Morgan Stanley

WEALTH MANAGEMENT

INVESTMENT STRATEGY

Global Investment Committee | July 2024

On the Markets

Halftime Show and the Music Plays On

Lisa Shalett
Chief Investment Officer
Head of the Global Investment Office
Morgan Stanley Wealth Management

Daniel Skelly
Senior Investment Strategist
Morgan Stanley Wealth Management

Closing the books on the first half, the S&P 500 Index sits just below another all-time high following its 12th best start to a year since 1950. Given precedent around trend persistence, especially in presidential election years, this suggests a sanguine full-year outlook. But this bull run, like this economic cycle, is atypical in so many ways that forecasting with confidence borders dangerously on hubris.

Consider that the aggregate headline of the US economy continues to suggest robust nominal GDP growth (14 quarters above 5% annualized), reasonably low unemployment (4%), positive real income growth and slowly declining inflation; yet two-thirds of consumers and most small businesses are exhibiting signs of stress and weak confidence. While new and existing home sales are falling, the average price is still rising more than 6% per year, and owner-occupied rents have failed to decline. Despite 550 basis points of rate hikes and more than $1 trillion in quantitative tightening, US financial conditions remain as accommodative as ever, raising genuine questions about the policy transmission mechanism and whether the Federal Reserve really has control in a world characterized by extreme wealth concentration, shadow banking and fiscal predominance. Equally perplexing, rarely have markets been so expensive—absolutely and relative to US Treasuries—or so disconnected from economic surprises and the level and direction of interest rates. Rarely has a bull market experienced such an uninterrupted string of all-time highs amid severely deteriorating breadth and limited participation from small-cap stocks. And rarely have the top-10 stocks accounted for more than 35% of total S&P 500 market cap, with those companies all now declaring their fortunes tied to the promise of generative artificial intelligence (AI.) Further complicating the outlook, technical indicators signify complacency, with realized and implied volatility below average, put/call ratios at their long-run averages and short interest benign.

While an expected return to margin expansion and resultant acceleration in year-over-year profit growth may play out—driving further equity gains in the second half—the Global Investment Committee is proceeding with caution. In fact, we anticipate a material pickup in volatility as "known unknowns" around monetary and fiscal policy, domestic politics and electoral and geopolitical outcomes are slowly revealed. We lean into balance and diversification, with a preference for quality, earnings achievability and reasonable valuation. Risk demands compensation. ■

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US EQUITIES

Look to Quality Value Ahead of Market Broadening

Daniel Skelly, Senior Investment Strategist, Morgan Stanley Wealth Management

So far this year, shifting interest rate narratives, dominant technology sector earnings leadership and fervor around the potential for artificial intelligence (AI) to transform the economy have fostered an extremely narrow equity market. Indeed, for the year to date, five tech companies accounted for roughly 60% of the S&P 500 Index's 15.3% first-half total return. Even as the market made new highs in June, only 30 stocks hit new peaks.

That said, we see two primary reasons why markets will eventually broaden out this year and into 2025: 1) Federal Reserve rate cuts amid economic growth (consistent with the base case view of Morgan Stanley & Co.'s chief US economist, Ellen Zentner) should drive interest in more cyclical and value-oriented sectors; 2) according to consensus estimates, during the second half of 2024, the earnings growth of the "Magnificent Seven" should start to slow versus that of virtually all other stocks, i.e., the S&P 493. This dynamic will shine a light on the idea that companies outside the AI-centric names also offer earnings growth. Furthermore, it favors positioning in reasonably valued stocks that can deliver on more modest expectations in the second half of 2025, which is consistent with the preference of Morgan Stanley Wealth Management's chief investment officer and head of the Global Investment Office, Lisa Shalett.

In addition to concentrating on economic and earnings trends, in the coming months, investors will likely focus more on election scenarios and the question of whether or not tremendous AI spending will actually drive stronger earnings for its adopters. Outcomes around those topics could meaningfully affect interest rates, style rotation and investor sentiment. While concerns around AI adoption and potential election-year impacts have so far offered limited visibility, we have enough conviction in the first two catalysts to begin positioning portfolios for a broadening out to more value-oriented segments.

Having said that, it's important to avoid favoring stocks purely based on valuation and crucial to select quality names that enjoy *both* long-term secular drivers and the potential for near-term upside from declining rates or cyclical recovery in their end markets.

Notably, if Ellen's projection for seven rate cuts over the next 18 months plays out, the terminal fed funds rate will be approximately 3.0%. Adding a 50-100 basis point term premium to the 10-year US Treasury yield implies a level of roughly 4.0%. It also implies that there is a real cost of capital post-COVID and that the resting heart rate for financing costs is higher in this cycle than it was during the years following 2008. As such, we believe it's even more important to own quality value stocks with strong cash flows and longer-term structural growth drivers that can outperform in a challenging environment.

Within this category, we believe four investable themes stand out for the next six to 12 months:

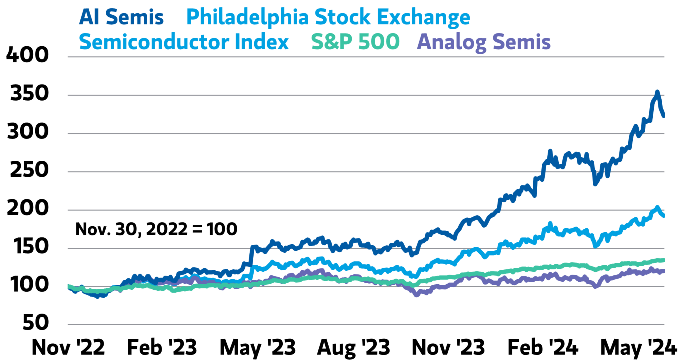
SELECT COMMERCIAL REAL ESTATE. While the 19% national office vacancy rate reflects changing approaches to work amid the commercial real estate sea change, we view sectors such as industrial, data center, multifamily rental and senior housing as longer-term opportunities. Given high interest rate sensitivity, the potential start of Fed rate cuts is the key catalyst for commercial real estate companies in general.

Longer term, industrial players should continue to benefit from reshoring and potential data center conversion amid significant AI spending. While lower rates should improve home ownership potential, there is still a major supply issue stemming from a lack of post-2008 capacity expansion, with multifamily rental thus offering an interesting opportunity. As the baby boomer generation reaches retirement, senior-housing-related assets offer longer-term potential. Last, a concurrent structural theme is rising access to private real estate investment vehicles themselves. As Morgan Stanley & Co. Research financials analyst Michael Cyprys argues, democratization of alternative categories in general is real and here to stay, and the megatrend is intact for retail allocations to rise from low single digits to upward of roughly 15%.

ANALOG SEMICONDUCTORS. While AI-related semiconductor stocks have led not only the tech sector, but the market overall (see chart), we see emerging opportunity in other areas of the semi space. Recent earnings results across a host of analog semiconductor firms suggest that the two-year-plus downcycle in analog semis, the longest in history, may have bottomed, as industrials and analog demand improves. MS & Co. Research semiconductors analyst Joe Moore sees improving survey demand data for analog products, peaking inventory depletions and better global industrial order trends supporting this outlook.

Longer term, the structural case for increasing content in autos, automation within the factory, and data center power management and testing capabilities all support analog semis.

AI-Related Semiconductor Stocks Have Outperformed



Note: Digital and analog semis include stocks of companies that primarily produce those respective semiconductors. Source: Bloomberg, Morgan Stanley Wealth Management Global Investment Office as of June 24, 2024

CELL PHONE TOWER OPERATORS. The leading cell phone tower operators have lagged over the past two years, given rising interest rates and peaking carrier leasing related to the 5G upgrade cycle. In the near term, declining interest rates should offer relief for the businesses, as they generally carry high leverage. Additionally, MS & Co. Research telecom analyst Simon Flannery sees recent signs of higher telecom carrier capex, suggesting the start of a new cell tower spending upcycle.

Longer term, as mobile data use continues its multiyear expansion, tower stocks should benefit. Additionally, as AI training and activity move to devices from the data center, and applications shift from text and image creation toward video, we anticipate growing demand for cell phone tower capacity.

LIFE SCIENCES TOOLS. High rates have certainly been a drag on biotech and biopharma funding, which are important drivers for the life sciences tools companies. Additionally, recent fundamental headwinds have included peaking COVID testing demand and a slowdown in China, which was previously an outsize growth driver for the tools industry.

In the near term, if rates have peaked and China growth stabilizes, we see potential for stronger biopharma spending. Over the longer term, these businesses should see strong benefits from adopting AI. Indeed, a recent MS & Co. Research thematic report positioned life sciences tools at the forefront of AI adoption, given next-generation sequencing and the broader digitalization of health care data. The unique data sets provided by life sciences tools, coupled with AI enhancement, will help build new products, realize lab and other operational efficiencies and eventually democratize the adoption of personalized medicine and improve care. ■

ENERGY

A Nuclear Renaissance Is Coming

Tim Chan, CFA, Equity Strategist, Morgan Stanley Asia Limited+

Nuclear power remains divisive. High construction costs—as well as political sensitivity and concerns about waste and safety—mean that it is likely to remain a binary issue for many markets. Even so, it's making a comeback. Before the Fukushima accident, it accounted for 15% of electricity globally. While that dropped to as low as 12% in 2022, in our view, nuclear is set to play a key role in meeting energy needs. We expect it to supply as much as 17% of global electricity by 2050.

We estimate that this nuclear renaissance will be worth $1.5 trillion through 2050 in the form of capital investment in new capacity. This assumes that there will be 383.5 gigawatts (GW) of nuclear capacity added globally—roughly equal to the current global capacity of 390 GW. By our estimates, the growth will be led by China, with some 168 GW, and the US, with 50 GW. China is also likely to lead on the basis of investment in nuclear, at $470 billion, followed by the US, at $250 billion, and the EU, at $197 billion. In addition, $128 million will be required annually to maintain the new capacity.

CHINA TO LEAD. Total current capacity in China is 57 GW, but we expect this to reach 70 GW by 2025, and 150 GW by 2035, which is about 10% of total energy supply. By 2060, nuclear is likely to account for 18%, according to the China Nuclear Association. Total nuclear capacity under construction, planned or proposed in China is 261 GW. This figure represents half of the global nuclear capacity in similar stages, which amounts to 520 GW. Out of the 261 GW, our base case is that China will realize 168 GW of new capacity.

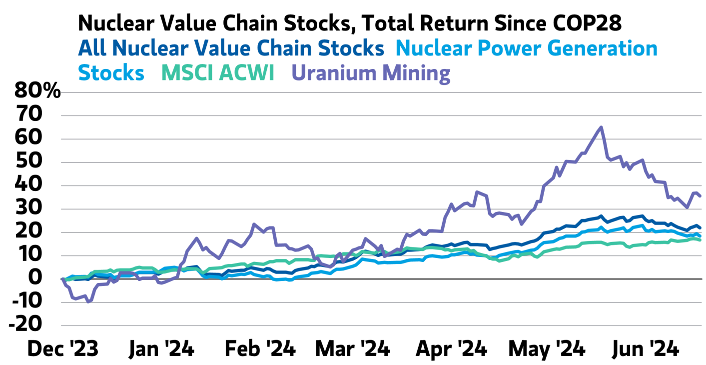
The US may surprise to the upside if it meets its COP28 target (COP28 refers to the 28th UN Climate Change Conference, or Conference of the Parties). During the COP28 meeting, more than 20 countries, including the US, Canada and France, joined a multinational declaration to triple nuclear power capacity by 2050, using 2020 as a baseline. Investors are paying attention: Since the meeting, which concluded last December, the "nuclear value chain" stocks identified by Morgan Stanley & Co. Research have outperformed the MSCI All Country World Index (see chart).

