Morgan Stanley

WEALTH MANAGEMENT

INVESTMENT STRATEGY

MIDYEAR
Investment Outlook

Global Investment Committee | June 2022

On the Markets

The Other Side of the "V"

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While many investors and pundits seem surprised by recent events in both the markets and the economy, the Global Investment Committee has regularly posited that this year's market action, while negative for total returns, has been quite rational and orderly. Our interpretation of events follows two interlinked narratives—one related to market behavior and the other to the implications of higher rates and inflation not just for markets but for the real economy and corporate earnings.

The first of these narratives is premised on the view that the extraordinary V-shaped recovery in US stocks from their March 2020 lows to all-time highs for both the Nasdaq Composite and S&P 500 was tied to the unprecedented scale, scope and speed of COVID-related stimulus from the Federal Reserve and Congress. We suggested that record-low real interest rates and abundant liquidity were producing excesses that ultimately would need to get wrung out.

As we entered 2022, the catalyst for that revaluation was three-fold. First, investors and the Fed had to acknowledge a new inflation regime when price gains—extremely widespread and at 42-year highs—touched everything from food and energy, to labor, housing, auto supplies and semiconductors. Second, having fallen dangerously behind the inflation curve, Fed policy pivoted aggressively, with the market suggesting fed funds would need to rise as much as 275 basis points over just 12 months. This would be coupled with balance sheet reduction, set to begin this month and climbing to a pace twice that of the post-Great Financial Crisis quantitative tightening (QT) in 2017 and 2018.

Finally, investors had to acknowledge that events in Ukraine were history-altering—reconfiguring global alliances and raising the odds of new geopolitical risks between the West and Russia and China, with potential implications for inflation, currencies, globalization, defense spending, cybersecurity and efforts around decarbonization and climate change. All told, these shifts to the equity risk premium, mostly via the channel of higher rates, caused price/earnings multiples to compress by 20%, accounting for most of the cyclical bear losses.

As we approach the second half of the year, we must deal with the next, traditionally sequential narrative around the impact of rates and inflation on the

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real economy and earnings. While the knee-jerk reaction is that tighter policy has the potential to slow growth, squeeze liquidity and reduce demand, the dynamics are particularly nuanced this time due to COVID-related distortions. Stimulus, which by many accounts saved the economy during lockdown, also caused massive overshoots in spending, exacerbating burgeoning supply chain problems and obscuring the phenomenon of corporate "overearning." When combined with the massive skew toward spending on goods and away from in-person services and experiences, these overshoots were apt to foster disappointment when the economy reopened to find its new normal.

Now, this is where we are … on the other side of the V. And the conundrum for investors, who have remained sanguine about earnings resiliency and the Fed's ability to achieve a soft landing, is how to recalibrate growth and earnings expectations to account for potentially more persistent inflation and growth that may be recovering more tentatively than originally forecast. As discussed in this month's articles, we still see downside to this cyclical bear market and recommend focusing on diversification and opportunistic repositioning.

All that said, we need to distinguish a potential profits recession from an economic one. Regarding the former, odds are growing that sequential profit growth has peaked and will turn negative at least for a few quarters, as inventory levels normalize and costs stabilize from all-time high margins. The economy seems well prepared to avoid recession for now, however. Even with a severe slowdown from last year's heights of 13% to 14% nominal GDP expansion, nominal growth forecast at approximately 5% will still be higher than the average of the last 13 years. Meanwhile, balance sheets of banks, corporations and households are solid, and manufacturing is holding up while the labor market remains strong. ■

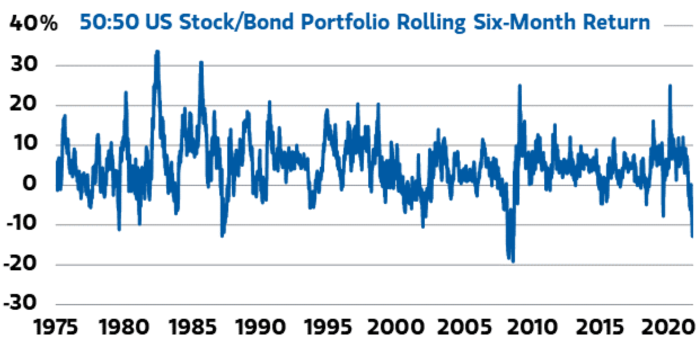
CROSS-ASSET STRATEGY

The Tempest

Andrew Sheets, Chief Cross-Asset Strategist, Morgan Stanley & Co. International plc+

So far, 2022 has seen a lot. It's seen the worst bond market performance since 1980, the biggest commodity outperformance since data availability in 1960 and large moves within and between equity indexes. It has also seen a terrible conflict in Europe, a COVID crisis in China and the first 50 basis point hike by the Federal Reserve in 22 years—and it's only June (see chart).

