Morgan Stanley

WEALTH MANAGEMENT

INVESTMENT STRATEGY

Global Investment Committee | May 2024

On the Markets

Navigating Higher for Longer

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After soaring 25% from the end of October through March, in April US equities pulled back 4.2% from the S&P 500 Index's 5,254 all-time high. At the heart of the pause has been a material shift in the market narrative, as growth has proved much stronger than expected and inflation much more stubborn than hoped for.

On the growth front, a burgeoning recovery in global manufacturing, still-strong fiscal flows and related capex, and a resilient consumer have led to a major upward revision in forecast GDP growth. Ellen Zentner, GIC member and Morgan Stanley & Co.'s chief US economist, has raised her 2024 and 2025 estimates for real activity by 70 basis points each, to 2.3% and 2.1%, respectively. Similarly, it is hard to deny that inflation is proving stickier. Reacceleration of so-called supercore drivers—including upside surprise in the employment cost index—along with housing prices 6% above year-ago levels and personal consumption expenditures indicating inflation closer to 4% than the Fed's 2% target, contradict the "Goldilocks" soft-landing assumptions that drove equities and multiples expansion late last year.

We see several implications of this change in storyline. First, it complicates the path for a data-dependent Fed to ease rates. To wit, since the end of March, fed funds futures have gone from discounting four cuts in 2024 to less than two. Based on MS & Co. forecasts, we now estimate that fed funds will decline to 3.6% at year-end 2025, 100 basis points above prior estimates. Second, given bifurcation between those who are rate sensitive and those who are not, the new scenario will test the limits of higher-for-longer rates, fostering uncertainty and "fat tails" for the economic probability distribution. With low-end consumers, commercial real estate owners, regional banks and small and unprofitable companies increasingly stressed, odds for both a hard landing and a "no landing" have risen. Third, and more positively, stronger growth and pricing power sustain corporate profitability, especially for those with the most compelling branded franchises, raising odds of earnings achievability despite ambitious consensus estimates. With the economy near full employment, the potential for growth and investment to drive productivity is improving. To reflect those dynamics, the GIC recently implemented a tactical portfolio guidance change, increasing our focus on large-cap quality stocks and real assets (energy and power-generation infrastructure) while eliminating exposure to small caps and reducing exposure to duration. Investment themes, the new inflation regime and diversification remain our focus. ■

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US EQUITIES

Rates Matter Again for Equities

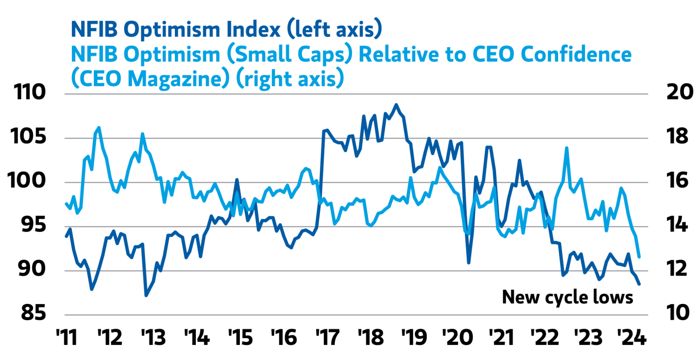
Michael Wilson , Chief Investment Officer and Chief US Equity Strategist, Morgan Stanley & Co. LLC

At the start of the year, we cited three potential 2024 macro outcomes with similar probabilities: 1) a soft landing with slowing and below-potential GDP growth and inflation falling toward the Federal Reserve's 2% target; 2) a no-landing scenario with reaccelerating GDP growth and stickier inflation; and 3) a hard landing. Each has very different implications for asset prices generally and for equity leadership specifically. Just a few months ago, the consensus view skewed heavily toward a soft landing. However, the macro data has started to support the no-landing outcome, with several recent growth and inflation data points exceeding most forecasters' expectations, including those of the Federal Reserve.

Over the past year, the consensus has gone from a hard landing in the first quarter of 2023, to a soft landing in the second quarter, to a hard landing in the third quarter, to a soft landing in the fourth, prior to the current no-landing view. This shift has not been lost on markets, as reflation trades have worked nicely over the past few months. While cyclically sensitive stocks and sectors have started to outperform, however, quality remains a key attribute for market leaders.

We think the combination of quality and cyclical factors makes sense in the context of what is still a later-cycle, rather than an early-cycle, reacceleration of growth. If it were more the latter, we would expect to see more persistent outperformance of low-quality cyclical and small-cap stocks. Furthermore, we continue to believe that much of the upside in economic growth over the past year has been the result of government spending, funded by growing budget deficits. This has led to a "crowding out" of many smaller and lower-quality businesses and the lowest small-business sentiment since 2012 (see chart).

Small Business Confidence at New Cycle Low

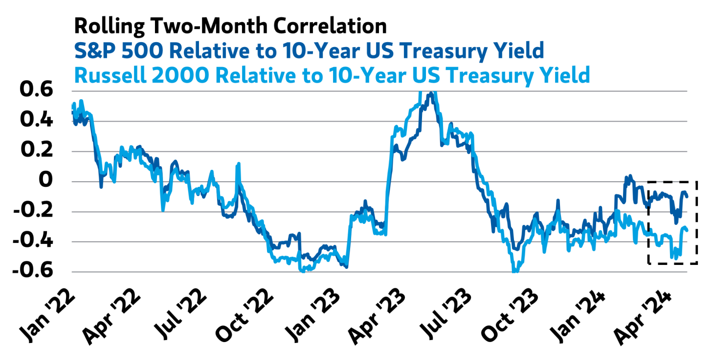


Source: Bloomberg, Morgan Stanley & Co. Research, Morgan Stanley Wealth Management Global Investment Office as of April 14, 2024

QUALITY BIAS. As with most fiscal stimulus packages, the plan is for this bridge of support to buy time until a more durable growth outcome arrives, driven by organic private income, consumption and spending. Until this potential outcome is more solidified, the equity market should continue to trade with a quality bias. The largest risk for stocks more broadly is higher back-end rates as the bond market begins to demand a higher term premium due to higher inflation and the growing supply of bonds to pay for the continued deficits.

The correlation of stocks to the 10-year US Treasury yield has turned decidedly negative again with higher inflation readings. We have also been highlighting a 4.35% to 4.40% yield range for the 10-year note as a key level for stock valuations, and it was breached decisively to the upside a few weeks ago. Unsurprisingly, small caps experienced more material underperformance, along with other lower-quality and more-levered cyclicals that are most negatively correlated to the 10-year yield (see chart). Given that the rally in equities since October has largely been a function of higher multiples as rates came down, it's rational to assume that multiples may now face headwinds if rates rise further.

Stocks Are Again Negatively Correlated to Yields, Especially Small Caps



Source: Bloomberg, Morgan Stanley & Co. Research, Morgan Stanley Wealth Management Global Investment Office as of April 25, 2024

While leadership within the equity market continues to broaden toward cyclicals, it still makes sense to stay up in the quality curve. Our recent large-cap energy sector upgrade fits the shift in the narrative to the no-landing outcome, and it remains one of the cheapest ways to get exposure to the reflation theme. Other reflation trades are less attractive from a valuation standpoint, in our view.

AGGRESSIVE FISCAL SPENDING. Finally, it's worth spending a moment on fiscal dominance—a topic that is gaining attention in our discussions with clients. We first identified this changing policy dynamic in April 2020, immediately after the lockdowns and massive government response. At that time, we viewed it very favorably, given the massive slack in the economy and potentially positive impact on corporate earnings. Today, we are less sanguine on this dynamic, as aggressive fiscal spending may ultimately keep the Fed from cutting rates to levels that will benefit small businesses with lower-quality balance sheets and less-flexible cost structures. The bottom line is that a no-landing scenario may be good for growth but challenging for equity valuations if rates push higher. The best opportunities likely lie beneath the surface in individual stocks. ■

This article was excerpted from the April 14 Morgan Stanley & Co. report, "Rates Matter Again for Equities." For a copy of the full report please contact your Financial Advisor.

US ECONOMICS

US Economic Update

Ellen Zentner, Chief US Economist, Morgan Stanley & Co. LLC

An intellectual conundrum has been resolved. Faster US population and labor force growth than previously thought explains last year's rapid economic expansion amid decelerating inflation and wage pressures. Incoming data also supports government estimates that immigration flows this year will be similar to last year. For the US economic outlook, this revelation has significant implications, and Federal Reserve policymakers will need more time to fully embrace them in their projections. We have made significant upward revisions to our growth outlook but also to unemployment, capturing the spirit of Fed Chair Powell's assessment that the US is "a bigger economy, rather than a tighter one."

STRONGER IMMIGRATION. This year, we have focused on new population estimates showing faster growth primarily due to increased immigration. The Congressional Budget Office's updated population projections point to 3.3 million immigrants in 2024—about the same as it estimates for 2023. For both years, the CBO boosted population growth estimates significantly, by 0.6 percentage points for 2023 and 0.7 percentage points for 2024, as well as by 0.5 percentage points for 2025. Relative to our year-ahead outlook published in November 2023, incorporating the higher estimates raised our 2024 GDP growth forecast by 0.7 percentage points on a fourth-quarter-over-fourth-quarter basis, to 2.3%. It also raised our 2025 forecast by the same amount, to 2.1%. We expect slower headline GDP growth in 2024 and 2025 to belie more resilience in final private domestic demand, as consumption and investment respond.