TRIPLING US CAPACITY. This year, a new nuclear power plant was completed in Georgia, the first built in the US in more than 30 years. Beyond this, however, we haven't seen a strong pipeline for large-scale nuclear plants in the US, according to the World Nuclear Association. For the US to triple its nuclear capacity from about 100 GW, it must build 200 GW more capacity. In our nuclear renaissance scenario, we assume only 50 GW will be built, considering the improved viability of other clean energy options, construction delays and cost overruns. But there is still upside if the US is able to meet its target to build approximately 150 GW more. If no large-scale reactors are to be built, it will depend a lot on the development of small modular reactors (SMR).

The nuclear renaissance intersects with the development of generative artificial intelligence too. Nuclear power generators offer a unique opportunity to locate data centers on site and provide consistent, uninterrupted power without external connections. This would lower data center power costs by eliminating or reducing transmission and distribution charges.

FINANCING. The financial hurdles for the nuclear renaissance are significant. Governments may offer nuclear projects financial support through subsidies, while others may offer support via bond investments. We expect nuclear financing through green bonds to become increasingly common and accepted. For now, however, some investors still exclude nuclear from their portfolios. There are also meaningful challenges related to construction time, labor shortages and constraints on the availability of uranium. ■

Nuclear Value Chain Stocks Versus MSCI All Country World Index



Source: Bloomberg, Morgan Stanley & Co. Research, Morgan Stanley Wealth Management Global Investment Office as of June 21, 2024

This article was excerpted from the June 10, 2024 Morgan Stanley & Co. report "A Nuclear Renaissance Is Coming," combining input from various MS & Co. Research teams. For the full report, please contact your Financial Advisor.

GLOBAL CREDIT

AI and the Credit Markets

Vishwanath Tirupattur, Chief Fixed Income Strategist and Director of Quantitative Research, Morgan Stanley & Co. LLC

Technology diffusion driven by artificial intelligence (AI) has been a defining investment theme over the past few years, and recent developments in generative AI (GenAI) have the potential to bring transformational change across the economy. Our colleagues in equity research have taken the lead in sorting AI winners from losers through multiple lenses and across geographies. Meanwhile, as we learn how and in which industries AI will get deployed, as well as how long it will take to realize the benefits, our economists have explored its impact on labor and the economy, acknowledging that it's still early days. Here, we examine the role of credit markets.

AI's infrastructure requirements—semiconductor fabrication plants, data centers and energy resources—are enormous. Data centers house servers, storage devices, support-infrastructure and other equipment. Our analysts estimate that GenAI power demand will rise rapidly, reaching 224 terawatt-hours by 2027 in their base case. That's more than 75% of all global data center power use in 2022. AI data center infrastructure stock returns have far outpaced the broader equity market since 2023. While NVIDIA remains the poster child for AI infrastructure investment, our analysts have identified approximately another 80 names that are also involved in the build-out of AI data centers.

CAPEX NEEDS. It goes without saying that AI infrastructure will need substantial capex. Early on, much of it has been funded by a combination of venture capital and retained earnings from cash-rich technology companies, i.e., equity capital. As the focus shifts from early innovators and enablers to adopters, those needs are bound to grow significantly and will require more-efficient forms of capital. We think that credit markets in various forms—unsecured, secured, securitized and asset backed—will play a major role.

So far, debt financing has played a relatively small part in funding tech companies, especially AI beneficiaries. To illustrate, take two tech leaders, Apple and NVIDIA. The former is a tech stalwart with an emerging AI footprint, while the latter can be categorized primarily as an AI firm. Eleven years ago, Apple had virtually no corporate debt, but now it has about $100 billion of unsecured bonds. NVIDIA's outstanding debt amounts to one-tenth of Apple's.

TECH SECTOR DEBT CAPACITY. Despite credit growth in some names, the tech sector represents less than 10% of the Bloomberg Investment Grade Corporate Index, compared to more than 30% of the S&P 500 Index. In terms of credit quality, the tech sector ranks highest across the investment grade market, with an average rating of A2 from Moody's and A from Standard & Poor's. Net leverage is very low, at 0.82 times, while the median debt/enterprise value multiple is 11% versus 18% for the overall market. In other words, the sector has significant capacity to add debt without a material deterioration in credit metrics. This is complemented by an investor base with meaningful dry powder to absorb incremental issuance.

Of course, the story is not that simple. Cash-rich companies may not have a compelling need to access credit markets if the equity market continues to reward redirection of free cash flow. To the extent that debt financing is needed, there will also likely be push and pull between private placements and secured and unsecured debt. The path of the rates market will also matter, and as monetary policy eases, cost of debt becomes more attractive. It's clearly early innings, but credit markets holistically should play a bigger role as the cycle matures.

In addition, as the capex cycle broadens out from enablers to adopters, we note that most sectors are not as cash-rich as tech. While the median cash-to-debt ratio for the tech sector is over 50%, it's close to 15% for the remaining sectors.

NOT JUST CORPORATES. Financing for AI infrastructure, particularly data centers, will not come from corporate credit markets alone. Data centers can be owned by the companies using them or by an operator that leases space to them. The data centers themselves and/or the tenant lease payments can be treated as underlying collateral to access securitization markets. This is already happening. The first data center asset-backed security was issued in 2018, and the market, which has grown to over $20 billion, is poised for rapid expansion.

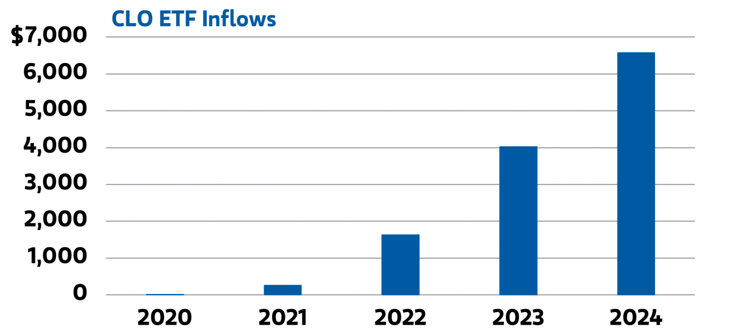
The bottom line: As AI-driven tech diffusion takes center stage, credit markets, broadly defined, will likely play a growing role. As always, there will be winners and losers, but for credit investors, AI as a theme is here to stay. ■

This article was excerpted from the June 16 Morgan Stanley & Co. report, "AI and the Credit Markets." For a copy of the full report, please contact your Financial Advisor.

Short Takes

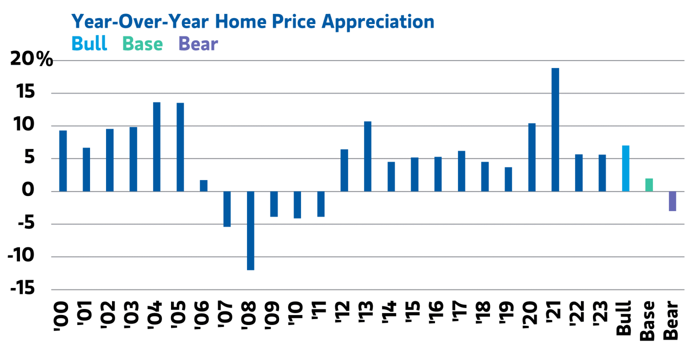
CLO ETF Sector Gaining Traction

Don't look now, but a previously under-the-radar segment of the exchange-traded fund (ETF) universe has emerged as a major asset gatherer in 2024. Collateralized loan obligation (CLO) ETFs have added $6.6 billion in assets across ten actively managed funds, following up on a strong 2023, as individuals have grown more comfortable with the underlying sector, which offers floating rates that have been beneficial in the current cycle and potentially low correlation to other assets. Institutional investors have been accessing the ETFs as well, especially the Janus Henderson AAA CLO ETF (JAAA), which is by far the largest of the group. Investors should note, however, that along with potentially favorable attributes, CLOs may frequently entail a combination of credit and interest rate-related risks.—*Michael Suchanick*



Source: Bloomberg, Morgan Stanley Wealth Management Global Investment office as of June 21, 2024

More Home Listings, Slower Price Ascent?

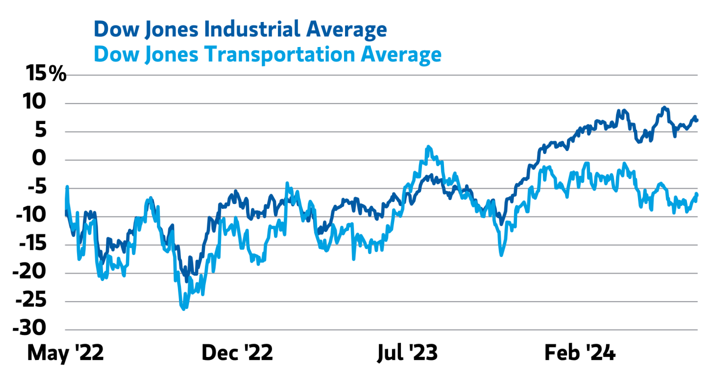


Note: Bull, Base and Bear cases indicate Morgan Stanley & Co. Research 2024 forecasts. Source: Case-Shiller, Morgan Stanley & Co. Research, Morgan Stanley Wealth Management Global Investment Office as of June 26, 2024

While home prices continue to set records amid tight supply, their ascent may stall if the Fed starts cutting rates, bringing more buyers and sellers to the market. Indeed, even before cuts have begun, annualized listings have grown five straight months, resulting in the most homes for sale since September 2022. Still, this comes as the number of homes for sale remains near a historic low. Morgan Stanley & Co. housing strategist James Egan argues that rising supply should slow price appreciation, but given his estimate of only 4.2 months of current supply and relatively strong demand response to recent dips in mortgage rates, he thinks year-over-year price appreciation will only moderate from its 6.4% rate to 2.0% by year-end 2024.—*Daniel Skelly*

Transportation Stocks Moving in Reverse

As major equity indexes continue to reach all-time highs, one narrower but closely watched index—the Dow Jones Transportation Average—may be suggesting caution. Many investors, especially technical analysts, have historically looked to the transportation gauge to confirm either an up or down trend in the broader Dow Jones Industrial Average based in part on breaching specific price levels, consistent with a Dow Theory analysis. Others, scrutinizing the index from a more fundamental macro standpoint, consider it to be a harbinger of economic activity, as it is comprises stocks of companies in economically sensitive industries, such as railroads, trucking and airlines. Based on the latter approach, recent Dow Jones Transportation Average performance may be especially concerning, given its 3.0% decline in 2024.—*Peter Winkler*



Source: Bloomberg, Morgan Stanley Wealth Management Global Investment Office as of June 27, 2024

CURRENCIES

King Dollar Lacks Challengers

James K. Lord, Head of FXEM Strategy, Morgan Stanley & Co. International plc+

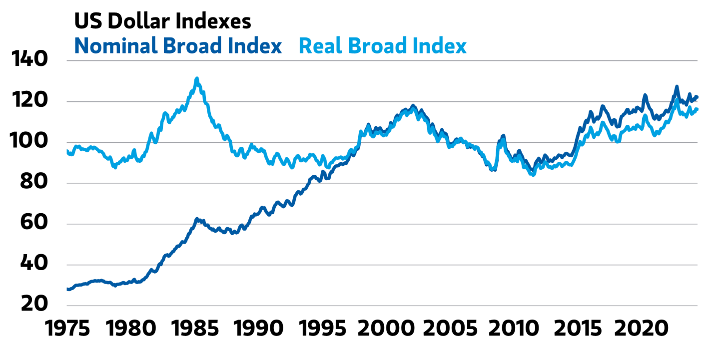
The US dollar's influence in the global economy is the subject of significant debate, with some predicting a reduced international role—and with it a bear market for the currency. We're far from convinced.

The stakes are high. The totality of external trade and finance is massive, as global foreign exchange reserves exceed $12 trillion, global trade is around $35 trillion and cross-border bank lending tops $38 trillion. So, even small changes in percentage terms can lead to large nominal changes.

