the quarter.
- Plan liabilities decreased due to higher discount rates.
- Funding ratio levels decreased as the fall in assets outweighed the drop in liabilities.

Funded status risk - Q3 2023

Equities	↓
Interest rates	↑
Credit spreads	↓

Sources: LGIM America, ICE indices and Bloomberg. Data as of September 30, 2023.

Figure 2 – Discount rates



Sources: LGIM America, ICE indices and Bloomberg. Data as of September 30, 2023.

Fixed Income Markets

Anthony Woodside, CFA, FRM
Head of US Fixed Income Strategy

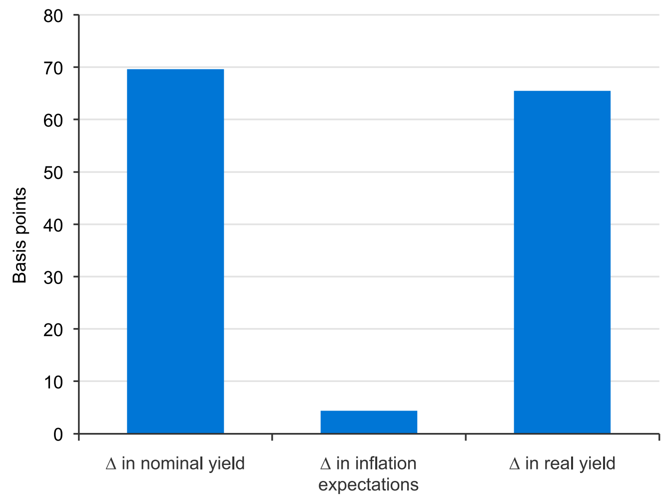
"In investment grade credit, we remain modestly defensive as spreads are now tighter than before the cycle began while downside risks have proliferated."

As we cross the threshold from summer and proceed towards winter's embrace, we are reminded that our perception of the weather can rarely be divorced from the influence of context. Indeed, on the heels of a scorching summer, a temperature of sixty degrees often summons jackets from hibernation, while the same reading tends to produce the opposite effect following a grueling winter. Similarly, as the seasons of economic policy change from an ultra-accommodative to a restrictive backdrop, market participants have been left to ponder whether the economy has already acclimated to "higher for longer" or whether hot economic data is poised to turn frigid as policy lags recede. With the peak in the Fed's (and other global central banks') tightening cycle now in sight, risk asset valuations suggest that a soft landing is largely priced in. However, with downside risks increasing, should investors reassess the risk premiums they require in an environment of elevated uncertainty?

The Fed resumed hiking in the third quarter, raising its policy rate by 25 basis points to 5.50%.[1] Moreover, the central bank's latest dot plot continued to signal an additional 25 basis points hike this year, while its median dot for 2024 rose from 4.6% to 5.1%, implying that the Federal Open Market Committee (FOMC) expects to cut rates by only 50 basis points next year as opposed to roughly 100 basis points implied by its previous forecast.[1] Investors have clearly embraced the "higher for longer" theme, as evidenced by expectations for the policy rate significantly exceeding the Fed's projections by the end of 2026 (roughly 4% vs. 2.9%).

Price action in rates garnered much of the spotlight this past quarter as yields surged on elevated deficits, increased supply and ongoing economic resilience. 2-year yields rose 15 basis points, while 10- and 30-year yields jumped by 73 and 84 basis points, respectively.[1] Real yields have accounted for over ninety percent of the advance in long-end rates, while inflation expectations have been broadly stable (Figure 3). Furthermore, the spread between 10-year and 2-year maturities dis-inverted by nearly 60 basis, with the bulk of the move transpiring over the last month.[1]

Figure 3 – Decomposing the YTD move in 10-year yields – Real yields have led the way