The civilian noninstitutional population has grown much faster than anticipated, leading to a significantly higher breakeven rate of labor supply and demand. We believe this will result in a labor market that moves from balance into oversupply this year, as evidenced by higher unemployment and further easing in wage pressures. We estimate monthly 2024 breakeven payroll growth at approximately 265,000, declining to about 210,000 in 2025. We forecast monthly net new job gains that average 225,000 this year and 186,000 next year, lower than breakeven, putting upward pressure on the unemployment rate. By the fourth quarter of 2024, we expect the unemployment rate to average 4.2% versus 4.1% in our prior projection and 3.7% in the fourth quarter last year. We see the rate rising further in 2025, to 4.5%.

POSITIVE SUPPLY SHOCK. The US is experiencing a positive supply-side shock, which allows for a larger economy without adding inflationary pressures. Despite the significant upgrade to GDP growth, we now see more labor market slack and have revised our inflation forecasts. We are also making two important changes to the Fed's policy path: 1) a slightly later start and 2) an earlier ending at a higher level.

While recent inflation data has been broadly in line with Federal Open Market Committee (FOMC) forecasts, volatility has made it difficult for the Fed to extract the signal from the noise. By the July meeting, additional inflation prints should provide a clear enough view for the Fed to deliver its first rate cut (versus June in our previous projection). We expect strong growth, supportive financial conditions and a desire to move cautiously to support a Fed decision to skip a rate change in September. With fresh projections then solidifying a view that inflation is in line with expectations, and with more labor market slack, we anticipate two more cuts for the year. With monthly inflation prints consistent with the Fed's 2% goal, we expect the central bank to then cut at every FOMC meeting through the first half of 2025, reaching 3.625%.

RISKS TO OUR OUTLOOK. It is important to stress the high level of uncertainty around immigration assumptions for 2025 and beyond. Economic activity would face downside risk if the strong tailwind of immigration were to fall off meaningfully. More broadly, the post-election outlook for 2025 around trade policy, taxes, immigration reform and energy policy—all of which could impact the growth outlook next year—remains highly uncertain. ■

MS & Co. Forecast Comparison: April 2024 Versus 2024 Year-Ahead Outlook

	2024	2025
Real GDP (% Q4/Q4)		
April 2024 Forecast	2.3	2.1
2024 Year-Ahead Outlook (November 2023)	1.6	1.4
Difference (percentage points)	*0.7*	*0.7*
Unemployment Rate (% Q4 Average)		
April 2024 Forecast	4.2	4.5
2024 Year-Ahead Outlook (November 2023)	4.1	4.3
Difference (percentage points)	*0.1*	*0.2*
Core PCE Inflation (% Q4/Q4)		
April 2024 Forecast	2.6	2.1
2024 Year-Ahead Outlook (November 2023)	2.4	2.1
Difference (percentage points)	*0.2*	*0.0*
Fed Funds Target		
April 2024 Forecast	4.625	3.625
2024 Year-Ahead Outlook (November 2023)	4.275	2.375
Difference (percentage points)	*0.250*	*1.250*

Source: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve, Morgan Stanley & Co. Research, Morgan Stanley Wealth Management Global Investment Office as of April 14, 2024

This article was excerpted from the April 14 Morgan Stanley & Co. report, "Outlook Update: Near-Term Inflation Against a Positive Supply Shock." For a copy of the full report, please contact your Financial Advisor.

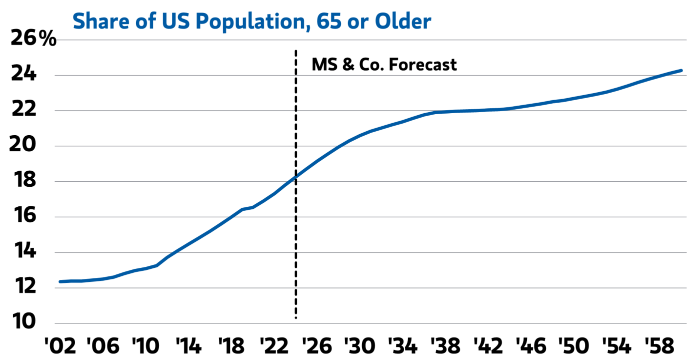
LONGEVITY

The Economics of Aging

Sarah Wolfe, Economist, Morgan Stanley & Co. LLC

Aging is rapidly shifting the composition of the US population. This year, nearly 18% of the population is over 65 years old, compared to 12% some 20 years ago and less than 10% prior to the 1970s. We expect the 65-plus population share to continue to rise through 2060 to 24% (see chart). The growth of the elderly segment means that its members' spending and savings decisions, along with their wealth accumulation, will become increasingly important for both demand and the overall economic outlook.

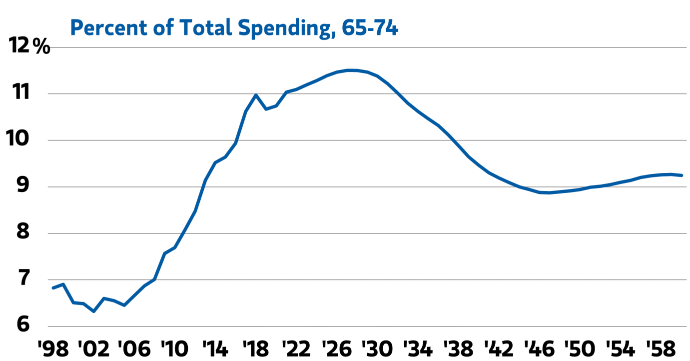
65 or Older Share of Total Population



Source: United Nations, Morgan Stanley & Co. Research, Morgan Stanley Wealth Management Global Investment Office as of Dec. 31, 2023

Leveraging population projections from the US Census Bureau and spending-by-income details from the Consumer Expenditure Survey, we project that the 65-plus population will maintain its peak share of consumer spending through 2030, at about 12%. It is likely to begin moderating in 2030-2050, as the youngest population group grows in size and spending (see chart).

Elderly Cohort Share of Total Spending



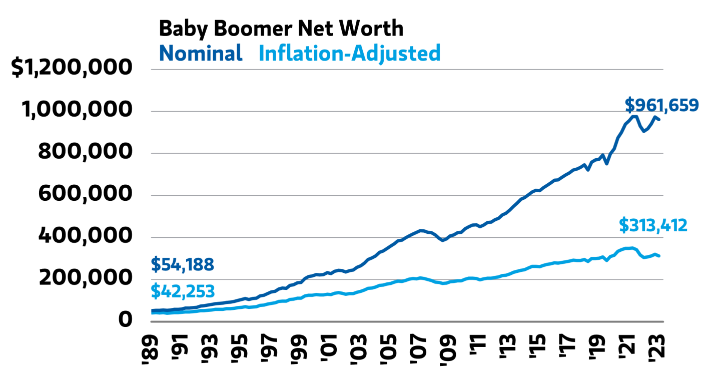
Note: Forward projections based on Census Bureau and Consumer Expenditure Survey data. Source: US Bureau of Labor Statistics, Morgan Stanley & Co. Research, Morgan Stanley Wealth Management Global Investment Office as of Dec. 31, 2023

While the oldest cohort accounts for nearly one-fifth of the population, it represents a disproportionately smaller share of consumer spending because seniors have much lower income and fewer expenses. The 65-plus group spends much less than younger segments on work-related expenses like transportation and apparel, and on education services. However, seniors spend significantly more on health care and housing-related expenses, as well as on entertainment.

WEALTH BUILDUP. Seniors have benefited from a tremendous buildup in housing and financial wealth. Through 2022, their net worth as a share of disposable income sat at an all-time high, indicating that this population is well positioned for a comfortable retirement. In fact, nearly 80% of the 65-plus population are homeowners versus 65% for the overall population, as the group has disproportionately reaped the benefits of its accumulated home equity.

In nominal terms, from 1989 to 2023, per capita net worth for baby boomers increased by 1,700%, rising from $54,000 to $960,000 (see chart). Adjusted for inflation, the increase has been 640%. Real estate has played a critical part in wealth accumulation, with 25% attributed to housing. The per capita real estate wealth buildup over this period has been 740%, from $30,000 to $250,000, equivalent to a 240% gain in inflation-adjusted terms. Even with inflation factored in, baby boomers' per-capita home equity of $250,000 provides a nice additional retirement cushion and the ability to put down a larger down payment on a new home when they decide to move, or to consider a senior living facility.

Net Worth for Baby Boomers



Source: Federal Reserve, Morgan Stanley & Co. Research, Morgan Stanley Wealth Management Global Investment Office as of Dec. 31, 2023

THE "AGING-IN-PLACE" FACTOR. Most seniors say they want to stay in their existing home, a phenomenon known as aging in place. When AARP surveyed seniors on the topic in 2000, 90% said they wanted to remain in their home. Fast-forward to 2023, and the numbers barely changed: 87% wanted to age in place. However, the sheer size of this population and the fact that the number of seniors who are most likely to be in senior living (85-plus years old) is projected to grow in population share through 2050 still creates significant tailwinds for investment in serving seniors.