MULTIPLE METRICS. The dollar's dominance and global influence are evident across multiple metrics—including central bank reserve allocations, global trade financing, foreign exchange activity, cross-border lending and debt issuance. Accounting for an average of 53% of the above metrics, the dollar's standing has remained unchallenged over the past decade. The euro is the second-most used reserve currency, but at less than half the rate of the dollar. The British pound accounts for about 5% of the above metrics. Having emerged as a global reserve currency in the 19th century, it started to fade in the wake of World War I when the dollar rose to prominence.

Continuing dominance, which drives additional external demand from foreign investors and traders, has helped to keep the dollar's value elevated in real and nominal terms (see chart). Put simply, when money changes hands across borders for trade or finance, the dollar is the currency most likely to be involved.

US Dollar Remains Close to Multi-Year Highs



Source: Federal Reserve, Morgan Stanley & Co. Research, Morgan Stanley Wealth Management Global Investment Office as of May 31, 2024

DOLLAR BULLS. In the short term, we are dollar bulls on account of the fundamentals of the US business cycle. US economic growth has moved to a higher plane in light of strong immigration, productivity and investment. The eurozone does not show a similar trend. And while China has become a global economic power, deterioration in its economic fundamentals will likely keep the Chinese renminbi from gaining much traction as a reserve currency.

We also believe that the dollar will receive secular support through future business cycles because of its reserve currency dominance. That doesn't mean that future business cycles couldn't prove negative for the dollar. They could, of course, particularly if valuations become more expensive in the short term. However, enduring reserve currency dominance should remain a structural source of strength.

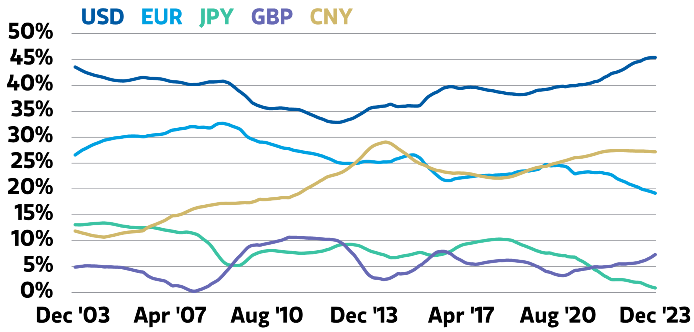
WRONGWAY CONSENSUS. Since around 2017, the consensus on the dollar has been bearish and largely wrong. We think it continues to be too bearish, mostly based on our more constructive short-term view on the US business cycle. To the extent that forecasts have been influenced by the debate around reserve currency status, we would push back. Indeed, from 2020 onward, the degree of bearishness around consensus dollar forecasts appears correlated with the frequency of media articles mentioning the dollar and its reserve currency status.

While concerns about the dollar's reserve currency status are unlikely to disappear entirely, recognition that there are no viable challenges to its status should help alleviate them. The US election campaign may offer a road test of issues related to the dollar's value and reserve currency status, such as fiscal sustainability and the Federal Reserve's independence. We think that the dollar's status as the dominant reserve asset will emerge intact, but there are risks to its value—for instance, should markets intuit a more dovish path for the Fed.

OVERBLOWN CRITIQUES. Critics argue that foreigners' willingness to hold dollars and use them for external trade and finance is not limitless. A rising debt/GDP outlook, increased perceived political uncertainty from debt ceiling and budget negotiations, and persistent use of economic sanctions are all cited as rationales to find an alternative to "King Dollar's" dominance. It's not to say that this issue is unimportant or that the dollar can't decline. But we think that investment theses chiefly based on the notion that the dollar will lose its dominant status are likely overblown.

While a true loss of dollar dominance would lead to higher rates and a weaker currency, we only expect a moderate and gradual decline in the greenback's international use, given the rise in multipolarity and continued low diversification costs for reserve managers. Other factors, such as the enduring attraction of the US economy for international capital, will likely dominate exchange rate trends. Importantly, the dollar has a leading market share in global trade and capital flows—and no other currency is even close. Another measure of a currency's influence is how much other countries peg their exchange rates to it, or otherwise anchor themselves to it in one form or another. The so-called dollar bloc recently accounted for 47% of global GDP—a 20-year high (see chart).

USD Remains the Most Influential Currency as a Percent of Global GDP



Note: Methodology parameters include minimum and maximum values of 0 and 1, respectively.
Source: IMF, Morgan Stanley & Co. Research, Morgan Stanley Wealth Management Global Investment Office as of Dec. 31, 2023

CORPORATE SENTIMENT. Corporations are significant participants in foreign exchange, as both foreign currency costs and revenues can influence performance. We used market intelligence search platform AlphaSense to check corporate transcripts for indications of concern about the dollar's direction or its status as a reserve asset and found little evidence. At least, the topic barely features in earnings calls, which is not surprising. When conversations about hedging dollar exposure come up, it's usually in response to exchange rate volatility, and not anticipatory. Should volatility pick up during the US election campaign or due to macroeconomic catalysts, we'd expect interest to pick up.

History suggests that three factors support the ascent to currency dominance. First is the economic use case. That means a third party is more likely to hold the currency if its economy is sufficiently large and globally integrated such that there's a ready and clear embedded use case. Next, countries that are part of a political bloc (explicit or implicit) may be more likely to trade with each other in that hegemonic country's currency, making it easier for non-bloc members to trade with bloc members in that currency. Finally, there are institutional protections to consider. How safe is it for a third party to hold that currency? What are the risks around that asset losing value either due to economic policies such as inflation and devaluation or political factors such as expropriation and asset freezes? Confidence in a country's economic credibility is an ongoing necessary condition—confidence in both the value of the currency itself and the country's economic and institutional policies.

NO CREDIBLE CHALLENGER. The chief challenge to eroding the dollar's dominant status is a lack of a credible alternative. The rise and fall of the British pound demonstrates that dominant currency status is neither a foregone conclusion nor permanent. Yet, history shows that the dominant currency only loses its status once a sufficiently attractive challenger appears. The share of reserves held in dollars may continue to grind lower back to the historically normal levels of "first among equals," as opposed to unipolar dominance, reflecting cheaper in transaction costs. But in the absence of a credible competitor or a shock as profound as World War I, concerns about a rapid change in leadership that also affects a broader range of reserve currency use cases may be overblown.

The stability of the dollar's global influence over the past 10 years demonstrates that no clear competitor is emerging. China is the most widely discussed candidate, given its growing economic, financial and political roles. We expect a modestly more global role for the renminbi, primarily driven by the trade channel. But the "3-D challenge" to China's economy—debt, deflation and demographics—will likely limit its appeal. We see reserve holdings in renminbi only rising to 3.0% in 2030 from 2.3% currently.

What Is a Reserve Currency?

When market participants talk about "reserve currencies," they tend to refer to the currencies that central banks hold within their foreign exchange reserves. From this perspective, a currency becomes a de facto reserve currency of sorts if a central bank adds it to its portfolio of reserve assets. The phrase also often refers to a more limited group of currencies than the overall set represented in central bank foreign exchange reserves. Members of this group are not only held within central bank foreign exchange reserves but also have broader international use and influence for a larger set of institutions and market participants.

Central banks maintain foreign currency reserves primarily as a safety net to meet external financing needs, to help manage exchange rate volatility and to act as a lender of last resort to an economy struggling to raise foreign currency inflows. As such, central banks prize currencies that offer credibility as a store of value and liquidity in times of need. The revealed preferences of central banks offer clues as to which currencies retain these characteristics. The IMF's Currency Composition of Official Foreign Exchange Reserves survey represents the most comprehensive dataset, and the share of the dollar in central bank foreign currency reserves is frequently referenced in the broader conversation about whether the world is shifting toward a more multipolar currency reserve system.

SPACE FOR COMPETITORS. The collapse of the explicitly dollarized Bretton Woods system in the early 1970s certainly created more space for competitors to emerge. But despite pundits predicting King Dollar's demise at the hands of various competitors, none took the crown. Why? We think that investors underestimate the fact that dominance is not a free lunch. Dominant currencies tend to see artificial demand and strength, which isn't always welcome for export-oriented economies. Currency convertibility opens the economy up to potentially unwanted exchange rate volatility and an "outsourcing" of financial conditions. Inflows to financial assets may keep borrowing costs undesirably low, fueling a credit binge like the US housing debt crisis and the eurozone debt crisis.

Ultimately, countries have to want currency dominance and must be willing to accept the consequences. The most commonly argued contenders since Bretton Woods have chosen not to pursue it. Germany and Japan both viewed their own currency dominance with skepticism, given their export focus and preference for fiscal austerity. Similarly, the euro was seen as a potential competitor to the dollar, particularly in the mid-2000s. However, the limitations of the currency zone were laid bare during the eurozone debt crisis, and since then policymakers have seemed reluctant to take the necessary integrative steps.

The US is well suited to absorb those consequences. Nearly all US imports are invoiced in dollars, and the US external sector is small compared with peers. Policymakers have generally supported the strong dollar policy over time and appear content with the depth and liquidity of US capital markets. The Fed, time and time again, has demonstrated support for the internationalized dollar. ■

This article was excerpted from the April 18 Morgan Stanley & Co. report, "King Dollar Lacks Challengers," combining input from various MS & Co. Research teams. For a copy of the full report, please contact your Financial Advisor.

ELECTIONS

Navigating a Noisy Election

Michael D. Zezas, CFA, Strategist, Morgan Stanley & Co. LLC

Elections have consequences. But when it comes to identifying the consequences for financial markets, it's easy to mistake noise for signal. In 2020, for example, our survey showed investors tended to link a Biden win with a negative outcome for equities and, seemingly contradicting that, a lowering of tariffs. Neither came to pass, and investors appeared to underestimate the probability and impact of further fiscal expansion. Given the noise of US elections, however, we have sympathy for such confusion. Candidates promise a lot in terms of policy, but their willingness and ability to deliver is a signal that's more difficult to focus on.

TOO CLOSE TO CALL. Not only do we see plenty of noise for investors to deal with in 2024, but there's good reason to believe this election would be too close to call—even in the days after it takes place. The US electorate remains deeply divided. As in prior elections, polls show gaps within the margin of error between the candidates in enough states that if the election were held today, it wouldn't be surprising if either candidate won. Prediction markets reflect this reality, giving each candidate roughly a 50% chance of victory. And with the ongoing adoption of vote by mail, which requires more time for counting than machine voting, it would not be surprising to have several days of outcome uncertainty, featuring legal challenges and competing declarations of victory.

There are policies in play that create meaningful uncertainties for the economic and market outlooks (see exhibit). For instance, consider a scenario where former President Trump wins another term. He has promised to use executive power in ways we can confidently say will substantially influence the growth and inflation dynamics governing the US economic outlook. These include greater use of tariffs, immigration curbs and exploration of ways to exert authority over the Federal Reserve.

This may sound a lot like Trump's prior term, but there's a key difference for investors. In that term, executive actions with unfamiliar economic consequences, like tariffs, were sequenced to follow policy choices whose consequences had greater perceived predictability, such as tax cuts. That allowed investors to focus on the impact of fiscal policy in isolation for much of 2017. In a hypothetical second term, investors should prepare for a scenario where executive actions precede legislative policy choices, like extending tax cuts.

PUSH AND PULL. Markets will need to try to price in combined effects of policy choices that could push and pull growth and inflation in different directions. Our discussion of economic impacts in Republican-win scenarios is in line with this, but we believe that risks are skewed to the downside for growth, and potential changes at the Fed add a layer of uncertainty. Policy choices under Democratic-win scenarios skew more toward the predictable, as most continue the status quo and hence entail fewer exogenous economic factors to consider.

Amid the uncertainty, we see value in the following guidance:

Policy choices have reliable impacts on equity sectors. Lean into those with a positive skew across outcomes. Opportunities exist in sectors where specific policy outcomes might amplify already positive stories. This includes industrials and telecom, given potential benefits around tax cut extensions in a Republican sweep. It also includes sectors involved in our "Security" theme, in particular defense, as we see both parties incentivized to spend more on national security, with potentially greater global growth in defense spending if Republicans win the presidency.