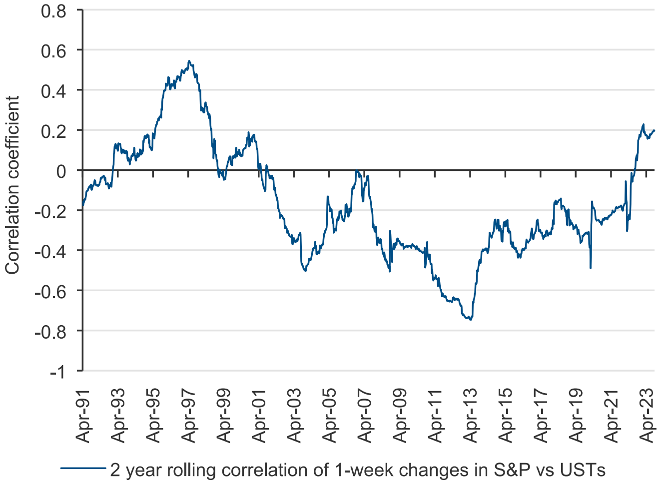


Source: Bloomberg. Data range begins on December 20, 2022 though September 29, 2023.

Despite increased rates volatility and weakness in equities, corporate credit remained resilient. Total returns for investment grade credit were negative yet again, owing to the sharp increase in yields, but excess returns were positive as market and long credit spreads tightened 2 and 14 basis points, respectively.[1] The outperformance of long-dated credit has been fueled by a lack of supply as companies have shied away from locking in higher coupons over the long-term. In contrast, high yield credit posted positive total and excess returns as attractive all-in yields and limited issuance continued to serve as tailwinds for the asset class.

The conventional path to recession has been widely chronicled over the past year. In the lead-up to recession, the yield curve typically flattens and then inverts before ultimately bull steepening once the market prices in rate cuts as the economy loses momentum. Unsurprisingly, the rapid dis-inversion has reinvigorated the hard landing camp, but we argue that such enthusiasm should be tempered as the move deviates from the blueprint in a fundamental way. Specifically, the steepening of the curve has been led by an increase in long-end rates, suggesting that investors are expecting either an economic re-acceleration and/or demanding higher term premiums given increased uncertainty around inflation and the stock-bond correlation (Figure 3). This nuance is yet another twist from a business cycle that has been defined by misdirection and false alarms.

Figure 3 – The stock bond correlation has turned positive



Source: Bloomberg. Data as of October 13, 2023.

Over the last few years, vulnerabilities in developed markets have been masked by a heavy dosage of monetary and fiscal sedatives administered during the pandemic. However, we see mounting evidence the credit cycle is deteriorating as economies are weaned off policy stimulus. In investment grade credit, rating outlooks are now skewed towards downgrades after an extended period of positive ratings momentum. Moreover, delinquencies in credit cards and auto loans are on the rise, while defaults in both high-yield and leveraged loans continue to climb higher. While the housing market showed signs of bottoming earlier this year, homebuilder sentiment has reversed its recent gains as the rate on 30-year fixed mortgages has continued its ascent towards 8%. The effective rate of interest on mortgage debt outstanding is only roughly 4%, but affordability for new homebuyers is at the worst level in decades and home purchase applications have plummeted as a result. We acknowledge that the prevalence of fixed-rate obligations amongst households and corporates has helped the US economy outperform its developed market peers during this synchronized hiking cycle, but we caution that refinancing risks will become more pronounced over the next 12-18 months. For reference, more than $1.6 trillion in US corporate debt (roughly 7% of GDP) is set to mature by the end of 2025.[5] Rounding out this wall of worry is our view that regional bank and commercial real estate issues are far from resolved.

In investment grade credit, we remain modestly defensive as spreads are now tighter than before the cycle began, while downside risks have proliferated. In terms of sectors, we view utilities as an attractive overweight irrespective of the macro view, and we expect sovereign spreads to widen when economic data starts to roll over. In rates, we are leaning towards turning constructive on duration as risk-free rates at the highest levels in over a decade (and real yields in excess of 2%) offer diversification against slowing growth and escalating geopolitical risks.