2022 Has Been Bad for Both Stocks and Bonds



Source: Bloomberg, Morgan Stanley & Co. Research as of May 24, 2022

This tempest has three drivers, all of which are ongoing. First, enormous fiscal stimulus drove above-trend growth, which is now moderating. Second, developed market central banks decided to err on the side of caution, keeping monetary policy easy even as growth rebounded; now, the training wheels are off as policy tightening races to catch up. Third, events in Ukraine and China are creating a negative supply shock and more global inflation for the given level of growth.

REGIONAL STORYLINES: US, EUROPE, JAPAN, CHINA, EM. These three themes continue in our updated forecasts, but so does another. While price weakness has been widespread, regional storylines show significant divergence. Consider that the US, facing high core inflation and tightening fiscal policy, is priced for a 1994-style hiking cycle; Europe faces much lower wage growth and core inflation, but high geopolitical risk; Japan has low inflation and a central bank on hold; China is set to ease further as its COVID policy diverges from the rest of the world; and many emerging market (EM) economies—already well into hiking cycles—could see rate hikes peak over the next 12 months.

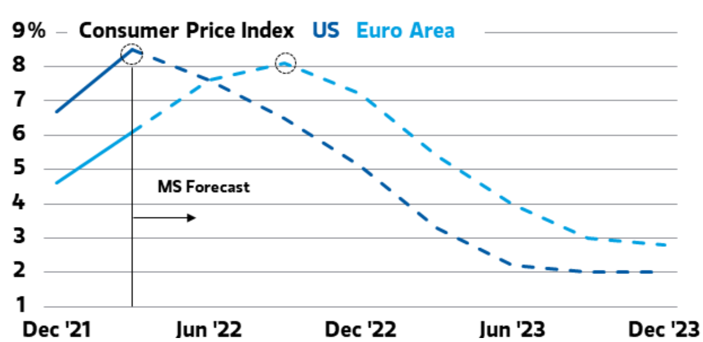
LATE CYCLE UNTIL PROVEN OTHERWISE. We continue to approach these dynamics through a late-cycle lens. In our framework, late cycle applies when data is significantly above trend, raising the likelihood that the market will trade with a defensive tilt as prospects of a slowdown increase. While it is early for a late-cycle environment—given the recession was just two years ago—we've argued this cycle could be accelerated, like 1946 to 1961 (see our March 18 report, "Cross-Asset and US Equity Strategy: Speeding Through a Hotter but Shorter Cycle").

With strong labor markets, tightening policy, a flat yield curve and our economists forecasting slower global growth with a downside skew, we think the market's late-cycle flavor will continue, supporting the case for light overall positioning and portfolio defense and diversification.

CHANGES TO INFLATION, USD AND EM POLICY. Slower growth, tighter policy, late-cycle dynamics and regional differences are all ongoing themes that should continue to apply, but there are some changes as well. We forecast reversals in developed market inflation, the US dollar (USD) and EM policy rates this year ... just not quite yet.

Inflation has been the economic story of 2022, with the US Consumer Price Index (CPI) hitting its highest year-over-year level since 1980. What's notable, however, is how inflation numbers are set to change. Our economists forecast US CPI falling from 8.3% to 5.1% and 2.0% by the end of 2022 and 2023, respectively, as supply issues improve and growth slows (see chart). If realized, this decline would give the Federal Reserve more flexibility while boosting real earnings growth—a far better narrative that beckons later in the year. Meanwhile, slowing growth and moderating inflation should mean policy rates in Brazil, Chile, the Czech Republic, Poland and Mexico all peak this year.