Outcomes skew toward strength and volatility for the US dollar and Treasuries. Based on history, we regard election outcomes, and related policy uncertainty, as volatility-inducing for both Treasuries and the dollar. The impact of policy paths across outcomes tends toward strengthening the dollar. In addition to the already constructive setup, history suggests tariff talk resulting from a Republican White House win could boost the currency further, though a potential Trump administration's stance toward the Fed is a key risk. For Treasuries, election outcomes mostly affirm our current expectation of a path to lower nominal yields, though a Republican sweep is more complicated. It includes potential for a higher term premium and divergence between lower real yields and higher breakeven rates as investors try to parse the uncertainty of combined policy impacts.

The election also features important considerations for investors around taxes and immigration. As lawmakers contend with the expiring Tax Cuts and Jobs Act (TCJA), we believe a Republican sweep would yield legislation more similar to the original 2017 law, while a Democratic sweep would likely portend certain extensions, paired with offsets like higher taxes on wealthy individuals and corporations. In a divided government, we anticipate a narrow extension of some key provisions with bipartisan support. Each outcome leads to an incremental deficit, in our view, with the largest impact in a Republican sweep, at $1.6 trillion over 10 years, versus a Democratic sweep, at $600 billion. In a divided government, we would expect an incremental deficit of $1 trillion.

Summary: Policy and Market Impacts by Election Outcome

			Democratic Sweep	Divided Government - Democratic President	Divided Government - Republican President	Republican Sweep
Likelihood by Outcome: Number of asterisks indicates how likely the policy is in that election outcome scenario						
Policy	Immigration	Congressional efforts to reform/restrict immigration	*	*	*	**
		Further executive efforts to restrict immigration	*	*	***	***
	Tariffs	Targeted tariffs on particular goods	*	*	***	***
		Widespread tariffs (baseline 10% on all imports)			**	**
	Fiscal Policy	Child tax credit enhancement	***	**	**	**
		Extend some existing TCJA corporate tax breaks	*	**	**	***
		Extend some existing TCJA individual tax breaks	*	**	**	***
		Let some existing TCJA corporate tax breaks expire	***	**	**	*
		Let some existing TCJA individual tax breaks expire	***	**	**	*
		Social Spending	*			
	Regulation/ Other	Inflation Reduction Act partial repeal and/or delays			**	***
		"All of the above" energy policy			**	***
		AI regulation	*	*	*	*
Fundamental Impact			Outcome/Rationale	Outcome/Rationale	Outcome/Rationale	Outcome/Rationale
Market		USD	(~)/(+)	(~)/(-)	(~)/(+)	(+)
		Treasury Yield Impact	(~) · Marginally higher yields initially, which revert lower	(~) · Status quo: marginally lower yields	(~)/(-) · Lower yields	(~)/(+) · Mixed to slightly higher yields · Wider breakevens · Unchanged to lower real yields
		Clean Tech	(~)/(+) · IRA roll-out continues	(~)/(+) · IRA roll-out continues	(~)/(-) · Risks to IRA roll-out	(-) · Risks to IRA roll-out and potential for targeted repeal
		Energy	(-) · Exposure to tax changes · Stricter regulations	(~)/(-) · Stricter regulations	(~)/(+) · Exposure to tax changes · More favorable regulatory environment	(~)/(+) · Exposure to tax changes · More favorable regulatory environment
		Tech/Telecom/ Industrials/Retail/ Financial Services/ Health Care	(-) · Exposure to higher rate changes	(-) · Exposure to higher rate changes	(-) · Exposure to higher rate changes	(-) · Exposure to higher rate changes
		Pharma/Tech Hardware/Software/ Consumer Brands	(-) · Exposure to potentially increased minimum taxes			
		Defense	(+) · Seculary security theme	(+) · Seculary security theme	(+) · Seculary security theme	(+) · Seculary security theme

Source: Morgan Stanley & Co. Research as of June 14, 2024

If immigration continues to be a top issue for voters, we expect the next administration—Republican or Democratic—to take policy action, including legislative and executive options. We see a potential revival of the stalled bipartisan border bill in addition to possible unilateral executive action to limit daily crossings at the southern border, with key impacts on the economic outlook. Although scenarios can yield different policy outcomes, we see a degree of policy convergence between Democratic and Republican lawmakers, as President Biden recently released an executive order mirroring the asylum and border changes that the bipartisan border bill would have included if passed. ■

This article was excerpted from the June 14 Morgan Stanley & Co. report, "Navigating a Noisy Election," combining input from various MS & Co. Research teams. For a copy of the full report, please contact your Financial Advisor.

MEXICO

A Mexico Moment for Markets

Michael D. Zezas, CFA, Strategist, Morgan Stanley & Co. LLC

If you haven't been paying attention to Mexico, this is a good time to start. Last month, the country elected its first female president, Claudia Sheinbaum, and a governing coalition that will give her a stronger-than-anticipated position in Congress. In the past, investors not focused on emerging markets might have glossed over this event. But based on recent conversations with our clients, interest is much broader today—with good reason, in our view. Mexico's political economy is a nexus of key themes for markets.

MULTIPOLAR BENEFICIARY. First, Mexico should be an important beneficiary of the "multipolar world," though near-term risks are rising. The emergence of China in recent years as an economic challenger to the US has created new trade barriers, giving multinational companies incentives to conduct more business in countries that are more politically and economically aligned with the US. Mexico has a competitive cost of labor, proximity to the US market and a free-trade agreement with the US, making it a potential beneficiary of the rewiring of global trade. Our economists estimate that marginal export gains for Mexico could reach as much as $155 billion over a five-year period starting in 2023. But key risks could create headwinds, including the cost of producing enough electricity to support potential growth. Other risks stem from public policy, including the following dynamic.

US LINKS. Mexico plays a key role in the US economic outlook, given its potential influence on immigration. As the US' second-largest goods-trading partner, it has long figured prominently in the structure of the US economy. But its influence on the US economic cycle in the near term is more salient, given potential partnership in limiting immigration to the US, which could crimp GDP growth. For example, there's an increasingly bipartisan bias in the US to limit the number of asylum seekers crossing the border from Mexico, but Mexico would need to cooperate, as this policy shift would leave many potential immigrants on its side of the border.

Most investors we talk with assume that Mexico will cooperate, as its economic interlinkage with the US makes it too costly not to. To our knowledge, however, President-elect Sheinbaum hasn't definitively commented on the topic, so investors should watch carefully for statements that could confirm or refute this assumption. The key risk we see is that without a cooperative relationship, a scenario with former President Trump in a second term could lead to (or at least threaten) tariffs intended to move Mexico toward a more accommodative stance.

Our strategists' views reflect Mexico's increasing ties to the following macro themes:

In equities, policy challenges have led us to downgrade Mexico to Equal-weight, reinforcing our more broadly cautious view on Latin American equities. This shift also underscores our preference for markets we think currently have more clear-cut fundamentals, such as Japan and Europe.

We consider Mexico fixed income to be in a holding pattern. Assets—including the Mexican peso and hard- and local-currency bonds—have repriced weaker. Yet we think that it's too soon to fade such a move. Risks are high, and the market needs clarity on future policy direction, which may only come in September.

In the US Treasury market, immigration policy choices will be influential. Our view that yields will track lower over the next 12 months could be reinforced by US-Mexico cooperation that slows immigration notably, which in turn would weigh on US GDP growth.

BOTTOM LINE. Keep an eye on Mexico's public policy choices following the US election. They're likely to have effects on markets beyond its borders. ■

This article was excerpted from the June 9 Morgan Stanley & Co. report, "A Mexico Moment for Markets." For a copy of the full report please contact your Financial Advisor.

JAPAN

Feedback on Japan From Japan

Chetan Ahya, Chief Asia Economist, Morgan Stanley Asia Limited

Long battered by deflation, Japan is moving toward a new equilibrium of sustained, moderate inflation and stronger nominal GDP growth. In our view, policies should stay accommodative as a positive wage-price cycle emerges. Meanwhile, a conducive macro backdrop, coupled with strong reform momentum, should allow return on equity to keep rising.

While many investors acknowledge that Japan has indeed taken a step out of the long shadow of deflation, they have lingering concerns as to whether inflation is sustainable in the medium term. They are also keen to understand the interplay of the Japanese yen, inflation and monetary policy. Here are some of their most frequently asked questions and our responses:

Will Japan's inflation will be sustained?

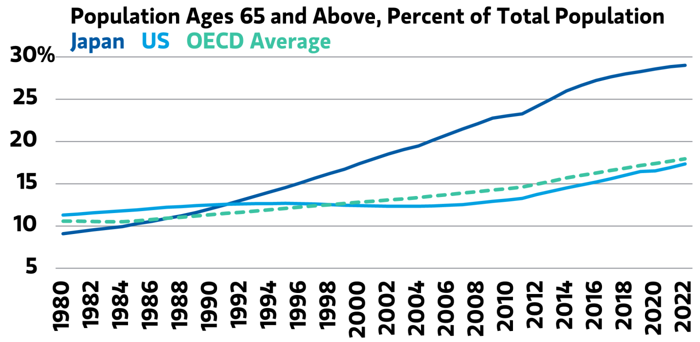
Japan has had reflationary cycles in the past, but sustained inflation did not take hold. What is different this time? Once imported inflation cools, won't headline inflation also move below target?

To be sure, the post-pandemic global reflationary environment and depreciation of the yen have provided one round of reflation. For instance, import prices rose to a 49% annual rate at the peak in July 2022, which in turn lifted core goods inflation to a peak of 5.4% with a lag. Headline inflation peaked at 4.4% in January 2023 as well. Now, we believe a strengthening wage-price pass-through will sustain moderate inflation. Our chief Japan economist, Takeshi Yamaguchi, expects headline Consumer Price Index (CPI) inflation to be at 2.8% year over year by the end of this year and 1.4% by year-end 2025.

Accommodative domestic policy choices have given us the current backdrop. The Bank of Japan (BOJ) has been patient, keeping its monetary policy accommodative and allowing real rates to decline, and we expect this to continue. Wage growth is at a 32-year high and is likely to further rise, supported by this year's strong spring wage agreement results between unions and workers. More importantly, we are observing that the wage-price pass-through has turned positive since the fourth quarter of 2022 and remained at 0.5 percentage points in the fourth quarter of 2023. The strengthening pass-through is leading to a virtuous cycle of rising wages and prices.

Structurally, our Japan economics team expects that the labor shortages will also help support wage growth. Post-2013, policymakers pushed for a higher female participation rate, and the policy has paid off to such an extent that Japan's prime-age female participation rate of 76% has surpassed that of the US' 56%, implying limited scope to improve labor supply. Moreover, the baby boomer generation is beginning to exit the workforce, adding to labor market tightness (see chart).

Labor Shortages Are Emerging as the Baby Boom Generation Exits the Labor Force



Source: OECD, Morgan Stanley & Co. Research, Morgan Stanley Wealth Management Global Investment Office as of May 26, 2024

Inflation appears to be eroding purchasing power and holding back private consumption. Will this dynamic change, and if so, when?

Currently, real wage growth deflated by headline inflation is an annual -0.7%, and 0.5% when deflated by US-style core CPI. On current forecasts, we expect that headline inflation will decline to around 2% by mid-2025, while wage growth based on wage negotiations is expected to rise to 3% this quarter, and so real wage growth will improve to 1% in 12 months. We would also note that recently announced new counter-inflation measures by the government, including utility subsidies from August, could potentially bring forward the timing of real wage growth turning positive to August 24 and act as a potentially positive catalyst for personal consumption. In the interim, we believe consumption will be supported by the one-off income tax cut in June that amounts to 0.6% of GDP. With this backdrop, we expect real consumption growth to improve to 0.6% annualized in the fourth quarter of this year versus -1.9% in the first quarter, and further to 1% in 2025, up from 0.6% in 2023.