Soft landing advocates argue that macro imbalances look relatively benign compared to periods leading up to historical downturns. Certainly, debt-servicing ratios appear manageable across both households and corporates. However, just as the performance of the S&P 500 has significantly outpaced the equal-weighted version of the index, so have aggregate corporate metrics obscured the dispersion that lies beneath the surface. With central banks intent on achieving victory over inflation, laggards are likely to be exposed as policy continues to normalize. Hence, prudent security selection and a more tactical approach to investing will be critical going forward. Just as we adjust our attire to changing temperatures, investors must adapt to the varying climates of the financial world. Like falling temperatures, cooling economic data is a harbinger that winter is coming. The crucial question for investors is whether this year's iteration will be relatively mild or significantly more severe.

Equity Markets

Dave Chapman, CFA
Head of Portfolio Solutions

"Dynamics under the surface of index-level performance illuminate market expectations and related implications for prospective risks."

Equity markets are in their own "in-between time," listless from being neither loved nor loathed and remaining fully captive to the dominant macro narrative Jason described. A decline of 3-4% for the quarter across many broad domestic and global indices is not an aberration against the backdrop of rising rates and their potential to restrict growth. However, dynamics under the surface of index-level performance illuminate market expectations and related implications for prospective risks.

For additional context, we segment quarterly gross domestic product (GDP) data since 1990 (133 observations) relative to trend growth. We can parse this data even more finely based on whether the annualized quarterly real GDP change was accelerating or decelerating versus the year prior. The distribution of quarters is shown in Figure 5. (The relatively high proportion of above-trend growth is attributable primarily to periods following a severe contraction and the productivity boom of the late-90s.)

Figure 5 – Acceleration/deceleration of annualized quarterly real GDP changes

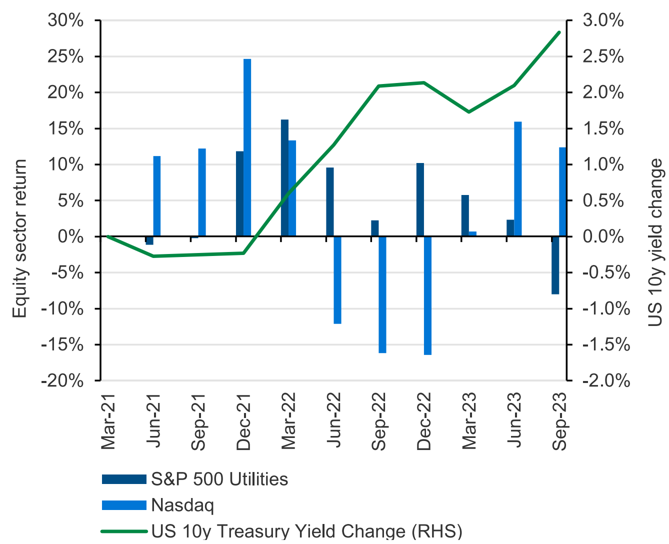
	Declining	Accelerating	All periods
Severe contraction	5%	0%	5%
Mild contraction	8%	0%	8%
Slow growth	14%	2%	15%
Trend growth	17%	12%	29%
Above-trend growth	9%	35%	44%
	51%	49%	

Source: Bloomberg, LGIM America calculations. Data from September 30, 1990, through September 30, 2023. GDP measure is the real growth quarter-over-quarter, annualized, seasonally adjusted rate. Trend growth is defined as c. 2.5% p.a. according to LGIM America.

We then turn our attention to the longest duration (i.e., theoretically most interest rate sensitive) segments of the equity market: utilities and technology. Utilities have steady but low-growth cash flows (not unlike bonds), while high-growth tech firms are typically assumed to have more of their cash flow far in the future. These sectors should therefore be most sensitive to discount rates, all else equal.

What follows next holds true regardless of whether we use nominal or real rates as our independent variable, which is very convenient given the real rates-driven impulse recently. Across all environments like the current one of steady-to-declining growth around trend, utilities have exhibited a strongly negative correlation to changes in US 10-year rates, while technology has been relatively ambivalent. Our interpretation is that while both sectors should be relatively rate-sensitive, expectations for growth dominate discount rate effects for technology. Therefore, understanding the relative performance of both sectors can help us comprehend the evolution of the current macro narrative and which sector is currently receiving more attention.