On average, seniors tend to move into senior living facilities between the ages of 80 and 82, which indicates the population most likely to need such arrangements—those 85 and up—will continue to grow as a share of the population until it peaks in 2050. We expect residents in independent living, assisted living and skilled-nursing housing to grow from about 1.7 million today to 2.1 million in 2030. The potential rise of active-adult communities would provide further upside to our estimates.

SENIOR LIVING. According to the National Investment Center for Senior Housing & Care, the senior housing occupancy rate was 85.1% in the fourth quarter of 2023 versus 87.1% in the first quarter of 2020. The occupancy rate hit a low of 77.8% in 2021 and has since made a steady recovery. The rebound has been strongest for assisted living and nursing care, while independent living has lagged. While higher interest rates are slowing the transition into independent living, the demographics support strong demand trends longer term. Further, rising life expectancies mean that more people will reach the age at which you are most likely to move into senior living and are more likely to be there longer. And longer life expectancy means people will be living in senior facilities longer, too.

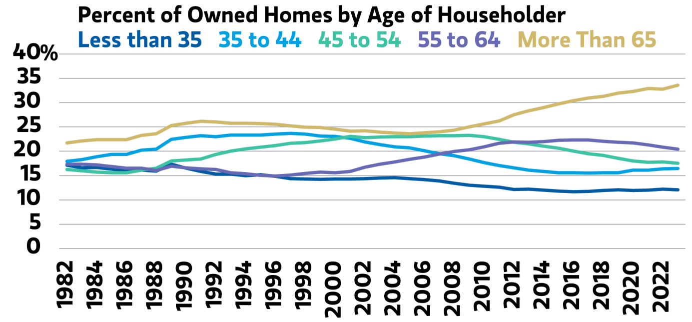
To be sure, senior living is expensive and labor intensive. Senior housing ranges from independent living facilities, for those requiring minimal assistance, all the way to memory-care facilities, for those requiring skilled nursing care. Nursing and residential care facilities employment experienced significant outflows of labor during the peak of COVID and has seen little recovery since. In 2020-2021, employment at senior care facilities fell more than 15%, while the 65-plus population grew by 6.7%. While the broader labor market is fully recovered, senior care employment is still 7% below its pre-COVID level, and even further below longer-term trend.

While wage growth for senior-living workers has been strong over the past year, the industry's overall compensation is still 33% below the national average for wages. As such, amid a very tight labor market, there is greater opportunity to move into higher-paying industries or other areas within the health care sector.

It will be difficult for senior living facilities to meaningfully raise wages further to attract employees, given pricing constraints. Research has found that demand for senior living is price elastic—meaning that it is viewed as a luxury, not a necessity. As such, rising prices will cause demand for senior living to dampen and keep people in their existing home arrangement. This dynamic of high price elasticity and labor shortages could present a long-term headwind for the industry.

IMPACT ON RESIDENTIAL HOUSING. An aging population affects the residential housing market, too. From 1982 through 2009, people over 65 years old owned roughly 25% of US homes; between 2009 and 2023, that steadily climbed to 34% (see chart). The growth has not just been among younger seniors. People over 75 became the largest share of homeowners in 2009 and have not looked back. More than one out of every three homes is owned by someone above 65, and they're not in a hurry to move. In fact, their desire to age in place is contributing to the lack of supply in the housing market that has kept home prices elevated despite deteriorating affordability.

People Over 65 Own More Than One Out of Every Four Homes in the US



Source: US Census Bureau, Morgan Stanley & Co. Research, Morgan Stanley Wealth Management Global Investment Office as of March 19, 2024

In surveys, seniors say almost unanimously (97%) that they want to remain in their current home, as it's the most familiar and lowest-cost option, especially for those without a mortgage. The rise of home health and hospice care agencies provides an affordable complementary option to improve quality of life, and we note that about 7% of older adults use home health agencies or hospice-care services that are regulated and paid through Medicare. We expect penetration rates for such services to continue to rise.

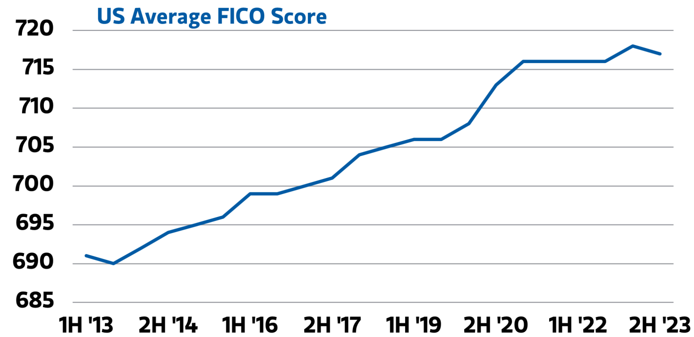
As for the other 3%, they will likely look to senior housing of various sorts. And even if market penetration remains flat, senior housing residents are likely to number 2.1 million in 2030, up from 1.7 million in 2022, based on the growth of the senior population cohort. ■

This article was excerpted from the March 19 Morgan Stanley & Co. report, "Longevity in the US: Trends and Investment Opportunities." For a copy of the full report please contact your Financial Advisor.

Short Takes

Key Consumer Credit Metric Shows Signs of Stalling

With the Fed's pause in short-term rate adjustments now approaching 10 months, an important US consumer credit metric—the average FICO score—recently began to exhibit some weakness. While the closely watched indicator is still at a relatively high level, at 717, its modest decline, following some flattening out since 2021, was its first in more than a decade. A key driver was an increase in the rate of missed payments. Notably, 18% of the US population recently owed a payment on one or more credit cards that was past due by 30 days or more. That is especially important amid rising credit card interest rates, which averaged 22.6% at the end of the first quarter, according to the Federal Reserve.—*Peter Winkler*



Source: Bloomberg, Fair Isaac Corporation, Global Investment Office as of Oct. 31, 2023

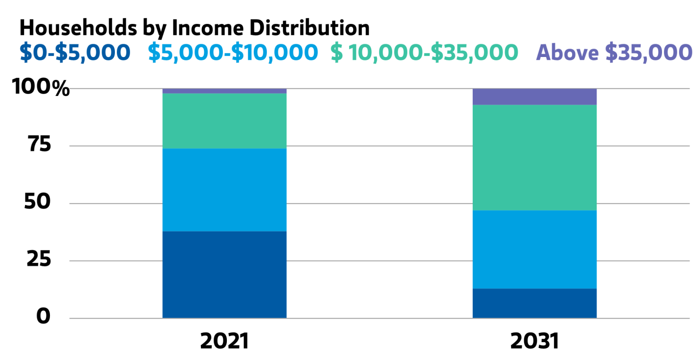
Signs of Resurgence for the IPO Market?

Source: Bloomberg, Morgan Stanley Wealth Management Global Investment Office as of April 30, 2024

After more than two years in the doldrums, the US initial public offering (IPO) market is showing signs of life. Given the performance of the Renaissance IPO Index and the success of some major IPOs, such as Reddit and Astera Labs, many believe that IPO volume could be poised to increase meaningfully from 2022's low levels. The Renaissance IPO Index is up 31.9% over the past 12 months versus the S&P 500 Index's 22.3% increase. While a return to a strong IPO pace could potentially benefit private firms exploring exit strategies as well as investors, getting all the way back to the early-2021 IPO pace would likely be a stretch at best, as volume for that year's first quarter exceeded $150 billion.—*Matt Armstrong*

India's Middle Class Poised for Further Growth

On track to become the world's third-largest economy by 2027, India continues to exhibit strong growth. One especially important component of that growth is its expanding middle class. Morgan Stanley & Co. Research predicts that by 2031, 46% of the population will fall in the $10,000-$35,000 income range—nearly double 2021's 24%. A growing middle class is a powerful tailwind. In fact, International Monetary Fund researchers found that making the poor and middle class one percentage point richer can raise a nation's GDP growth by as much as 0.38 percentage points. Investors have rewarded India in recent years for its economic growth, as the MSCI India Index has outpaced the MSCI Emerging Markets Index by nearly 15% per year since 2019.—*Chris Baxter*



Note: Morgan Stanley & Co. estimates for 2031.
Source: Morgan Stanley & Co. Research, Morgan Stanley Wealth Management GIO as of April 6, 2024

GLOBAL MACRO

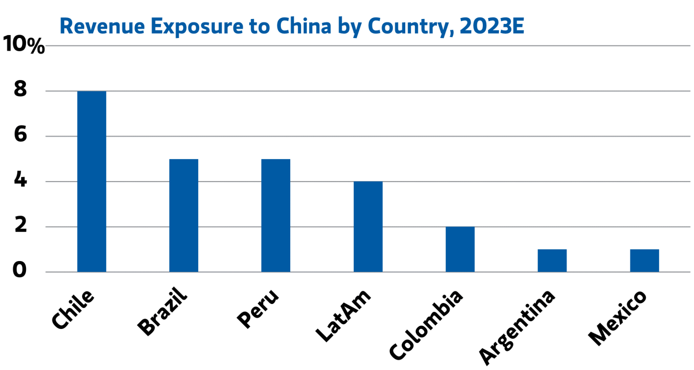
Shifting Global Export Trends

Nikolaj Lippmann, Equity Strategist, Morgan Stanley México, Case de Bolsa, S.A. de C.V.+

Chinese policymakers have committed to a profound shift in focus away from property and local government debt and toward the "new productive forces" of science and technology upgrading and investment in high-tech and clean-tech goods. This has led to multiple downward revisions to China GDP, and Chinese companies have underperformed expectations for nine consecutive quarters. The Morgan Stanley & Co. Asia economics team has identified the challenges that China faces as "3D"—debt, demographics and deflation. But that's not all. Global derisking of supply chains and portfolios adds another layer of complexity, particularly for profitability in sectors facing excess capacity, such as electric vehicle (EV) batteries and solar power.