A weaker yen has helped inflation, but it seems that it is now reaching a level that is forcing the BOJ to respond. What are the implications?

Our base case is that the yen will appreciate modestly. Morgan Stanley & Co.'s US economics team forecasts that core personal consumption expenditure (PCE) inflation will moderate to an average of 0.2% on a month-over-month basis, which will allow the Federal Reserve to start cutting policy rates in September 2024. With this backdrop, our Japan macro strategist, Koichi Sugisaki, sees the yen strengthening to end the year at 146 to the dollar from its recent 161. We believe the BOJ will broadly stick to its framework of assessing upside risks to inflation on account of currency depreciation. This means that the central bank may not use monetary policy directly to address yen weakness but may be considering the effects of yen weakness on prices to wages and wages to prices.

However, if US inflation surprises to the upside and market pricing for the Fed's rate path moves higher, the yen could face more downward pressure. While we do see some risk of an additional 25-basis-point rate hike in July 2025 if underlying inflation and wage growth turn out to be stronger than our forecast, we don't see aggressive hikes in our base case. In any case, this measured pace of hikes should be characterized as monetary policy turning less accommodative, as our Japan economics team estimates that Japan's nominal neutral rate is around 1% or marginally higher.

With the BOJ already behind the curve, won't policy rates have to quickly rise above 2% over the next 12 to 18 months?

We don't think so because we don't see a sustained overshoot of the inflation target. At the outset, we note that Japan is facing more limited demand-side pressures than other developed markets. We believe core inflation is already down to 2%, and we expect it to remain around 2%. Moreover, until recently, BOJ officials were highlighting that underlying inflation has not reached 2%. The BOJ's inflation expectations are somewhere in the 1% to 1.5% range and hence still have some distance from 2%.

What other risks should we monitor?

Internally, the key risk is that inflation surprises to the downside. Such a scenario could materialize if the pass-through of wages to prices turns out to be weaker than expected. We note that recent analysis from the BOJ currently indicates a smaller wage-to-price pass-through than our estimates, though it still points to the fact that the pass-through has now increased compared to the early 1990s.

Externally, the key risk to our constructive outlook on Japan likely stems from a US recession. In our midyear outlook, our global economics team laid out the downside scenario for global growth, whereby a stagflationary shock in the US stems from a sooner end to the immigration surge and therefore more persistent services inflation leads the Fed to keep rates higher for longer. This would ignite recession fears in the US, resulting in weaker external demand for Japan, a stronger yen and potential downward pressure on inflation. ■

This article was excerpted from the May 26, 2024 Morgan Stanley & Co. report, "The Viewpoint: Feedback on Japan from Japan." For the full report, please contact your Financial Advisor.

Q&A

Global Real Estate: Opportunity Amid Transition

More than two years after the onset of the current interest rate cycle, the global real estate market continues to evolve. With that evolution have come changes to valuations, transaction activity and relative sector performance. According to Cathy Marcus, PGIM Real Estate's co-chief executive officer and global chief operating officer, for investors willing to move off the sidelines, those changes have also brought appealing opportunities. In her July 6 discussion with Keith Fortmiller, real assets investment officer for Morgan Stanley Wealth Management Global Investment Manager Analysis (GIMA), she shared her thoughts on a variety of investment themes, including those related to US housing and alternative real estate sectors. The following is an edited version of their conversation.

Keith Fortmiller (KF): Real estate is a hot topic for many investors. What's your view on the current state of the market?

Cathy Marcus (CM): The real estate market is definitely in a transition period, and as with many asset classes, it began when interest rates started going up near mid-2022. The public markets reacted very quickly, and you saw a pretty immediate correction in real estate investment trusts (REITs). In the private markets, where you generally have very illiquid assets and the valuation process tends to lag, you saw a much slower correction.

Roughly two years from when this all began, it feels like we're getting to the bottom in terms of private-direct asset valuations. And of course, the market is composed of different places, different markets and different sectors. So, for example, the repricing in Europe began much earlier, with the breakout of war in Ukraine, and Europe got its repricing much more quickly than the US.

KF: What trends are you seeing that you think will persist over the medium to long term?

CM: In terms of themes where we have strong conviction, there is a lot of focus now on housing, housing shortages and affordability. And the "living sectors" is one of the investment themes around which we have the most conviction globally.

Thinking about various demographic trends and trends around housing affordability and the lack of supply, we feel very bullish about traditional multifamily rental as well as single-family rental. A big driver of that is the significant increase in the cost of housing. And now, of course, amid a much higher interest rate environment, we think that home ownership is far less attainable for most people than it was before.

We believe that people are going to be renting longer. People previously might have rented only in their 20s, not into their 30s. Many kinds of life milestones are happening later, such as getting married, moving to the suburbs and having the wherewithal to purchase a home.

We think that there is a need not just for more rental housing, but perhaps for different formats. The notion of renting a single-family home is really growing in popularity because of the unaffordability of purchasing one. People may want to have a backyard, live in a neighborhood where their children can walk to school and have an experience like that of owning a single-family home even if they can't afford to actually purchase one.

Similarly, thinking about demographics, more and more baby boomers are hitting 75 or 80 years old, and there's a structural shortage of senior housing. Therefore, senior housing, particularly development, is a very strong investment theme of ours. It's another part of the demographic barbell in terms of the living sectors and our conviction there.

Another one of our strong-conviction themes is around digitalization and the changing supply chain, including logistics and e-commerce. We think there's still a lot of room for e-commerce to grow. The changes to the supply chain that were initially prompted by COVID are being rethought around geopolitical tensions. Very few retailers want to have all their eggs in one basket from a supply chain and distribution perspective. This continues to support the industrial and logistics markets around the world.

The other part of digital evolution is digital infrastructure and in particular data centers, demand for which is growing exponentially. Initially fueled by streaming and then the work-from-home phenomenon, it's now being driven by artificial intelligence (AI).

It's not the type of asset class where you can just decide you're going to build one tomorrow. Data centers are very expensive to build and are centered around power and the ability to source and supply it—maybe one day even to generate it on-site.

KF: Another important area of the real estate market is deal activity, which seems to have slowed, especially in the commercial space. What would you say has been driving that, and what will be the catalyst for it to return to normal?

CM: In terms of the big picture, the lack of transaction activity is related to the very slow repricing of the market and the really wide gap between what buyers thought they could get and where sellers thought their assets should be priced. That gap is and has been closing over time.

One of the nuances of direct illiquid real estate is that the asset values and yields investors will accept are largely established by comparable sales. And when there isn't enough transaction activity, it's very difficult not just for buyers and sellers, but even for appraisers and lenders, to agree where value is. And it takes time.

Just in the past couple months, we've begun to see more activity, and we believe that that's essentially been driven by capitulation, if you will, from sellers saying "OK, my asset is not worth what it was before interest rates went up." And now that they're starting to see some transaction activity, some of the uncertainty around where values are is starting to go away.

We're seeing more transaction activity over the past couple of months than we saw all last year, and it's primarily in multifamily for rent. We're probably still seeing the least activity in the office sector.

KF: Can you share some of PGIM's non-consensus views on real estate and how you're taking advantage of them in your portfolios?

CM: While I wouldn't say it's non-consensus, we've leaned into some of the alternative real estate sectors more than others have and earlier than others—areas like self-storage, manufactured housing, senior housing, student housing and data centers. Unlike the office, industrial, retail and multifamily sectors, they aren't in the "traditional four food groups." They're considered to be types of alternatives within real estate, which obviously is an alternative sector itself.

We were a very early mover into alternatives and still tend to have more exposure to those sectors. We like them, we understand them and we look at them with a focus on the durability of the cash flows rather than getting too caught up in what the difference is between a multifamily traditional project, a senior housing project, a student housing project or manufactured housing. There are clearly differences between them, but we're less caught up in labels and more focused on cash flows.

KF: What are the biggest challenges and opportunities in real estate over the next 12 to 24 months?

CM: One of the biggest challenges is the interest rate environment. What will it look like? How long will we be in this higher-rate environment before rates start to come down? How quickly will they come down?

I think a big challenge for our industry is going to be a final acceptance that we're probably not going to be in the type of interest rate environment we were in previously for a very long time. It wasn't normal, and it typically wasn't the experience historically. I think letting go of that and not sitting on the sidelines until we have very cheap money again is important. Investors have to start investing in this environment, realizing that we're probably back in a more normal rate environment and that there are opportunities.

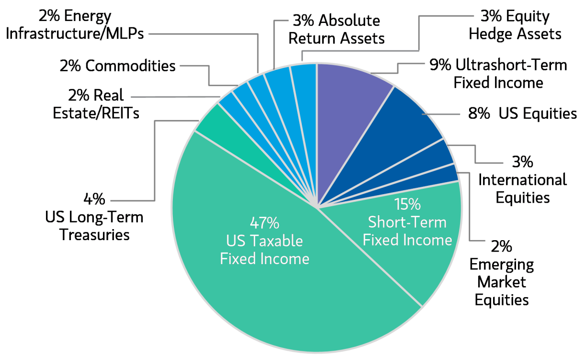
If you look at supply of housing in particular, during the past two years, construction starts have almost completely evaporated. There's very little new construction because it's become difficult, and actually prohibitively expensive, to get financing. Thinking about 2025, 2026 and 2027, that is going to lead to very little new supply, which will probably lead to rents going up and therefore values as well. So there are opportunities to be had by getting into the market right now, and I think a big risk to our sector is that people will stay on the sidelines too long and not benefit from them. ■

Cathy Marcus is not an employee of Morgan Stanley Wealth Management or its affiliates. Opinions expressed by her are her own and may not necessarily reflect those of Morgan Stanley Wealth Management or its affiliates

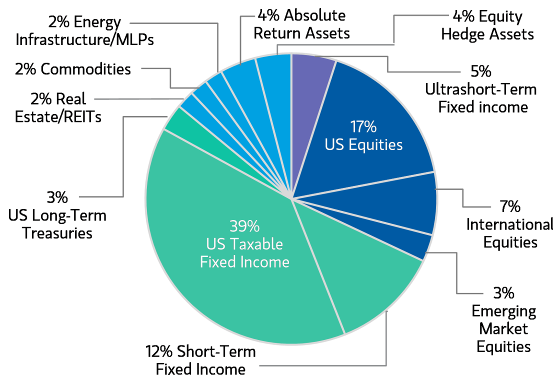
Global Investment Committee Tactical Asset Allocation

The Global Investment Committee provides guidance on asset allocation decisions through its various allocation models. The five models below include allocations to traditional assets, real assets and hedged strategies. They are based on an increasing scale of risk (expected volatility) and expected return.