We Expect US Inflation to Moderate



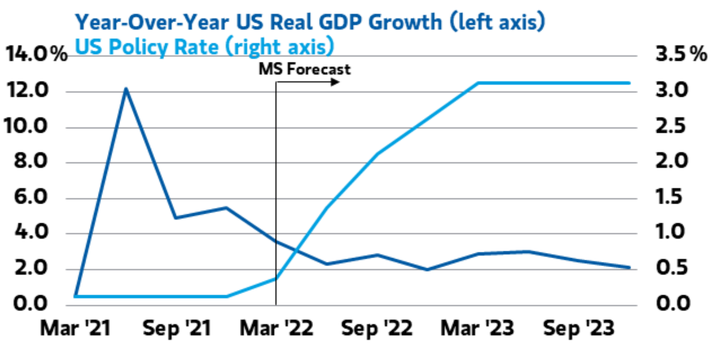
Source: International Monetary Fund, Morgan Stanley & Co. Research as of May 10, 2022

Another change is that more is in the price. Expectations for US and EU central bank policy have seen one of the fastest hawkish shifts in the past 40 years. The yield of the Bloomberg US Aggregate Bond Index, at 3.3%, has risen 155 basis points this year. These are significant moves.

Cross-asset valuations have shifted as well. Global equities have seen material derating, bringing some markets back below January 1, 2017, levels. While nonderivative-based credit has seen less repricing, credit default swap (CDS) indexes, mortgage-backed securities (MBS) and EM credit have also moved to the wide end of their five-year ranges.

LIGHT POSITIONING, MORE RELATIVE VALUE. Slowing growth and ongoing tightening (see chart) are meeting an improving valuation picture. In this regard, we have two takeaways: First, these forces are broadly balanced, and we forecast rangebound markets for equities, credit, yields and the US dollar over the next 12 months. We continue to recommend light overall exposure, with an equal weight in global equities, spread product and bonds. Energy, for which we have an above-consensus forecast and which we continue to like as an inflation hedge, remains a bullish exception. A positive view toward energy and more caution toward metals leave us with a small overweight in commodities.

We Expect Slow Growth Amid Policy Tightening



Source: Bloomberg, Morgan Stanley & Co. Research as of May 10, 2022

Second, 2022 has been, and should remain, a good market for relative value, given material cross-asset divergence. Greater uncertainty around growth and policy has led to different pricing of these risks. Select core relative value ideas from across our strategy views include:

Japan over US equities. Divergent policy (easing versus tightening), valuations (cheap versus expensive) and positioning (light versus popular) all support Japan outperformance.

MBS and municipals over corporate credit. We think that mortgages offer better valuations and are likely to gain more from a peak in inflation that reduces rate uncertainty. While municipals enjoy very strong fundamentals, corporate credit is more expensive on a historical basis and at greater risk in a late-cycle environment.

CAN and IDR over NZD and the CNY. The Canadian dollar (CAD) should benefit from oil strength and higher rates. The Indonesian Rupiah (IDR) offers an attractive stagflation hedge, while the New Zealand dollar (NZD) and Chinese renminbi (CNY) could weaken under downside risks to growth.

Oil over metals. Oil fundamentals remain strong, and a steep futures curve offers high positive carry (the benefit or cost of holding a security, potentially related to factors such as interest rates, dividends or futures contracts). Metals face more risk if growth slows with less carry to compensate. ■

This article was excerpted from the May 10 report from Morgan Stanley & Co. Research, "The Tempest." For a copy of the full report please contact your Financial Advisor.

ECONOMICS

US Economics: Policy Weighs On Growth

Ellen Zentner, Chief US Economist, Morgan Stanley & Co. LLC
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Global challenges and a faster pace of Federal Reserve policy normalization have raised downside risks to the US economic outlook. Our base case forecasts for growth this year and next remain above potential, with continued strong wage and job gains. Still, headwinds have increased, leading us to reduce our real GDP growth forecast for 2022 by 100 basis points, to 2.0% on a fourth-quarter-over-fourth-quarter basis. Our outlook for 2023 remains unchanged, at 2.1% (see table).

The ongoing shock to energy prices and the Russian invasion of Ukraine continue to hang over the global economy, and our recent work on the impact of the oil shock on consumer activity points to some persistence of its effect on consumption growth. That downside will likely be partially offset by a pickup in energy-related investment, which added meaningfully to US GDP growth in the first quarter, and some lift from fiscal policy as infrastructure spending kicks into higher gear from the fourth quarter on. With headwinds from the oil shock combined with tighter monetary policy pointing to a slowdown in consumption, labor income will be the primary driver for spending through 2023. Also layered onto our consumption forecast is the ongoing wallet shift away from goods and toward services.