POLICY SHIFT. The world's second-largest economy can't make a tectonic policy shift without reverberations being felt elsewhere. The impact on Latin America may seem like an afterthought in comparison with what China's moves may do to its Asian neighbors, but it is nonetheless consequential. Chile gets 8% of its corporate revenues from China, followed by Brazil and Peru—each at about 5% (see chart). Brazil ships iron and agricultural products to China, while Peru sends copper, fish and specialty agricultural products like blueberries and asparagus. As a whole, about 4% of Latin America's corporate revenues are sourced in China. As a result of changes in China, policymakers in Latin America will increasingly face a dilemma between welcome deflationary factors arising from cheaper Chinese imports and the risk to domestic manufacturing.

Chile Is the Country Most Exposed to China in Terms of Revenues



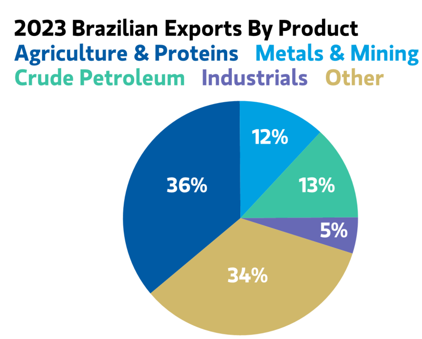
Source: Company data, Morgan Stanley & Co. Research, Morgan Stanley Wealth Management Global Investment Office as of April 12, 2024

China's new, more strategic manufacturing exports are set to challenge multiple sectors and policymakers. This has become evident in recent months during which Latin American countries, like many around the world, have seen sharp increases in imports of Chinese electric vehicles (EVs). A similar picture is playing out in renewable energy and battery technology. It affects Latin American inflation and local manufacturing; it also affects retailers, car rental companies, shopping malls, telecoms and utilities. It ultimately presents a new multipolar and national security complexity pertaining to the future of domestic manufacturing capabilities and dependence on foreign powers.

GAMING A SLOWDOWN. China's slowing housing market and infrastructure spending represent the key link to risk in Brazilian markets. Our analysis involves sensitivity testing to different tail risks in China, including a harder landing than expected and even a hard landing for China's overall economy. Some critical takeaways indicate that in the case of a hard landing for Chinese housing, resulting in a 50% decrease in Brazilian iron ore exports to China, the result would be a 0.8%-equivalent hit to GDP. It could also result in a 4% decline in total exports, leading to an increase in the Brazilian current account deficit to 2.2%. While not a wishful scenario, it is a manageable one, and in the real world it would likely be mitigated by positive factors from other commodities. A hard landing in China that causes all Brazilian exports to drop by 50% would be of greater concern, as it could lead to a 1.4% decline in GDP and a 7.1% current account deficit.

Brazil's export base has in large part been mirroring China's economy—undergoing a shift away from investment and toward consumption. It has been increasing exports of agricultural products and oil, thereby mitigating negative impacts down the road on mining commodities. For instance, agriculture, proteins and oil accounted for about 50% of Brazil's total exports in 2023, while metals and mining represented just 12% (see chart). By 2030, agriculture, proteins and oil could account for 75% of exports.

Agriculture, Proteins and Oil Accounted for Approximately 50% of Brazil's Total Exports in 2023



Source: Secex, Morgan Stanley & Co. Research, Morgan Stanley Wealth Management Global Investment Office as of April 12, 2024

While China continues to be Brazil's main destination, at about 30% of total exports, the shift in the export mix away from metals provides a hedge vis-à-vis China's slowing appetite for metal and mining commodities. Iron ore, for example, makes up about 18% of what Brazil sends to China, a 23-year low.

RECALIBRATING FOR A NEW ERA. China's "new era," featuring slower growth and changing sources of growth, affects Latin American investors at multiple levels. These impacts range from the apparent external vulnerability of Andean countries like Chile and Peru that export copper and lithium to China, to Brazil's changing export base, making it well-positioned for multipolar dynamics and rising trade tensions between the US and China.

In both Brazil and Mexico, we find that the macro and earnings-per-share narratives differ. Mexico's growing role in manufacturing is also linked to dynamics that are reshaping global supply chains. In Brazil, metal and mining company profits materially outweigh agricultural sector profits, despite the recent years' macro shifts. Risks around iron ore exports from Brazil to China appear to be skewed negatively, as Chinese housing rebalances. On the other hand, the total profit of listed Brazilian farms is in the hundreds of millions of dollars—much smaller and far more fragmented than the iron ore market. For Brazil, however, soy exports are now higher than iron ore exports, and total agricultural exports are three times those of mining. What's more, the correlation of soft commodities with hard commodities is low, and drivers are often different.

The combination of weaker Chinese domestic demand and a supply-centric strategy is likely to keep its export prices under downward pressure, as supply chain investments, both in China and abroad, potentially outpace demand. For the Latin America region, the key implication is the importance of understanding the magnitude of potential shifts in relative sector growth and commodity intensity and what they mean for trade patterns. In particular, we are watching the risks around further trade tensions in light of the success of players in China's EV industry and its supply chain. ■

This article was excerpted from the April 12 Morgan Stanley & Co. report, "Not So Fast: China's New Era & LatAm Markets," combining input form various MS & Co. Research teams. For a copy of the complete report, contact your Financial Advisor.

CIO SURVEY

1Q24 CIO Tech Survey Results

Keith Weiss, CFA, Equity Analyst, Morgan Stanley & Co. LLC

In our first quarter 2024 CIO survey, we asked decision-makers at 100 US and European firms about their external information technology (IT) budgets and the current spending environment. While budget growth expectations have remained stable and below the long-term average, the survey's forward indicators have inflected positive, suggesting upward revision may be on the horizon. Positive inflection in the up-to-down revision ratio, in particular, was notable—indicating that, despite recently being "stuck in second gear," more CIOs expect to revise IT budgets higher in 2024 than CIOs expecting to revise them lower.

From a sector standpoint, CIOs expect acceleration across all groups, with software leading the pack on that metric, followed by communications. Regionally, expectations for IT spending among US firms continue to outpace those of European Union (EU) counterparts. That said, while projections for 2024 budget growth were revised down by US respondents, there were signs of geographical bifurcation, with EU CIOs revising their expectations higher sequentially.

On a long-term basis, secular trends were again constructive, as more CIOs anticipate IT spending as a portion of revenue to grow over the next three years than to decline. In our view, our survey's strong forward indicators likely stem from building interest in generative artificial intelligence (GenAI), with AI retaining its position at the top of the CIO priority list. While the GenAI innovation cycle undoubtedly presents a vast opportunity, we suggest patience around the pass-through and translation of GenAI dollars into meaningful IT spending inflection, as most CIOs expect their first projects with GenAI/large language model (LLM) technology to go into production in the second half of 2024 and beyond. The positive inflection in survey leading indicators leaves us optimistic about the potential for more material IT budget revisions. However, with growth expectations sitting below long-term averages, and GenAI implementation timelines still biased to the second half of 2024 and later, we remind investors to practice patience around this rapidly transforming cycle.

Highlighted Macro Takeaways and Key Details

CIO expectations for 2024 IT budgets remained largely stable sequentially, at a 3.2% growth rate versus the 3.3% indicated in our fourth quarter 2023 survey, with the level remaining below the 4.1% 10-year average. Regionally, US CIOs continue to expect higher growth in IT budgets, at 3.3%, compared to their EU counterparts (3.0%). Notably, EU CIOs' growth expectations returned to above 3.0%.

The one-year up-to-down ratio ticked up again, to 1.1 times, reflecting the first reading above 1.0 times since the second quarter of 2022. While still below the eight-year average of 1.3 times, in a constructive sign, more CIOs anticipate revising their 2024 budgets up (25%) than down (23%). On a three-year view, the metric remains constructive, at 4.4 times.

CIOs continue to expect software to have remained the fastest-growing technology industry in 2023, at 3.3% growth, followed by communications (2.5%), services (2.3%) and hardware (1.3%). In 2024, software spending is expected to continue to lead the pack, at 3.5% growth. Expected growth for communications, services and hardware all decelerated modestly from the fourth quarter of 2023.