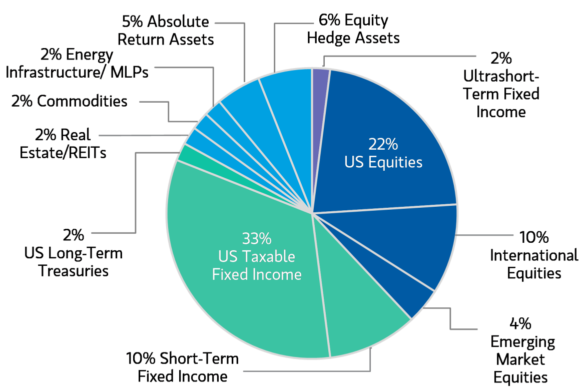
Wealth Conservation



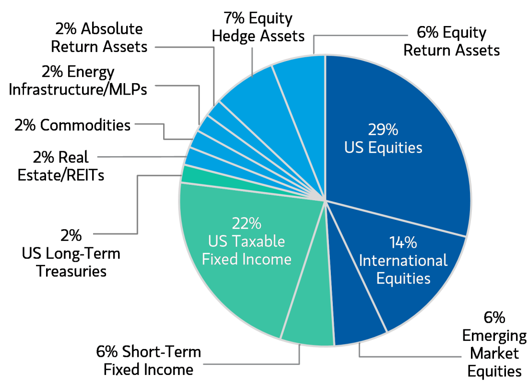
Income



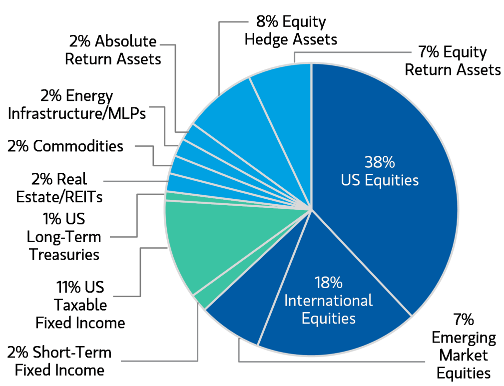
Balanced Growth



Market Growth



Opportunistic Growth



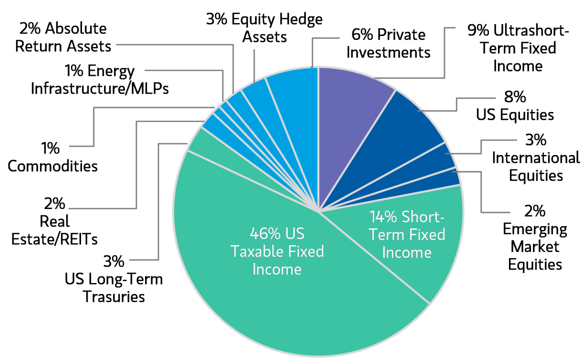
Key

- **Ultrashort-Term Fixed Income**
- **Fixed Income & Preferreds**
- **Equities**
- **Alternatives**

Source: Morgan Stanley Wealth Management GIC as of July 1, 2024

The Global Investment Committee provides guidance on asset allocation decisions through its various allocation models. The five models below include allocations to traditional assets and alternative investments, including privates, and are recommended for investors with over $10 million in investable assets. They are based on an increasing scale of risk (expected volatility) and expected return.

Wealth Conservation



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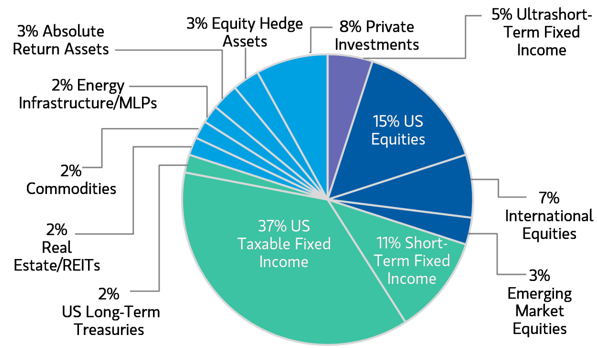

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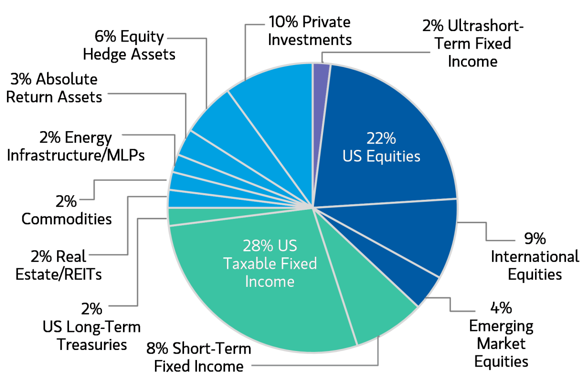
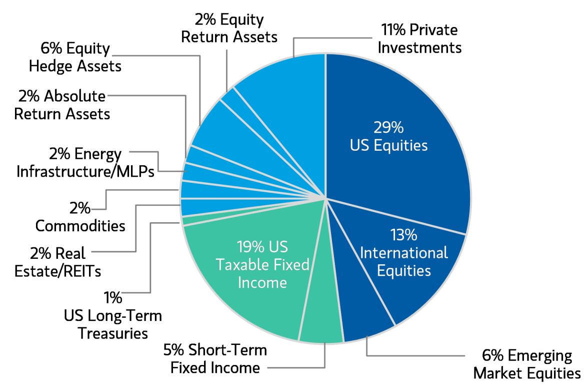
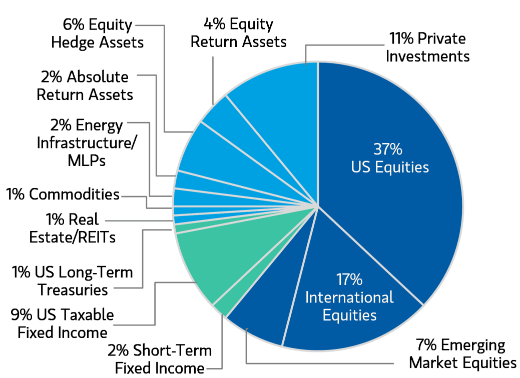


Market Growth



Opportunistic Growth



Key

Ultrashort-Term Fixed Income

Fixed Income & Preferreds

Equities

Alternatives

Source: Morgan Stanley Wealth Management GIC as of July 1, 2024

Tactical Asset Allocation Reasoning

Global Equities	Weight Relative to Model Benchmark	
US	Underweight	We recently closed our US large-cap equity underweight, which was premised on concerns about achievability of 2023 earnings estimates. While higher inflation should delay Fed rate cuts, more pricing power contributes to confidence that has risen, given GDP strength and visible international growth rebounds. Our preference is for cyclical and secular-growth equities with quality balance sheets.
International Equities (Developed Markets)	Market-Weight	Given weak currencies and dovish central banks—in Japan and soon in Europe, with the ECB likely cutting in June—economic rebound should be at hand in the second half. Developed market exposure should skew toward commodities and materials exporters, especially those in the Asia Pacific region, including Japan.
Emerging Markets	Market-Weight	Peaking US rates and, in turn, the US dollar, likely set up a second half rebound for EM ex China, given improving global growth dynamics. We favor Brazil, India and Mexico.
Global Fixed Income	**Weight Relative to Model Benchmark**	
US Investment Grade	Overweight	Stronger-than-anticipated economic growth is preserving the strength of corporate cash flows. While rates have backed up to reflect "higher-for-longer" expectations, yield spreads have remained well behaved. With geopolitical uncertainty high and equity valuations broadly rich, we like coupons of bonds with index-matching or shorter durations.
International Investment Grade	Market-Weight*	Yields are decent, central banks may soon cut rates and there is room for spread tightening as economic growth improves.
Inflation-Protection Securities	Market-Weight*	Real yields have sold off and are now bordering on cheap relative to the past two years. The securities could be a potential buy in a stagflationary environment.
High Yield	Market-Weight*	We have eliminated our exposure to the equity-like asset class to reduce equity beta of portfolios. High yield bonds rallied aggressively after the unprecedented provision of liquidity from the Fed and fiscal stimulus from Washington. However, there is currently limited upside and much downside to investments in riskier products, given the market environment.
Alternative Investments	**Weight Relative to Model Benchmark**	
REITs	Market-Weight	We expect higher stock-bond correlations, which place a premium on the diversification benefits of investing in real assets. Nevertheless, with real interest rates positive and services inflation remaining quite sticky, we would need to be selective in adding to this asset class.
Commodities	Market-Weight	Global reflation, tense geopolitics, especially in the Middle East, and ongoing fiscal spending suggest decent upside potential for precious metals and industrial-related commodities, including energy.
MLP/Energy Infrastructure	Overweight	We are increasing exposure to real assets, with a preference for energy infrastructure and MLPs. Competitive yields and expectations for continued capital discipline amid stable oil and gas prices over the next six months underpin our decision, as does hedging against geopolitical risks.
Hedged Strategies (Hedge Funds and Managed Futures)	Overweight	The current environment appears constructive for hedge fund managers, who are frequently good stock pickers and can use leverage and risk management to potentially amplify returns. We prefer very active and fundamental strategies, especially high-quality, low beta, low volatility and absolute return hedge funds.

*The GIC asset allocation models' benchmarks do not include any exposure to this asset class.
Source: Morgan Stanley Wealth Management GIC as of July 1, 2024

Disclosure Section

Important Information

The **Global Investment Committee (GIC)** is a group of seasoned investment professionals from Morgan Stanley & Co. and Morgan Stanley Wealth Management who meet regularly to discuss the global economy and markets. The committee determines the investment outlook that guides our advice to clients. They continually monitor developing economic and market conditions, review tactical outlooks and recommend asset allocation model weightings, as well as produce a suite of strategy, analysis, commentary, portfolio positioning suggestions and other reports and broadcasts.

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For index, indicator and survey definitions referenced in this report please visit the following: https://www.morganstanley.com/wealth-investmentsolutions/wmir-definitions

Important note regarding economic sanctions. *This report may involve the discussion of country/ies which are generally the subject of selective sanctions programs administered or enforced by the U.S. Department of the Treasury's Office of Foreign Assets Control ("OFAC"), the European Union and/or by other countries or multi-national bodies. The content of this presentation is for informational purposes and does not represent Morgan Stanley's view as to whether or not any of the Persons, instruments or investments discussed are or may become subject to sanctions.* ***Any references in this report to entities or instruments that may be covered by such sanctions should not be read as recommending or advising on any investment activities involving such entities or instruments.*** *Users of this report are solely responsible for ensuring that your investment activities in relation to any sanctioned country/ies are carried out in compliance with applicable sanctions.*

Glossary

Earnings revisions breadth is defined as the number of positive analyst revisions minus the number of negative analyst revisions divided by the total number of revisions.

Equity risk premium is the excess return that an individual stock or the overall stock market provides over a risk-free rate. The risk-free rate represents the interest an investor would expect from an absolutely risk-free investment over a specified period of time.

Term premium is the excess yield that investors require to commit to holding a long-term bond instead of a series of shorter-term bonds.

Hedged Strategy Definitions

Absolute return: This type of investing describes a category of investment strategies and mutual funds that seek to earn a positive return over time—regardless of whether markets are going up, down, or sideways—and to do so with less volatility than stocks.

Equity Hedge is a hedge fund investment strategy with a typical goal of providing equity-like returns while limiting the impact of downside market movements and volatility on an investor's portfolio. Managers utilize long and short positions, primarily in equity and equity-related instruments, to achieve this goal.

Risk Considerations

The sole purpose of this material is to inform, and it in no way is intended to be an offer or solicitation to purchase or sell any security, other investment or service, or to attract any funds or deposits. Investments mentioned may not be appropriate for all clients. Any product discussed herein may be purchased only after a client has carefully reviewed the offering memorandum and executed the subscription documents. Morgan Stanley Wealth Management has not considered the actual or desired investment objectives, goals, strategies, guidelines, or factual circumstances of any investor in any fund(s). Before making any investment, each investor should carefully consider the risks associated with the investment, as discussed in the applicable offering memorandum, and make a determination based upon their own particular circumstances, that the investment is consistent with their investment objectives and risk tolerance.

Alternative Investments

Alternative investments may be either traditional alternative investment vehicles, such as hedge funds, fund of hedge funds, private equity, private real estate and managed futures or, non-traditional products such as mutual funds and exchange-traded funds that also seek alternative-like exposure but have significant differences from traditional alternative investments. Alternative investments often are speculative and include a high degree of risk. Investors could lose all or a substantial amount of their investment. Alternative investments are appropriate only for eligible, long-term investors who are willing to forgo liquidity and put capital at risk for an indefinite period of time. They may be highly illiquid and can engage in leverage and other speculative practices that may increase the volatility and risk of loss. Alternative Investments typically have higher fees than traditional investments. Investors should carefully review and consider potential risks before investing. Certain of these risks may include but are not limited to: Loss of all or a substantial portion of the investment due to leveraging, short-selling, or other speculative practices; Lack of liquidity in that there may be no secondary market for a fund; Volatility of returns; Restrictions on transferring interests in a fund; Potential lack of diversification and resulting higher risk due to concentration of trading authority when a single advisor is utilized; Absence of information regarding valuations and pricing; Complex tax structures and delays in tax reporting; Less regulation and higher fees than mutual funds; and Risks associated with the operations, personnel, and processes of the manager. Further, opinions regarding Alternative Investments expressed herein may differ from the opinions expressed by Morgan Stanley Wealth Management and/or other businesses/affiliates of Morgan Stanley Wealth Management.