Morgan Stanley & Co.'s US Economics Team Forecasts Slower Growth

	2021	2022E	2023E
Real GDP (% 4Q/4Q)	5.5	2.0	2.1
Private Consumption	7.9	2.8	2.1
Government Consumption	0.1	0.4	2.1
Gross Fixed Investment	6.1	3.6	4.0
GDP Contribution*			
Final Domestic Demand	5.8	2.4	2.4
Net Exports	-1.2	-0.9	-0.2
Inventories	0.9	0.5	-0.1
Unemployment Rate (%, end of period)	4.2	3.4	3.3
CPI (% 4Q/4Q)	6.7	5.1	2.0
Core PCE (% 4Q/4Q)**	4.6	4.2	2.5
Policy Rate (%, end of period)	0.125	2.625	3.125
General Govt. Balance (% of GDP)	-11.2	-4.2	-4.0
Gross Govt. Debt (% of GDP)	126.2	119.1	116.0
Current Account Balance (% of GDP)	-3.1	-2.3	-2.3

*In percentage points **US Personal Consumption Expenditure Index
Source: Bureau of Economic Analysis, Bureau of Labor Statistics, Morgan Stanley & Co. Research as of May 10, 2022

STRONG CAPITAL EXPENDITURES. Business investment remains an important engine, with strong contributions to real GDP growth from investment over recent quarters and moderate gains likely ahead. Overall, we see private capex growing 5.9% and 4.3% in 2022 and 2023, respectively, on a fourth-quarter-over-fourth-quarter basis. The rate of inventory accumulation continues to be a major swing factor. We expect inventory's contribution to pick back up as supply chains ease in the second half of 2022, adding more than a full percentage point to real GDP growth in the last six months of the year.

LABOR AND INFLATION OUTLOOK. The labor market is tight and will stay so for the foreseeable future. Moderating job growth should remain healthy but, as participation continues to recover, the unemployment rate is set to decline to 3.4% by the end of 2022 and to 3.3% by the end of 2023. Still-high wage growth is likely to slow from the record pace of recent quarters.

We believe inflation will run higher for longer on the back of sustained pressures across the commodity complex and amid renewed supply chain problems. Shelter prices and COVID-sensitive services inflation are expected to put upward pressure on core services, while core goods inflation, led first by a decline in car prices, should slow the monthly pace of growth. Our forecast for headline Consumer Price Index (CPI) inflation in 2022 is 5.1% on a fourth-quarter-over-fourth-quarter basis. In 2023, we see it running at 2.0%, reflecting some commodity price payback.

EXPEDIENT HIKING CYCLE. We expect the Fed to raise the federal funds rate by an additional 50 basis points at both its June and July meetings before settling into 25 basis point hikes at each meeting thereafter for the balance of the year. That brings the midpoint of the fed funds target range to 2.625%. We see an additional 50 basis points of tightening in 2023, bringing the fed funds target peak to 3.125% by spring, with it holding steady into the end of the year. We anticipate the Fed beginning balance sheet reduction June 1, at a monthly rate of $30.0 billion for US Treasuries and $17.5 billion for mortgage-backed securities (MBS), and stepping up to the maximum of $60 billion of Treasuries and $35 billion of MBS after three months.

Overall, we view risks—primarily stemming from the Russian invasion of Ukraine and the COVID wave in China—as skewed to the downside. While recession risk has been on the rise, we see a still-moderate probability of recession starting within the next 12 months, at around 25%. ■

This article was excerpted from the May 11 report from Morgan Stanley & Co. Research, "US Economics Mid-Year Outlook: Policy Weighs on Growth." For a copy of the full report please contact your Financial Advisor.