AI/machine learning stayed on the top of the priority list, with 13.7% of responses—for the same level of net prioritization as indicated in the fourth quarter of 2023. Security software (up 11.3%), data warehousing/business intelligence/analytics (up 9.3%), digital transformation (up 9.3%) and cloud computing (up 8.0%) rounded out the top five, in line with fourth quarter 2023 priorities.

AI is continuing to cement itself as a clear priority, remaining on the top of the CIO priority list and increasing its net prioritization score by roughly 30 basis points sequentially. Moreover, the percent of CIOs who expect a direct impact to their IT investment priorities within the year—stemming from innovations around AI, LLM and other technologies—has continued to increase since we introduced the question at the start of 2023, with the 2024 first quarter reading coming in at 73%. Regarding timing, most CIOs expect their first AI/LLM projects to be in production in the second half of this year. Furthermore, 15% and 8% of CIOs expect first projects to be in production in the first half of 2025 and second half of 2025, respectively. ■

This article was excerpted from the April 9 Morgan Stanley & Co. report, "1Q24 CIO Survey—Still Stuck in Second Gear," combining input from various MS & Co. Research teams. For a copy of the complete report, contact your Financial Advisor.

COMMODITIES

Global Oil Market: Incorporating Geopolitical Risk

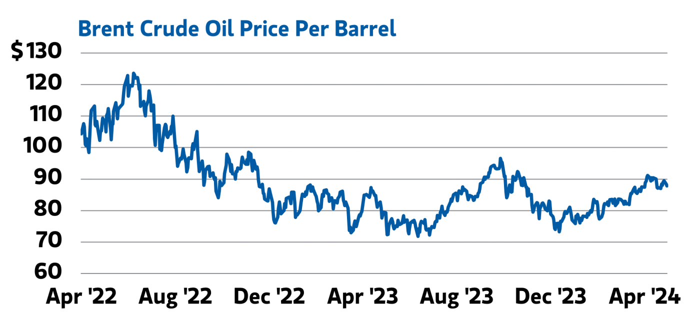
Martijn Rats, CFA, Equity Analyst and Commodities Strategist, Morgan Stanley & Co. International plc+

Our assessment of the oil market's fundamentals, which previously underpinned our Brent crude forecast of $90 per barrel, remains the same as last quarter. When it comes to geopolitical risk, however, even small probabilities can add several dollars to prices. As such, we recently raised our third quarter forecast to $94.

Oil's rally in 2024 (see chart) and its gains since early March have been partially supported by positive fundamental news. For example, China's apparent oil demand (refinery output plus net product imports) grew more rapidly than expected across January and February, as US production fell by more than forecast in January. But prices have also found support from a degree of supply uncertainty in the Middle East. This raises the question of whether gains can continue.

When we published our mid-March edition of *The Oil Manual*, we argued that the fundamentals of supply, demand and inventories were strong enough to support Brent crude oil prices at approximately $90 this summer. In regard to the market's near-term fundamentals, that assessment is unchanged. However, prices respond to more than just fundamentals. While we believe it is still unlikely that events in the Middle East will lead to a supply disruption, if they do, the impact on prices can be large, as was the case in 2022. Therefore, a small probability multiplied by a large impact can justifiably add several dollars to the price of oil in the meantime.

Oil Has Rallied in 2024



Source: Bloomberg, Morgan Stanley Wealth Management Global Investment Office as of April 26, 2024

SUPPLY/DEMAND BALANCE. As we discussed in March, the market's supply/demand balance appears a little tighter than expected at the start of the year. Demand has come in somewhat stronger than anticipated. We recently raised our projection for total liquids demand growth from approximately 1.2 million barrels per day to 1.5 million, which is above the long-term historical growth rate of roughly 1.3 million—even with the post-COVID recovery essentially complete. In short, demand continues to grow at a robust pace.

On the supply side, a few non-OPEC countries, like the US and Brazil, had a weaker start of the year. Still, non-OPEC production overall continues to grow strongly, as broadly expected. At the same time, OPEC+ countries have persisted in restraining production, with OPEC+ recently extending its production agreement. Notably, the agreement now includes a commitment from Russia to cut its output as well. Russia's track record of implementing cuts has been mixed, but given the extensive drone attacks on its refineries, we suspect that some oil production may eventually also be impacted, making the cuts more likely. With non-OPEC growth meeting global demand growth and OPEC production remaining constrained, we suspect that the oil market will be broadly balanced for the full year. However, not all quarters are the same: We expect undersupplied markets in the second and third quarters to be offset by oversupply in the first and fourth quarters.

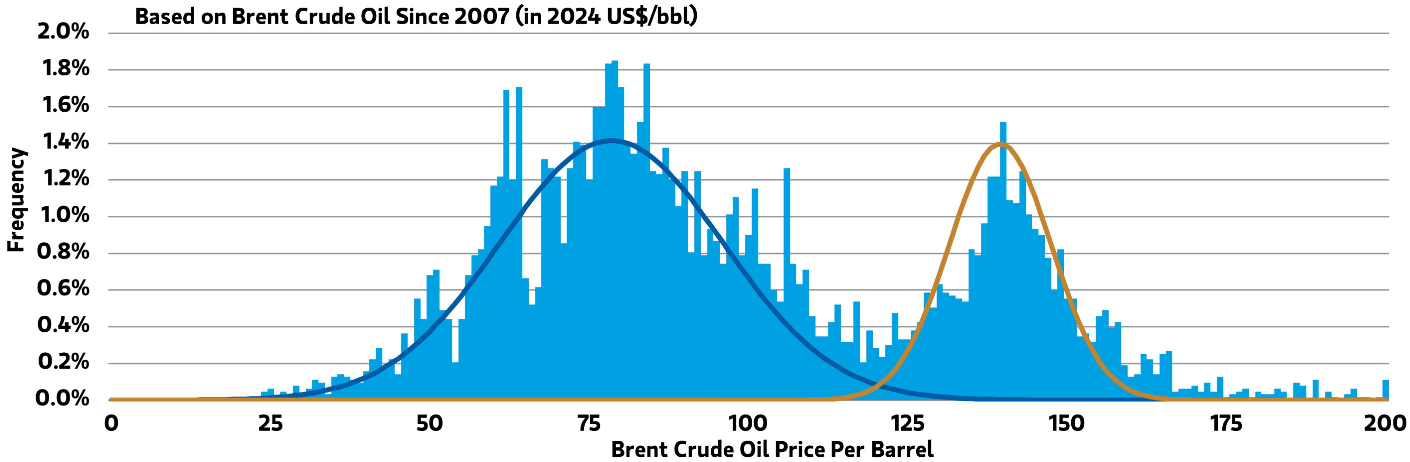
While there are indications of tightness, it is worth noting that there are some indications of softness as well. For example, refining margins for some refineries in Asia have declined sharply and are approaching levels that could potentially reduce crude demand. Also, observable crude oil inventories have recently been building. Our definition of observable inventories includes oil in transit, i.e., in tankers on its way to the customer, and that is where most of the increase is concentrated.

RISK PREMIUM. Our assessment above would change, of course, in the case of a meaningful supply outage. To be clear, that is not part of our base case; in fact, it strikes us as unlikely. That said, noting recent developments in the Middle East, even a small probability of supply disruption can noticeably impact prices.

If there were a supply outage beyond what OPEC spare capacity can compensate for, it is not unthinkable that oil prices would need to rise to the "demand-destruction" level. In the context of the chart below, that would mean a change in the oil price regime from that of the lower Bell curve on the left, which is consistent with regimes anchored by the marginal cost of production, to the higher curve to its right. In fact, the market priced in such a move for a while in 2022, when a decline in Russian production was widely expected—even without any actual decline taking place.

The two price regimes exhibited are far away from each other. This means that even if the probability of a supply disruption in the Middle East is measured in single-digit percentages, a small probability multiplied by a large impact can still justify an increase in oil prices of several dollars.

Distribution of Inflation-Adjusted Oil Prices



Source: Platts, Bloomberg, Morgan Stanley & Co. Research, Morgan Stanley Global Investment Office as of April 8, 2024

While we don't have differentiated insight into how recent geopolitical events will play out, the fact that the degree of related risk in key oil-producing regions has increased seems clear and uncontroversial. Our $4 increase for our third quarter Brent crude price forecast reflects that. Looking out further, we forecast a 2024 year-end price of $87.50, moderately above recent levels. ■

This article was excerpted from the April 8 Morgan Stanley & Co. report, "The Oil Manual: Incorporating Geopolitical Risk." For a copy of the full report please contact your Financial Advisor.

GLOBAL EQUITIES

Obesity Medication: Ripple Effects

Mark D. Purcell, Equity Analyst, Morgan Stanley & Co. International plc+

Growing obesity rates, combined with rising longevity, point to a mounting financial burden on health care systems. More than a billion people are living with obesity worldwide, with 54% of adults expected to be overweight or obese by 2035. Furthermore, obesity contributes to over half of the prevalence of diabetes and is associated with the development of more than 200 chronic diseases. These factors could lead to urgent changes in health care budget allocations—away from a treatment model and toward early screening and prevention.