Figure 6 – Sector performance vs Rate changes



Source: Bloomberg and LGIM America calculations. Data as of September 30, 2023.

We observed strong returns for both sectors in 2021, while rates remained low and relatively unchanged. In 2022, we saw the beginning of the sharp upturn in rates, which coincided with very weak quarterly performance of technology, while utilities returns remained quite robust. Finally, as rates have taken another leg higher over the past two quarters, we've seen another rotation with technology returns roaring back and utilities fading.

The evolution of sector returns since 2022 is consistent with initial growth fears and consensus calls for a recession that have been pushed back quarter after quarter. The growth narrative dominated the rise in rates in 2022, creating a defensive sector rotation that supported utilities despite the rise in rates. More recently, though, the positive returns to technology seem to indicate comfort with a soft landing—that the economy and markets have successfully digested higher rates and are comfortable with "higher for longer." Then, in line with tradition, utilities have unwound some of their strong 2022 gains during this second leg up in rates.

We would argue, though, that the importance of these sector dynamics is being lost in the noise in a couple of important ways. First, one-dimensional arguments about whether inflation, growth or the level of rates are driving the market can all be settled with a gentle shrug and acknowledging, "Yes." Instead, we should focus on the relative weight the market is giving to various macro dynamics. To us, recent performance demonstrates more of a focus on the path for growth than the level or path for rates. The risk to the growth narrative, of course, lies in equity valuations, which we have attacked in a few of our recent quarterly publications. Equities, and especially leading sectors like technology, are priced practically for perfection. To the extent growth expectations are lowered or priced out, especially if rates remain high or continue higher, high valuation equities are particularly at risk. Our outlook for returns remains bleak.

The other important takeaway is that these competing narratives are resulting in higher sector performance dispersion, which subdues realized volatility. Commensurately, we've seen implied volatilities troughing in Q3, exhibiting a less common "spot down, vol down" dynamic. In other words, vols were sold on days the market went down (e.g., "buy the dip," eagerness to monetize hedges, short vol carry, etc.) and bought on days the market went up (e.g., upside chase, long vol gamma). As of writing, this mean-reverting contribution from option market participants appears to have faded, potentially removing some marginal support for equities from the derivatives market. Meanwhile, favorable dynamics related to forward equity prices and reasonable implied volatility persist, supporting favorable entries for protective structures (e.g., put spread collars), as we've mentioned previously. Thus, combining those pervasive dynamics with a recent spot/vol correlation pivot may provide even more relative value to long-term hedges.

Real Assets

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Dan Dreher
Solutions Strategist

"The data volumes and computing power required for AI are likely to boost the prospects for data centers and renewable electricity generation."

Infrastructure and real estate can generate long-term, sometimes counter-cyclical income streams when there are structural imbalances in supply and demand. We believe the widespread adoption of artificial intelligence (AI) will trigger such a shift in demand.

This is likely to create equity and debt investment opportunities, alongside potential operational efficiencies in the management of existing assets. While some of the longer-term consequences of AI adoption are uncertain, from a real assets perspective there are three outcomes in which we have high conviction:

1. A rapid increase in requirements for data processing and storage facilities.
2. Substantial additions and upgrades to digital infrastructure networks.
3. Increased electricity generation, storage and distribution requirements.

Data centers and renewable energy

We expect a material positive impact on the investment prospects for data centers and renewable electricity generation.[6] The computing power and data volumes required for AI is significantly greater than for other digital tasks.

AI applications typically use around 30kW of power per rack, according to Knight Frank, whereas more traditional data center racks need 8-10 kW.[7,8] This thirst for greater computing power nets out to greater physical space requirements: Green Street reported record-breaking demand for data center space in the second quarter of this year.