EQUITIES

Global Equities: More of the Same

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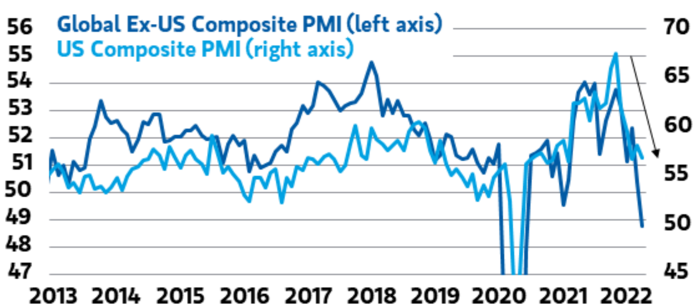
Graham Secker, Head of European and UK Equity Strategy, Morgan Stanley & Co. International plc+

Jonathan Garner, Chief Asia and Emerging Market Equity Strategist, Morgan Stanley Asia Limited+

Global equities are in the midst of a bear market that is not yet finished: Macro and earnings data continues to soften as economies move toward later-cycle phases. Purchasing managers' indexes (PMIs) continue to decelerate (see chart), and earnings revisions are slowing, with revisions breadth for the MSCI All Country World Index (ACWI) falling into negative territory (see chart). Cost pressures remain an issue for corporations around the world, and our US and European strategists flag risks to margin expectations for coming quarters amid sticky input/labor costs.

Global PMIs Are Decelerating



Source: Haver Analytics, Morgan Stanley & Co. Research as of May 10, 2022

The US remains further behind in terms of pricing macro and earnings risks, as valuations are much less demanding elsewhere (see chart). This is likely a byproduct of the notion that the US market is more defensive, less directly impacted by the Russia-Ukraine conflict and more insulated from China's zero-COVID policy.

US: Not Yet Fully Priced for Slower Growth

A hotter but shorter cycle is playing out in the US. We first made this case in March of last year, arguing that this cycle was likely to progress quicker than the prior four given the velocity of the growth rebound following the COVID recession, the return of inflation after a 40-year absence and a much earlier-than-expected shift to more hawkish monetary policy. Fast-forward to today, and that's what appears to be happening: Earnings have accelerated past prior-cycle peaks quickly compared with history and are starting to decelerate from a growth-rate perspective, inflation is at a multidecade high and the Federal Reserve has hiked twice just two years into the cycle.

Earnings Revisions Breadth Is Slowing With Prices

Source: FactSet, Morgan Stanley & Co. Research as of May 20, 2022

Fading positive operating leverage is confirmed by output from our leading earnings model and the recent downward pressure we have seen in earnings revision breadth. Coupled with decelerating PMIs, the decline in earnings growth that we expect to continue into next year gives us high conviction that our "ice" scenario has arrived and will be here for even longer than we envisioned going into the year.

We continue to believe that the US equity market is not priced for this slowdown in growth. Applying the recent 10-year yield to our fair value risk premium indicates an S&P 500 Index price level of approximately 3,700 to 3,800. Weaving that tactical setup into our forward 12-month price target of 3,900 implies that we may overshoot to the downside in the near term before working back toward 3,900 next spring (see table).

Amid a more volatile environment, we expect elevated performance dispersion and favor companies that can deliver on cash flow and operational efficiency. We stick with our defensive bias given our broadly risk-off view, and we remain overweight health care, utilities and real estate.

Largely Driven by the US, Global Equity Valuations Are Still Rich

Source: FactSet, Morgan Stanley & Co. Research as of May 20, 2022

Morgan Stanley & Co. Base Case Equity And Earnings Forecasts

Index	June 2023 Base Case Target (% upside)	MS EPS Forecast (year-over-year growth) 2022	2023	2024
S&P 500	3,900	225	236	236
	-5%	8%	5%	2%
MSCI Europe	1,760	127	130	135
	2%	5%	2%	5%
TOPIX	2,050	151	161	164
	7%	18%	7%	4%
MSCI Emerging Markets	1,060	87	93	96
	3%	4%	7%	7%

Note: 2024 forecasts of earnings per share are for June 2024.
Source: Bloomberg, FactSet, IBES, Morgan Stanley & Co. Research as of May 6, 2022

Europe: It Gets Worse Before It Gets Better

Our European economists are revising their GDP forecasts lower and their inflation estimates higher as the European Central Bank (ECB) is starting to remove policy stimulus, bond yields (and spreads) are biased higher and geopolitical risks remain elevated. Against this backdrop, we think the risk/reward profile for Europe remains unattractive, with no upside to our base-case 12-month index target and twice as much downside to our bear case than upside to our bull case.

We believe European equity valuations are reasonably attractive longer term; however, it's hard to argue that all the bad news is in the price given that the MSCI Europe Index has traded on a single-digit price/earnings (P/E) basis twice in the last 15 years. In addition, we note that, while the MSCI Europe Index trades at a record-low valuation relative to the S&P 500, its valuation versus the MSCI ACWI ex US Index is actually above the historical average.