Over the past 18 months, several developments in regard to the "diabesity" theme have been particularly notable. These include a shifting, more empathetic tone around the topic of obesity, clear evidence of the benefits of glucagon-like peptide-1 (GLP-1) drugs and runaway demand for these medications that has outstripped supply.

BROADENING USES. Injectable GLP-1 medications—initially approved for use in diabetes—can help people lose 15% to 25% of their body weight through appetite reduction. GLP-1 drugs target areas of the brain regulating appetite and food consumption, and patients on the medications feel full longer, have a reduced appetite and consume less food. Next-generation drugs could lead to even greater weight loss.

Treatment of diabetes has become increasingly weight-centric, as updated treatment guidelines drove 90% volume growth for GLP-1 medicines in diabetes globally in 2022. This weight-centric focus is broadening into other health complications, too. For example, the American Heart Association (AHA) has recently defined cardiovascular-kidney-metabolic (CKM) syndrome as a condition that links heart disease, kidney disease, Type 2 diabetes and obesity. The AHA estimates that a third of US adults have three or more risk factors for heart disease, diabetes or kidney disease. Treating CKM syndrome early could have far-reaching benefits for individuals, as well as for the economy and society.

The results from these medications have been impressive. Novo Nordisk's SELECT trial for its obesity medicine Wegovy showed a 20% reduction in the risk of heart attacks, strokes and cardiovascular deaths in nondiabetic patients with obesity and established cardiovascular disease. Further study has shown positive data sets across heart failure, chronic kidney disease and osteoarthritis. What's more, in the next 18 months GLP-1 data sets are due across peripheral arterial disease, sleep apnea and Alzheimer's. We expect an increasing emphasis on outcomes beyond weight loss: Inflammation played an important role in Wegovy's benefits in the SELECT trial, alongside reducing fat, glucose and blood pressure. These results have improved the cost-benefit profile significantly for health care payers. Discussions on the data and further positive readouts from comorbidity trials are likely to strengthen the case for expanded reimbursement in the US as well as for governments outside the US to reimburse for obesity medications.

UNPRECEDENTED DEMAND. Even without reimbursement, patient demand for high-efficacy obesity medicines has been unprecedented. Novo Nordisk's launch of Wegovy has seen uptake reach about 7% of people living with obesity in Denmark after 12 months, about 7% in Norway after 11 months and about 9% in Iceland after just two months.

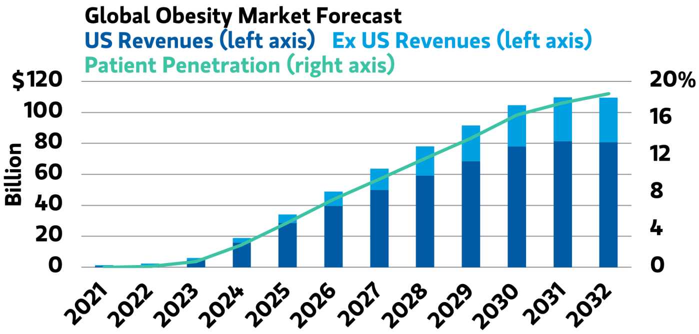
Crucially, these low-population-market launches have not been constrained by supply. In the key US market, however, supply shortages have hampered growth, keeping patient penetration for high-efficacy obesity medicines below 1% in 2023. Rapid reimbursement expansion, to cover 50 million lives in the US (compared with an estimated 110 million prevalence of adult obesity), has supported strong patient demand, which has continued to outstrip supply.

The key bottleneck has been fill-finish pen device capacity—that is, filling autoinjectors with drugs and packaging them for distribution—and, to a lesser extent, capacity to manufacture active pharmaceutical ingredients (APIs). Fill-finish sites take over three years to build and more than a year to scale, while API capacity takes over five years. These are complex facilities, and construction is challenged by constraints on machinery and equipment, technical expertise and human capital. The result is huge supply chain investment. But there is limited visibility on the cadence of obesity drug supply chain ramps as new facilities come on line, and this complicates attempts to forecast market size.

$105 BILLION MARKET. With supply the main driver of uptake in the next few years, it is a critical input in our bottom-up scenarios. We project the global obesity market to reach $105 billion in 2030, with 20 million US patients receiving high-efficacy obesity medicines in 2030, and a cumulative 33 million patients over the 2021-2030 period (see chart). In our bull case, this rises to $144 billion, based on 27 million US patients in 2030, and a cumulative 45 million from 2021 to 2030. If supply constraints persist, our bear case is a $55 billion global market and 10 million US patients in 2030, and a cumulative 17 million in 2021-2030.

Novo and Lilly may have established a possible duopoly in the market. Still, the potential scale of the obesity market will also continue to attract other large companies with established platforms in cardio-metabolic disease.

Our Base Case Forecasts for the Global Obesity Market —$105 Billion in 2030



Source: Morgan Stanley & Co. Research, Morgan Stanley Wealth Management Global Investment Office as of April 14, 2024

DOWNSTREAM EFFECTS. How will increased use of obesity medications affect downstream health care? Our research suggests that moderate obesity is associated with about $1,500 higher spend on health care per year compared to that of a "normal" weight person. The impact is even greater with severe obesity, at some $3,000 in higher spending per year. Yet, we think it would be a mistake to assume reduced rates of obesity are intrinsically negative for health care spending and downstream health care providers.

The increase in life expectancy as the result of potentially lower obesity rates is an important element of the debate. Our analysis suggests that obesity reduces life expectancy by about 10 years in younger adults and by five years in middle-aged adults. Health care spending is significantly higher in the later years of life. On average, adults aged 65-plus spend two to three times more on health care per year than adults in the 45-64 bracket. We therefore take the view that obesity medications will not dismantle core medical technology markets. In fact, we argue that the increase in life expectancy implies positive impacts in most medical technology categories in the medium to long term, with the possible exception of dialysis.

OTHER IMPACTS. In life sciences, the picture is less nuanced, with supply chain investment required for GLP-1 medications benefiting not just the contract manufacturers but life sciences tools more broadly. Further downstream in the US health care system, uptake of anti-obesity medications will impact insurers, distributors, pharmacies and health care technology. Although the longer-term implications are still unclear, US pharmacy benefit managers appear likely to be the most obvious beneficiaries at this stage, whereas drug distributors and pharmacies will probably see only minimal profit uplift in the near term. So far, US managed care providers are taking a conservative approach to coverage, given high costs, patient adherence and the complexity of the debate around how the drugs will affect the medical cost curve. Most conditions stemming from obesity arise in individuals aged 65 or over.

Wider use of appetite-curbing obesity drugs will likely have implications for the packaged food and beverage industries, restaurants, grocery stores and weight-loss programs. By 2035, we expect the number of people on weight-loss drugs to have grown fivefold to about 9% of the US population. Given the impact on appetite, this could drive a broad and lasting behavioral shift among a sizable demographic group—a group that accounts for a disproportionate share of food and beverage consumption.

FEWER CALORIES CONSUMED. Our proprietary US calorie model points to a 1.6% headwind to calories consumed by 2035 from the growing adoption of obesity medication in our base case. While seemingly modest, this figure masks divergent impacts across food categories. Our 2023 and 2024 AlphaWise surveys of people taking weight-loss medications highlighted reduced food consumption across the board, with a particularly pronounced impact on snacks, confections, carbonated/sugary drinks and alcohol. Roughly half of patients reported cutting consumption of carbonated/sugary drinks, alcohol and salty snacks by 50% or more since starting on the drugs, and 22% reported stopping consuming alcohol entirely.

Drawing on our survey results and our base case forecasts for obesity medication adoption, our analysis suggests ice cream, cakes, cookies, candy, chocolate, frozen pizzas, chips and regular sodas could see 4% to 5% reductions in consumption by 2035. Demand impacts could be higher if behavior changes among people on weight-loss drugs extend to their households. In our AlphaWise survey, two-thirds of respondents in multi-person households noticed family members adopting some of the changes in behavior. ■

This article was excerpted from the April 14 Morgan Stanley & Co. Blue Paper, "Obesity Medication: Ripple Effects," combining input form various MS & Co. Research teams. For a copy of the complete report, contact your Financial Advisor.

Q&A

A Look Ahead at Fed Policy Through the Lens of a Former Member

Significant spending on services, along with elevated shelter costs, has stalled recent inflation progress, resulting in higher interest rates and added uncertainty regarding the Fed's next steps. Higher-for-longer rates have not come as a surprise, however, to Dr. Rich Clarida, a global economic advisor to PIMCO, and a former Fed member himself. Rich recently spoke with Dan Skelly, Morgan Stanley Wealth Management's head of market research and strategy. In a wide-ranging conversation, he outlined his expectations for the economy, inflation and the Fed's likely policy approach. He also touched on the election and where PIMCO sees opportunities in fixed income markets. The following is an edited version of their conversation.

Dan Skelly (DS): You've had an extensive career at the Treasury, in academia, in the private sector, at the Fed and now as a global economic advisor at PIMCO. Let's start with your perspectives on the Fed.

First, while many folks are obsessed with how many cuts are being priced out, I'm curious, Rich, what is your best guess in terms of why so many were priced in to begin with, given positive labor and credit trends over the past six to nine months?