We anticipate that it will be challenging for supply to keep pace with this growing demand. For instance, plans to transition US data centers to renewable energy sources are impeded by current utility transmission infrastructure. The main problems are outdated power lines, delays in planning and permitting for new transmission and distribution projects, and supply chain bottlenecks. Similar dynamics have taken hold in Europe - power constraints are already restricting data center development in Frankfurt, Germany, while increased planning hurdles are likely to emerge as local authorities seek to understand these large sites with comparatively low employment density. Increased space demands combined with restrictions around new supply are likely to create favorable supply and demand dynamics, supporting rental growth.

Data centers do have negative environmental externalities, with their networks estimated to account for 1.5% of global electricity use in 2022, despite the sector remaining in its infancy.[9] The International Energy Agency highlights the materiality of the potential future electricity requirements of the sector, for example noting that data centers accounted for 18% of Ireland's electricity consumption in 2022, with the potential to increase to 28% by 2031.

To support the rollout of AI without undermining the transition to net-zero carbon emissions, data centers will likely require further efficiency improvements alongside increased renewable energy generation. Modern data centers have already made substantial improvements in energy efficiency, and we expect the sector to continue to innovate to contain the growth in energy demands. The growth in data usage and storage, turbocharged by generative AI, represents a tailwind in support of further investment to upgrade digital and renewable energy infrastructure networks. The potentially huge sums involved could, in turn, lead to lending opportunities within private credit.

High-quality, human environments

Perhaps counter-intuitively, more automation of analytical and clerical processes through AI may, in our view, increase the value associated with creativity, idea generation and human interaction. While there might be some negative implications for overall office demand, we think AI could increase the focus on high-quality spaces, be it best-in-class offices or leisure and hospitality environments.

We note that leisure has grown as a proportion of consumer spending over the past decade, despite a concurrent rapid growth in digital connectivity and usage, reflecting the continued value of social spaces within a more digital world.[10]

All this said, we should not underestimate the risks associated with AI – notably around data security, the potential displacement of workforces and the environmental costs of increased power requirements not being met by equivalent increases in clear energy generation. However, we see AI as a material trend with upside potential for productivity and growth, creating new investment opportunities within the real assets universe.

1. Source: Bloomberg
2. For illustrative purposes only. LGIM America prepares the Pension Solutions Monitor data assuming a typical liability profile using an approximate duration of 12 years and a 50% MSCI AC World Total Gross Index / 50% Bloomberg US Long Government/Credit Index investment strategy, incorporating data sourced from LGIM America, ICE, MSCI and Bloomberg. These results are based on simulated or hypothetical assumptions that have certain inherent limitations. Unlike the results in an actual performance record, these results do not represent actual trading. Because these trades have not actually been executed, these results may have under- or over-compensated for the impact, if any, of certain market factors, such as lack of liquidity. Simulated or hypothetical trading programs in general are also subject to the fact that they are designed with the benefit of hindsight. No representation is being made that any account will or is likely to achieve profits or losses similar to these being shown.
3. "Global equities" referred to here is represented by the MSCI AC World Total Gross Index.
4. Discount rates based on a blend of the Intercontinental Exchange Mature US Pension Plan AAA-A and Intercontinental Exchange Retired US Pension Plan AAA-A discount curves.
5. TS Lombard: How close is the next credit event? As of October 12, 2023.
6. Data centers are facilities designed to house and operate critical computing infrastructure that organisations use to assemble, process and store large amounts of data. AI use requires different cooling technology to 'normal' data storage and there are therefore building specification implications.
7. A data center rack is a physical steel and electronic framework that houses data servers, networking devices, cables and other computing equipment.
8. Jennifer Townsend. "Real Estate and Artificial Intelligence Clusters." Global Real Estate Consultants, Knight Frank, www.knightfrank.com/research/article/2023-09-13-real-estate-and-artificial-intelligence-clusters.
9. IEA, July 2023
10. For the Fun of It: The Evolution of Leisure Spending, Visa, usa.visa.com/partner-with-us/visa-consulting-analytics/economic-insights/for-the-fun-of-it-the-evolution-of-leisure-spending.html.

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