Certain information contained herein may constitute forward-looking statements. Due to various risks and uncertainties, actual events, results or the performance of a fund may differ materially from those reflected or contemplated in such forward-looking statements. Clients should carefully consider the investment objectives, risks, charges, and expenses of a fund before investing.

Alternative investments involve complex tax structures, tax inefficient investing, and delays in distributing important tax information. Individual funds have specific risks related to their investment programs that will vary from fund to fund. Clients should consult their own tax and legal advisors as Morgan Stanley Wealth Management does not provide tax or legal advice.

Interests in alternative investment products are offered pursuant to the terms of the applicable offering memorandum, are distributed by Morgan Stanley Smith Barney LLC and certain of its affiliates, and (1) are not FDIC-insured, (2) are not deposits or other obligations of Morgan Stanley or any of its affiliates, (3) are not guaranteed by Morgan Stanley and its affiliates, and (4) involve investment risks, including possible loss of principal. Morgan Stanley Smith Barney LLC is a registered broker-dealer, not a bank.

It is important to note that only eligible investors can invest in alternative investment funds and that in order for an FA/PWA to engage a prospective investor in general discussions about Alternative Investments and specifically with regards to Private Funds, the prospective investor will need to be pre-qualified through the Reg D system.

Managed futures investments are speculative, involve a high degree of risk, use significant leverage, have limited liquidity and/or may be generally illiquid, may incur substantial charges, may subject investors to conflicts of interest, and are usually appropriate only for the risk capital portion of an investor's portfolio. Before investing in any partnership and in order to make an informed decision, investors should read the applicable prospectus and/or offering documents carefully for additional information, including charges, expenses, and risks. Managed futures investments are not intended to replace equities or fixed income securities but rather may act as a complement to these asset categories in a diversified portfolio.

Hedge funds may involve a high degree of risk, often engage in leveraging and other speculative investment practices that may increase the risk of investment loss, can be highly illiquid, are not required to provide periodic pricing or valuation information to investors, may involve complex tax structures and delays in distributing important tax information, are not subject to the same regulatory requirements as mutual funds, often charge high fees which may offset any trading profits, and in many cases the underlying investments are not transparent and are known only to the investment manager.

Hedge Funds of Funds and many funds of funds are private investment vehicles restricted to certain qualified private and institutional investors. They are often speculative and include a high degree of risk. Investors can lose all or a substantial amount of their investment. They may be highly illiquid, can engage in leverage and other speculative practices that may increase volatility and the risk of loss, and may be subject to large investment minimums and initial lockups. They involve complex tax structures, tax-inefficient investing and delays in distributing important tax information. Categorically, hedge funds and funds of funds have higher fees and expenses than traditional investments, and such fees and expenses can lower the returns achieved by investors. Funds of funds have an additional layer of fees over and above hedge fund fees that will offset returns.

Private Real Estate: Risks of private real estate include: illiquidity; a long-term investment horizon with a limited or nonexistent secondary market; lack of transparency; volatility (risk of loss); and leverage.

An investment in an **exchange-traded fund** involves risks similar to those of investing in a broadly based portfolio of equity securities traded on an exchange in the relevant securities market, such as market fluctuations caused by such factors as economic and political developments, changes in interest rates and perceived trends in stock and bond prices. Investing in an international ETF also involves certain risks and considerations not typically associated with investing in an ETF that invests in the securities of U.S. issues, such as political, currency, economic and market risks. These risks are magnified in countries with emerging markets, since these countries may have relatively unstable governments and less established markets and economics. ETFs investing in physical commodities and commodity or currency futures have special tax considerations. Physical commodities may be treated as collectibles subject to a maximum 28% long-term capital gains rates, while futures are marked-to-market and may be subject to a blended 60% long- and 40% short-term capital gains tax rate. Rolling futures positions may create taxable events. For specifics and a greater explanation of possible risks with ETFs¸ along with the ETF's investment objectives, charges and expenses, please consult a copy of the ETF's prospectus. Investing in sectors may be more volatile than diversifying across many industries. The investment return and principal value of ETF investments will fluctuate, so an investor's ETF shares (Creation Units), if or when sold, may be worth more or less than the original cost. ETFs are redeemable only in Creation Unit size through an Authorized Participant and are not individually redeemable from an ETF.

Investors should carefully consider the investment objectives and risks as well as charges and expenses of an exchange-traded fund or mutual fund before investing. The prospectus contains this and other important information about the mutual fund. To obtain a prospectus, contact your Financial Advisor or visit the mutual fund company's website. Please read the prospectus carefully before investing.

Master Limited Partnerships (MLPs) are limited partnerships or limited liability companies that are taxed as partnerships and whose interests (limited partnership units or limited liability company units) are traded on securities exchanges like shares of common stock. Currently, most MLPs operate in the energy, natural resources or real estate sectors. Investments in MLP interests are subject to the risks generally applicable to companies in the energy and natural resources sectors, including commodity pricing risk, supply and demand risk, depletion risk and exploration risk. MLPs carry interest rate risk and may underperform in a rising interest rate environment.

International investing entails greater risk, as well as greater potential rewards compared to U.S. investing. These risks include political and economic uncertainties of foreign countries as well as the risk of currency fluctuations. These risks are magnified in countries with **emerging markets** and **frontier markets**, since these countries may have relatively unstable governments and less established markets and economies.

Investing in currency involves additional special risks such as credit, interest rate fluctuations, derivative investment risk, and domestic and foreign inflation rates, which can be volatile and may be less liquid than other securities and more sensitive to the effect of varied economic conditions. In addition, international investing entails greater risk, as well as greater potential rewards compared to U.S. investing. These risks include political and economic uncertainties of foreign countries as well as the risk of currency fluctuations. These risks are magnified in countries with emerging markets, since these countries may have relatively unstable governments and less established markets and economies.

Bonds are subject to interest rate risk. When interest rates rise, bond prices fall; generally the longer a bond's maturity, the more sensitive it is to this risk. Bonds may also be subject to call risk, which is the risk that the issuer will redeem the debt at its option, fully or partially, before the scheduled maturity date. The market value of debt instruments may fluctuate, and proceeds from sales prior to maturity may be more or less than the amount originally invested or the maturity value due to changes in market conditions or changes in the credit quality of the issuer. Bonds are subject to the credit risk of the issuer. This is the risk that the issuer might be unable to make interest and/or principal payments on a timely basis. Bonds are also subject to reinvestment risk, which is the risk that principal and/or interest payments from a given investment may be reinvested at a lower interest rate.

Bonds rated below investment grade may have speculative characteristics and present significant risks beyond those of other securities, including greater credit risk and price volatility in the secondary market. Investors should be careful to consider these risks alongside their individual circumstances, objectives and risk tolerance before investing in high-yield bonds. High yield bonds should comprise only a limited portion of a balanced portfolio.

Interest on municipal bonds is generally exempt from federal income tax; however, some bonds may be subject to the alternative minimum tax (AMT). Typically, state tax-exemption applies if securities are issued within one's state of residence and, if applicable, local tax-exemption applies if securities are issued within one's city of residence.

Treasury Inflation Protection Securities' (TIPS) coupon payments and underlying principal are automatically increased to compensate for inflation by tracking the consumer price index (CPI). While the real rate of return is guaranteed, TIPS tend to offer a low return. Because the return of TIPS is linked to inflation, TIPS may significantly underperform versus conventional U.S. Treasuries in times of low inflation.

Ultrashort-term fixed income asset class is comprised of fixed income securities with high quality, very short maturities. They are therefore subject to the risks associated with debt securities such as credit and interest rate risk.

Although they are backed by the full faith and credit of the U.S. Government as to timely payment of principal and interest, **Treasury Bills** are subject to interest rate and inflation risk, as well as the opportunity risk of other more potentially lucrative investment opportunities.

Principal is returned on a monthly basis over the life of a **mortgage-backed security**. Principal prepayment can significantly affect the monthly income stream and the maturity of any type of MBS, including standard MBS, CMOs and Lottery Bonds. Yields and average lives are estimated based on prepayment assumptions and are subject to change based on actual prepayment of the mortgages in the underlying pools. The level of predictability of an MBS/CMO's average life, and its market price, depends on the type of MBS/CMO class purchased and interest rate movements. In general, as interest rates fall, prepayment speeds are likely to increase, thus shortening the MBS/CMO's average life and likely causing its market price to rise. Conversely, as interest rates rise, prepayment speeds are likely to decrease, thus lengthening average life and likely causing the MBS/CMO's market price to fall. Some MBS/CMOs may have "original issue discount" (OID). OID occurs if the MBS/CMO's original issue price is below its stated redemption price at maturity, and results in "imputed interest" that must be reported annually for tax purposes, resulting in a tax liability even though interest was not received. Investors are urged to consult their tax advisors for more information.

Yields are subject to change with economic conditions. Yield is only one factor that should be considered when making an investment decision.

Credit ratings are subject to change.

Duration, the most commonly used measure of bond risk, quantifies the effect of changes in interest rates on the price of a bond or bond portfolio. The longer the duration, the more sensitive the bond or portfolio would be to changes in interest rates. Generally, if interest rates rise, bond prices fall and vice versa. Longer-term bonds carry a longer or higher duration than shorter-term bonds; as such, they would be affected by changing interest rates for a greater period of time if interest rates were to increase. Consequently, the price of a long-term bond would drop significantly as compared to the price of a short-term bond.

The majority of $25 and $1000 par **preferred securities** are "callable" meaning that the issuer may retire the securities at specific prices and dates prior to maturity. Interest/dividend payments on certain preferred issues may be deferred by the issuer for periods of up to 5 to 10 years, depending on the particular issue. The investor would still have income tax liability even though payments would not have been received. Price quoted is per $25 or $1,000 share, unless otherwise specified. Current yield is calculated by multiplying the coupon by par value divided by the market price.

Some $25 or $1000 par **preferred securities** are **QDI (Qualified Dividend Income)** eligible. Information on QDI eligibility is obtained from third party sources. The dividend income on QDI eligible preferreds qualifies for a reduced tax rate. Many traditional 'dividend paying' perpetual preferred securities (traditional preferreds with no maturity date) are QDI eligible. In order to qualify for the preferential tax treatment all qualifying preferred securities must be held by investors for a minimum period – 91 days during a 180 day window period, beginning 90 days before the ex-dividend date.

The initial interest rate on a **floating-rate security** may be lower than that of a fixed-rate security of the same maturity because investors expect to receive additional income due to future increases in the floating security's underlying reference rate. The reference rate could be an index or an interest rate. However, there can be no assurance that the reference rate will increase. Some floating-rate securities may be subject to call risk.

The market value of **convertible bonds** and the underlying common stock(s) will fluctuate and after purchase may be worth more or less than original cost. If sold prior to maturity, investors may receive more or less than their original purchase price or maturity value, depending on market conditions. Callable bonds may be redeemed by the issuer prior to maturity. Additional call features may exist that could affect yield.

Investing in commodities entails significant risks. Commodity prices may be affected by a variety of factors at any time, including but not limited to, (i) changes in supply and demand relationships, (ii) governmental programs and policies, (iii) national and international political and economic events, war and terrorist events, (iv) changes in interest and exchange rates, (v) trading activities in commodities and related contracts, (vi) pestilence, technological change and weather, and (vii) the price volatility of a commodity. In addition, the commodities markets are subject to temporary distortions or other disruptions due to various factors, including lack of liquidity, participation of speculators and government intervention.