Rich Clarida (RC): I think I did a CNBC appearance early in the year and thought six to seven cuts would end up being more like two to three, and the hosts were giving me a hard time. So I didn't understand it either in terms of the economics.

Now, in terms of why markets priced that in, in fairness, I think the press conference after the December meeting was pretty market-friendly. Then and at the November meeting, the Fed chair really embraced the idea that last year there was a very positive supply-side development, which meant we could grow faster than trend and have falling inflation.

The Fed itself says rates are well into restrictive territory, and if you plugged its Summary of Economic Projections (SEP) forecast into a standard Taylor-type rule, you would also get rates being cut pretty substantially.

DS: How much is fiscal spending and the residual level of liquidity in markets—particularly post-the COVID stimulus packages—offsetting the level of Fed rates today?

RC: It's indisputable that there was unprecedented fiscal support added in 2020 and 2021 that was actually delivered into the economy in 2022 and 2023. By some measures, folks had nearly $3 trillion of accumulated excess savings, and they spent that down, which meant that consumption held up quite well during a period when we had two negative quarters of GDP growth in 2022, a big decline in housing and a decline in gross aggregate investment. While recession bells were ringing, that was offset by the delayed fiscal stimulus as those stimulus checks were spent down.

And last year, the budget deficit increased substantially, even though we had a record low in the unemployment rate resulting in the unusual combination of a budget deficit north of 6% of GDP with an unemployment rate below 4%, which has not happened in decades.

Looking ahead, there will be some negative fiscal impulse this year. But I take those projections with more than a couple of grains of salt because we're in a domain now where a lot of federal outlays are really on the entitlement side, not on the discretionary side.

Also, most Americans are not looking at a big tax increase either, which is probably stimulating consumption to some extent. In terms of liquidity, I was at the Fed in a period when we went all in—during the dark, early days of the pandemic—and bought a lot of Treasuries and mortgages. That liquidity obviously went directly into the banking system.

The interesting point, Dan, is that even though the Fed has been engaging in quantitative tightening (QT) since June of 2022, the overall level of reserves in the banking system, which is a good measure of liquidity, hasn't really declined. Whatever impact QT would have had on draining liquidity has been offset by the unwinding of the reverse repo facility, which has been adding liquidity to the banking system. By that measure, there's still a lot of liquidity in the banking system.

DS: Why hasn't the inverted yield curve been as predictive recently? Has the Fed's involvement in the bond market distorted some of the fundamental signal from the yield curve given how much buying there has been from the Fed?

RC: Regarding the second part of your question, it's undoubtedly correct. Indeed, the goal of QE, initially under Ben Bernanke and then under chairs Yellen and Powell, has been to flatten the yield curve and to reduce the term premium.

We're starting from a position where the curve is flatter now because of QT. And so, when rates start to go up in hiking cycles, it's easier for the curve to invert. So I guess it's an open question whether or not that distorts the signal, but the yield curve has been inverted coming up on two years now, and I don't think there's ever been a case in the US experience when we've had an inverted curve for nearly two years that has not flagged a recession. I think another factor going on in this cycle, of course, is that the Fed very aggressively raised rates. So we went from a fed funds rate of 25 basis points to 550 basis points in about 15 months.

But a lot of those rate hikes were not necessarily generating a restrictive policy. They were just removing accommodation because when the Fed hiked, it was behind the curve. The Fed began to hike when core inflation was 5% and headline inflation was 7% or 8%. So a lot of what appeared to be an aggressive rate hiking cycle was really just beginning to move policy into restrictive territory toward the end of 2022 and early 2023. And Fed Governor Waller has said something similar.

Another factor that has attenuated the effect of rate hikes has been the fact that in the US most owner-occupied housing has been financed with 30-year fixed-rate mortgages, so many people were able to refinance at very low rates prior to the Fed hikes. There's a record gap between the average mortgage rate that people are paying and the spot rate that someone gets for a new mortgage.

That's also had implications not only for the transmission to construction but for house prices, because people literally can't afford to move. Indeed, if you sell your house and move, you've got to pay off your 2% or 3% mortgage and then refinance it at a much higher rate.

DS: Given today's unique crosscurrents around immigration, demographics, technology and housing, where do you see some of those trends impacting inflation over the near and long term?

RC: I think each is relevant over a particular time horizon. In my own mind, and maybe I'm just channelling the fact that I'm a former Fed official, I like to distinguish between pressures on inflation and the inflation that we actually get. So ultimately, we could be in a world where, compared to the decades before the pandemic, a lot of the secular pressures exemplify long-lived factors that put upward pressure on inflation, whether it's demographics, the move to "friendshoring" or facilitating the green transition. And I think we probably are in that world. I guess the one countervailing secular factor that could be very relevant is AI, depending on how rapidly it's adopted and how the adoption of AI and large language models shift both productivity and company cost structures. It could be disinflationary as well.

The last big positive productivity surprise we had in the US was in the '90s with internet connectivity. And certainly, for about a decade, we got not only faster productivity but downward pressure on inflation.

Another factor that goes against upward pressure on inflation, at least with regard to tradable goods, is that there appears to be so much excess capacity in export industries in China. This has put pretty big downward pressure on prices. The products that garner a lot of attention are electric vehicle batteries and solar panels.

The reason we probably want to be a little cautious about extrapolating that into lower inflation pressures is that a lot of countries, including the US, appear to be prepared to put countervailing tariffs or antidumping duties in place.

Whether that nets out to be a disinflationary force remains to be seen. But my own judgment is that for the next five years, if you're a central banker, whether in the US or the eurozone or Asia, on balance, more things will tend to push inflation pressures up than down. That's one reason why we need to recognize that central banks will maintain their credibility and return inflation to target. But the last mile of inflation could prove to be pretty sticky and stubborn, and we need to factor that in as well.

DS: Will we see a repeat of the stagflation of the 1970s?

RC: So far, what we've seen in the US is not stagflation. Stagflation is when inflation and unemployment are too darn high, like in the '70s with 10% inflation and 10% unemployment. That is textbook stagflation. More recently, there was a very substantial adverse supply shock, which pushed up inflation as supply chains froze and Russia's invasion of Ukraine pushed up energy prices.

In the US, that didn't result in stagflation, but in the eurozone, you've definitely had a whiff of stagflation in the sense that inflation's too high but growth is too low. But again, what's unusual in Europe is that it hasn't really shown up in the labor market. So both the UK and the eurozone have what people, including the central banks, believe are hot labor markets. There are a lot of things about the pandemic-driven collapse and subsequent recovery that are unusual, and this is one of them.

DS: How do you think investors should be thinking about a framework for when and how the Fed tapers and then potentially concludes QT?

RC: We believe that the Fed will announce at the May meeting that the tapering of QT will commence in June, or perhaps July 1. I'm not sure if there's a quarter-end issue they need to respect, beginning this summer. Now, the Fed has a long way to go on QT because it has established metrics in terms of the reserves as a percent of GDP or as a percent of deposits.

And according to those metrics, we're in the neighborhood of at least $1 trillion more in QT that would be relevant because there's still about $400 billion or so in the reverse repurchase facility. And as the Fed assumes that gets drawn down to zero, which we believe it will, that's going to add roughly $400 billion of reserves into the system.

I expect QT to continue throughout this calendar year and into 2025. I think once we get into 2025, there's uncertainty along two dimensions. One is just the actual runoff that occurs in the portfolio, and that will depend in part on people paying down their mortgages.

Second, it will depend on a judgment that the Fed needs to make about what level of reserves in the banking system is ample. Indeed, I remember being at the Fed meeting at which we agreed on the term that we were aiming for: ample reserves.

The Fed has never defined the term precisely because, as we found out in September 2019, reserves can appear to be ample on a Friday and then not ample on a Monday. So the Fed is cognizant that there is some uncertainty, and what it has said is that it wants to stop QT before the level of reserves that it estimates to be ample is reached. The Fed wants to build a buffer.

DS: How do you think the timing of the election might or might not impact the Fed's policy approach? And do you have any other comments on fiscal policy and the deficit more broadly?

RC: We went back and looked at every presidential election cycle since 1980, and in the vast majority of presidential election years, the economy has been such that the Fed hasn't found itself adjusting rates. The Fed has cut rates in election years, it's hiked rates in election years, so I think both Fed rhetoric and the reality is that the Fed is an independent institution. And it will set the monetary policy that is the policy needed to achieve its dual-mandate goals.

That being said, I do think that even though the Fed is data dependent, it does form a view about whether or not, for example, rates are restrictive and have peaked. Then it will form a view, based on the incoming data, about the number of rate adjustments or cuts that would be expected this year.

My own sense is that at the June meeting, the Fed will provide information through the SEP projections about the committee's views on whether or not any rate cuts this year are appropriate. And if the committee in June judges that rate cuts are appropriate this year, I think it would make sense to commence those cuts.

It turns out that this year the November Fed meeting is the day after the election, and the Fed does not want to be part of the election campaign. I think it's inevitable that it will be pulled into it, but the Fed will stay focused on its goals of price stability and maximum employment.

DS: What were some of the key takeaways from PIMCO's March cyclical economic forum regarding your team's outlook, and where does PIMCO see opportunities across fixed income?

RC: Last year, we saw a material divergence between the US and other developed economies, with well-above-trend growth in the US and barely positive growth in other parts of the world.

That divergence is likely going to continue. It also now looks like US inflation may be somewhat more sticky and stubborn than abroad. So, over the cyclical horizon, we think that an important theme will be taking full advantage of having a global opportunity set and seeking out relative value opportunities in fixed income across countries that may be at different points in the rate cycle.

We also see opportunities in credit markets. Both currently and traditionally, we have had an up-in-quality bias, and in particular we advocate bottom-up sector, and even company, selection because overall spreads are certainly in a tight range.

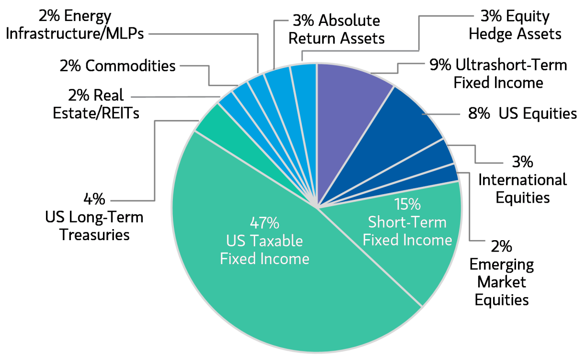
Additionally, while spreads are tight, that's on top of a historically high starting yield, so riskless three-month Treasuries are at a 5.5% yield. Two-year Treasury yields are around 5.0%. And when you add an investment grade spread on top of that, you're in the 6% range in an economy with underlying inflation at 2.5%. That's a historically healthy real coupon available in credit as well. ■

Rich Clarida is not an employee of Morgan Stanley Wealth Management or its affiliates. Opinions expressed by him are his own and may not necessarily reflect those of Morgan Stanley Wealth Management or its affiliates.

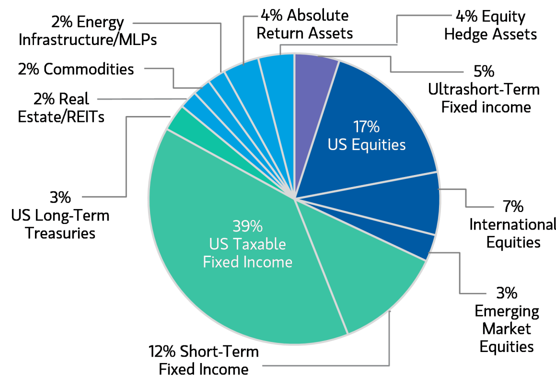
Global Investment Committee Tactical Asset Allocation

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.

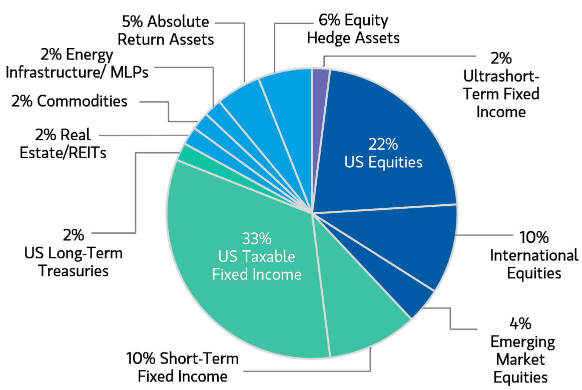
Wealth Conservation



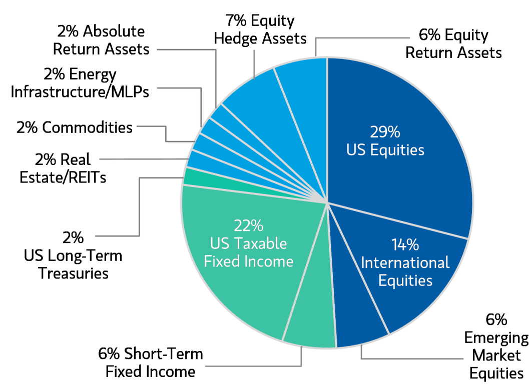
Income



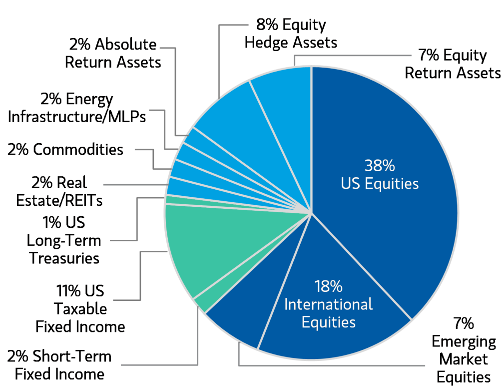
Balanced Growth



Market Growth



Opportunistic Growth



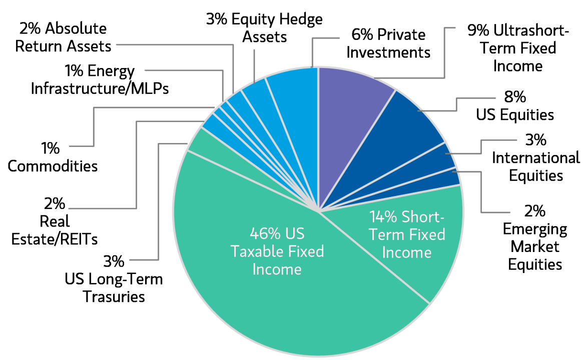
Key

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

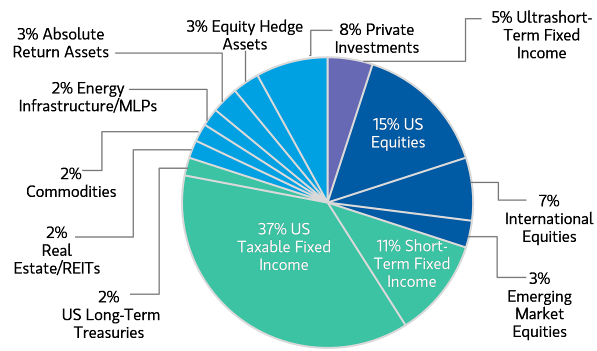
Source: Morgan Stanley Wealth Management GIC as of April 1, 2024

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.

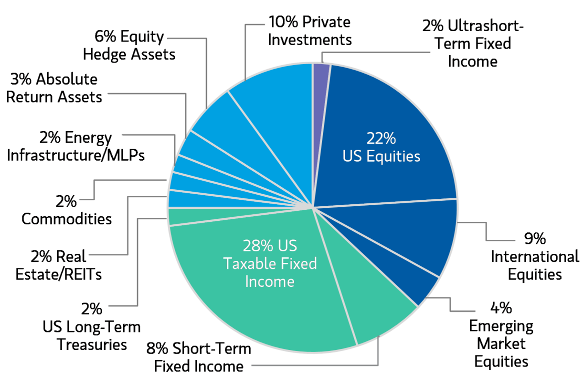
Wealth Conservation



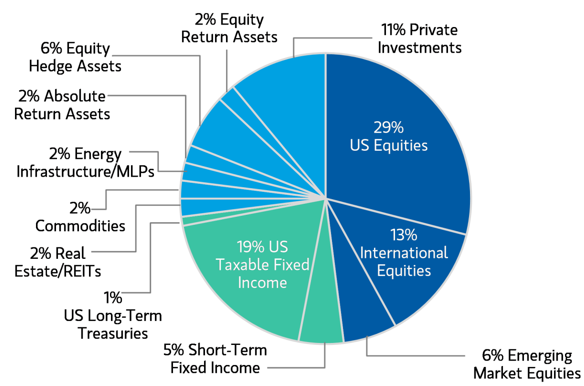
Income



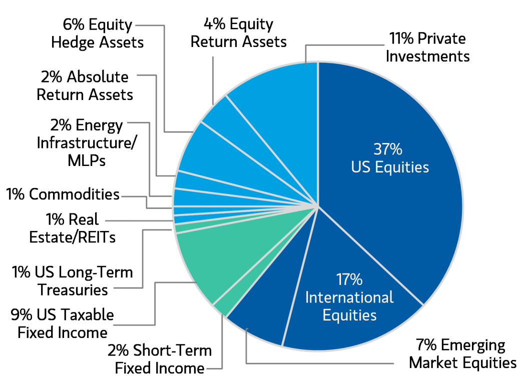
Balanced Growth



Market Growth



Opportunistic Growth



Key

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

Source: Morgan Stanley Wealth Management GIC as of April 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 April 26, 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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Matt Armstrong, Chris Baxter, Nikolaj Lippmann, Mark D. Purcell, Martijn Rats, Keith Weiss, Peter Winkler and Sarah Wolfe are not members of the Global Investment Committee and any implementation strategies suggested have not been reviewed or approved by the Global Investment Committee.

Index Definitions

NFIB SMALL BUSINESS OPTIMISM INDEX This index is a monthly report that gauges the sentiment of small business owners in the US.

For other 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.

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.

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