Physical precious metals are non-regulated products. Precious metals are speculative investments, which may experience short-term and long-term price volatility. The value of precious metals investments may fluctuate and may appreciate or decline, depending on market conditions. If sold in a declining market, the price you receive may be less than your original investment. Unlike bonds and stocks, precious metals do not make interest or dividend payments. Therefore, precious metals may not be appropriate for investors who require current income. Precious metals are commodities that should be safely stored, which may impose additional costs on the investor. The Securities Investor Protection Corporation ("SIPC") provides certain protection for customers' cash and securities in the event of a brokerage firm's bankruptcy, other financial difficulties, or if customers' assets are missing. SIPC insurance does not apply to precious metals or other commodities.

REITs investing risks are similar to those associated with direct investments in real estate: property value fluctuations, lack of liquidity, limited diversification and sensitivity to economic factors such as interest rate changes and market recessions.

Principal is returned on a monthly basis over the life of a **mortgage-backed security.** Principal prepayment can significantly affect the monthly income stream and the maturity of any type of MBS, including standard MBS, CMOs and Lottery Bonds. Yields and average lives are estimated based on prepayment assumptions and are subject to change based on actual prepayment of the mortgages in the underlying pools. The level of predictability of an MBS/CMO's average life, and its market price, depends on the type of MBS/CMO class purchased and interest rate movements. In general, as interest rates fall, prepayment speeds are likely to increase, thus shortening the MBS/CMO's average life and likely causing its market price to rise. Conversely, as interest rates rise, prepayment speeds are likely to decrease, thus lengthening average life and likely causing the MBS/CMO's market price to fall. Some MBS/CMOs may have "original issue discount" (OID). OID occurs if the MBS/CMO's original issue price is below its stated redemption price at maturity, and results in "imputed interest" that must be reported annually for tax purposes, resulting in a tax liability even though interest was not received. Investors are urged to consult their tax advisors for more information.

CDs are insured by the FDIC, an independent agency of the U.S. Government, up to a maximum of $250,000 (including principal and accrued interest) for all deposits held in the same insurable capacity (e.g. individual account, joint account, IRA etc.) per CD depository. Investors are responsible for monitoring the total amount held with each CD depository. All deposits at a single depository held in the same insurable capacity will be aggregated for the purposes of the applicable FDIC insurance limit, including deposits (such as bank accounts) maintained directly with the depository and CDs of the depository. For more information visit the FDIC website at www.fdic.gov.

Equity securities may fluctuate in response to news on companies, industries, market conditions and general economic environment.

Investing in smaller companies involves greater risks not associated with investing in more established companies, such as business risk, significant stock price fluctuations and illiquidity.

Stocks of medium-sized companies entail special risks, such as limited product lines, markets, and financial resources, and greater market volatility than securities of larger, more-established companies.

Companies paying **dividends** can reduce or cut payouts at any time.

Virtual Currency Products (Cryptocurrencies)

Buying, selling, and transacting in Bitcoin, Ethereum or other digital assets ("Digital Assets"), and related funds and products, is highly speculative <u>and may result in a loss of the entire investment</u>. Risks and considerations include but are not limited to:

- Digital Assets have only been in existence for a short period of time and historical trading prices for Digital Assets have been highly volatile. The price of Digital Assets could decline rapidly, ***<u>and investors could lose their entire investment</u>***.
- Given the volatility in the price of Digital Assets, the net asset value of a fund or product that invests in such assets at the time an investor's subscription for interests in the fund or product is accepted may be significantly below or above the net asset value of the product or fund at the time the investor submitted subscription materials.
- Although any Digital Asset product and its service providers have in place significant safeguards against loss, theft, destruction and inaccessibility, there is nonetheless a risk that some or all of a product's Digital Asset could be permanently lost, stolen, destroyed or inaccessible by virtue of, among other things, the loss or theft of the "private keys" necessary to access a product's Digital Asset.
- Investors in funds or products investing or transacting in Digital Assets may not benefit to the same extent (or at all) from "airdrops" with respect to, or "forks" in, a Digital Asset's blockchain, compared to investors who hold Digital Assets directly instead of through a fund or product. Additionally, a "fork" in the Digital Asset blockchain could materially decrease the price of such Digital Asset.
- Digital Assets are not legal tender, and are not backed by any government, corporation or other identified body, other than with respect to certain digital currencies that certain governments are or may be developing now or in the future. No law requires companies or individuals to accept digital currency as a form of payment (except, potentially, with respect to digital currencies developed by certain governments where such acceptance may be mandated). Instead, other than as described in the preceding sentences, Digital Asset products' use is limited to businesses and individuals that are willing to accept them. If no one were to accept digital currencies, virtual currency products would very likely become worthless.
- Platforms that buy and sell Digital Assets can be hacked, and some have failed. In addition, like the platforms themselves, digital wallets can be hacked, and are subject to theft and fraud. As a result, like other investors have, you can lose some or all of your holdings of Digital Assets.
- Unlike US banks and credit unions that provide certain guarantees of safety to depositors, there are no such safeguards provided to Digital Assets held in digital wallets by their providers or by regulators.

- Due to the anonymity Digital Assets offer, they have known use in illegal activity, including drug dealing, money laundering, human trafficking, sanction evasion and other forms of illegal commerce. Abuses could impact legitimate consumers and speculators; for instance, law enforcement agencies could shut down or restrict the use of platforms and exchanges, limiting or shutting off entirely the ability to use or trade Digital Asset products.
- Digital Assets may not have an established track record of credibility and trust. Further, any performance data relating to Digital Asset products may not be verifiable as pricing models are not uniform.
- Investors should be aware of the potentially increased risks of transacting in Digital Assets relating to the risks and considerations, including fraud, theft, and lack of legitimacy, and other aspects and qualities of Digital Assets, before transacting in such assets.
- Morgan Stanley Smith Barney LLC or its affiliates (collectively, "Morgan Stanley") may currently, or in the future, offer or invest in Digital Asset products, services or platforms. The proprietary interests of Morgan Stanley may conflict with your interests.
- This material has been prepared for informational purposes only, based on publicly available factual information. It does not provide individually tailored or general investment advice whatsoever. It has been prepared without regard to the individual financial circumstances and objectives of persons who receive it. Investors seeking to evaluate particular investments and strategies in Digital assets must seek the advice of their independent advisors. The appropriateness of a particular investment or strategy will depend on an investor's individual circumstances and objectives.

Value investing does not guarantee a profit or eliminate risk. Not all companies whose stocks are considered to be value stocks are able to turn their business around or successfully employ corrective strategies which would result in stock prices that do not rise as initially expected.

Growth investing does not guarantee a profit or eliminate risk. The stocks of these companies can have relatively high valuations. Because of these high valuations, an investment in a growth stock can be more risky than an investment in a company with more modest growth expectations.

Asset allocation and diversification do not assure a profit or protect against loss in declining financial markets.

Because of their narrow focus, **sector investments** tend to be more volatile than investments that diversify across many sectors and companies. **Technology stocks** may be especially volatile. Risks applicable to companies in the **energy and natural resources** sectors include commodity pricing risk, supply and demand risk, depletion risk and exploration risk. **Health care sector stocks** are subject to government regulation, as well as government approval of products and services, which can significantly impact price and availability, and which can also be significantly affected by rapid obsolescence and patent expirations.

Artificial intelligence (AI) is subject to limitations, and you should be aware that any output from an IA-supported tool or service made available by the Firm for your use is subject to such limitations, including but not limited to inaccuracy, incompleteness, or embedded bias. You should always verify the results of any AI-generated output.

Environmental, Social and Governance ("ESG") investments in a portfolio may experience performance that is lower or higher than a portfolio not employing such practices. Portfolios with ESG restrictions and strategies as well as ESG investments may not be able to take advantage of the same opportunities or market trends as portfolios where ESG criteria is not applied. There are inconsistent ESG definitions and criteria within the industry, as well as multiple ESG ratings providers that provide ESG ratings of the same subject companies and/or securities that vary among the providers. Certain issuers of investments may have differing and inconsistent views concerning ESG criteria where the ESG claims made in offering documents or other literature may overstate ESG impact. ESG designations are as of the date of this material, and no assurance is provided that the underlying assets have maintained or will maintain and such designation or any stated ESG compliance. As a result, it is difficult to compare ESG investment products or to evaluate an ESG investment product in comparison to one that does not focus on ESG. Investors should also independently consider whether the ESG investment product meets their own ESG objectives or criteria. There is no assurance that an ESG investing strategy or techniques employed will be successful. Past performance is not a guarantee or a dependable measure of future results.

Rebalancing does not protect against a loss in declining financial markets. There may be a potential tax implication with a rebalancing strategy. Investors should consult with their tax advisor before implementing such a strategy.

The **indices** are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. The indices are not subject to expenses or fees and are often comprised of securities and other investment instruments the liquidity of which is not restricted. A particular investment product may consist of securities significantly different than those in any index referred to herein. Comparing an investment to a particular index may be of limited use.

The **indices selected by Morgan Stanley Wealth Management** to measure performance are representative of broad asset classes. Morgan Stanley Smith Barney LLC retains the right to change representative indices at any time.

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The author(s) (if any authors are noted) principally responsible for the preparation of this material receive compensation based upon various factors, including quality and accuracy of their work, firm revenues (including trading and capital markets revenues), client feedback and competitive factors. Morgan Stanley Wealth Management is involved in many businesses that may relate to companies, securities or instruments mentioned in this material.

This material has been prepared for informational purposes only and is not an offer to buy or sell or a solicitation of any offer to buy or sell any security/instrument, or to participate in any trading strategy. Any such offer would be made only after a prospective investor had completed its own independent investigation of the securities, instruments or transactions, and received all information it required to make its own investment decision, including, where applicable, a review of any offering circular or memorandum describing such security or instrument. That information would contain material information not contained herein and to which prospective participants are referred. This material is based on public information as of the specified date, and may be stale thereafter. We have no obligation to tell you when information herein may change. We make no representation or warranty with respect to the accuracy or completeness of this material. Morgan Stanley Wealth Management has no obligation to provide updated information on the securities/instruments mentioned herein.

The summary at the beginning of the report may have been generated with the assistance of artificial intelligence (AI).

The securities/instruments discussed in this material may not be appropriate for all investors. The appropriateness of a particular investment or strategy will depend on an investor's individual circumstances and objectives. Morgan Stanley Wealth Management recommends that investors independently evaluate specific investments and strategies, and encourages investors to seek the advice of a financial advisor. The value of and income from investments may vary because of changes in interest rates, foreign exchange rates, default rates, prepayment rates, securities/instruments prices, market indexes, operational or financial conditions of companies and other issuers or other factors. Estimates of future performance are based on assumptions that may not be realized. Actual events may differ from those assumed and changes to any assumptions may have a material impact on any projections or estimates. Other events not taken into account may occur and may significantly affect the projections or estimates. Certain assumptions may have been made for modeling purposes only to simplify the presentation and/or calculation of any projections or estimates, and Morgan Stanley Wealth Management does not represent that any such assumptions will reflect actual future events. Accordingly, there can be no assurance that estimated returns or projections will be realized or that actual returns or performance results will not materially differ from those estimated herein. This material should not be viewed as advice or recommendations with respect to asset allocation or any particular investment. This information is not intended to, and should not, form a primary basis for any investment decisions that you may make. Morgan Stanley Wealth Management is not acting as a fiduciary under either the Employee Retirement Income Security Act of 1974, as amended or under section 4975 of the Internal Revenue Code of 1986 as amended in providing this material except as otherwise provided in writing by Morgan Stanley and/or as described at www.morganstanley.com/disclosures/dol.

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