From a sector/style perspective, we continue to follow a stagflation playbook, with a preference for commodities and defensives over cyclicals and financials. We also maintain our positive recommendations on the FTSE 100 Index, defensive value and stocks offering high and secure dividend yields.

Asia/Emerging Markets and Japan: Remain Selective

While the global equity outlook remains challenging, we see EM equities as much further progressed through a bear-market reset of valuations and growth expectations. The concerns we have expressed—typically signals for a bear market rally or even the start of a new cycle—are now widely acknowledged. This provides grounds for optimism beyond the next three to six months, but for now risks from European geopolitical developments and China's earnings amid COVID containment may surprise on the downside, with little room for support from monetary policy against the inflation backdrop.

Valuations for EM on a 12-month forward basis stand at 11.0 times—cheap, but not dislocated—while those for the Tokyo Stock Price Index (TOPIX) are 12.5 times. Looking ahead, we see near-flat valuations for EM and Japanese indexes. The key difference is stronger earnings per share (EPS) growth for Japanese equities in 2022 (18% versus 4% for EM), partially informed by our US dollar-yen spread forecasts for the next 12 months.

Amid the disruption in global supply chains, we recommend positioning in market-share winners, including both hard and soft commodity exporters and energy (upstream and refining) across Southeast Asia, Australia, the Middle East and Brazil, with financials also preferred (ex Australia). We retain an equal-weight recommendation on Chinese equities while watching for positive catalysts, such as the minimization of COVID-related restrictions—particularly to ensure supply chain resilience—or a more forceful injection of credit/liquidity and support for the property sector. An American depositary receipt audit agreement between the US and China and resumption of offshore initial public offerings by Chinese companies would also help restore investor confidence. On a style basis, we suggest looking for stocks with high free-cash flow yields and earnings-revision leadership. ■

This article was excerpted from the May 10 report from Morgan Stanley & Co. Research, "The Tempest." For a copy of the full report please contact your Financial Advisor.

INTEREST RATES

Neutral for Now on Government Bond Duration

Matthew Hornbach, Global Head of Macro Strategy, Morgan Stanley & Co. LLC

Amid dramatic changes to central bank policies and guidance, G-10 government bond markets have had their worst start to the year in decades. Heading into 2022, our economists thought that the Federal Reserve and European Central Bank (ECB) would continue to buy bonds well into the year and that neither would be ready to raise policy rates. Since then, however, the Fed has not only stopped its asset purchases, but it has hiked short-term rates by 75 basis points while announcing the start of normalization of its balance sheet.

Our economists now expect the Fed to deliver two more 50-basis-point hikes and then downshift to a series of 25-basis-point moves. At the end of 2022, they see the fed funds target range at 2.50% to 2.75% and the Fed's balance sheet on its way to $6.5 trillion. As for the ECB, our economists expect it to raise rates by 25 basis points in July and then again in September before heading to the sidelines for a period. Investors should note that the outlook for government bonds depends on more than just hawkish central bank policies, however. For example, projected government deficits and related financing needs will decline substantially in 2022 and more fully in 2023. In addition, risks to global growth skew to the downside already. And as monetary policies tighten, downside risks to growth, and eventually inflation, will increase. These conditions, which traditionally support government bonds, may not favor them in the near term—but we think they will in the longer term.

US. We expect US Treasury yields to move higher through 2023, with the 10-year note nearing 3.0% by the end of 2022 and 3.15% by the middle of 2023 (see table). A continued focus on above-target inflation should keep the Fed marching toward what it perceives to be a neutral level (neither accommodative nor restrictive) for short-term rates in 2022 and ultimately toward restrictive territory in 2023. Our economists anticipate a front-loaded hiking cycle, with early increases to the fed funds rate outweighing potential later ones. With this Fed forecast, we expect front-end yields to trace market-implied forward yields, largely consistent with two-year yields reaching 3.30% by the end of 2022 before beginning to edge lower to 3.25% by the middle of 2023 as the hiking cycle draws to a close.

In contrast, factors such as the defined-benefit private pension fund bid and downside global growth pressures will likely drive flows into the longer end of the Treasury curve, helping the 10-year yield stay relatively close to recent levels by the end of 2022 before moving slightly higher in the first half of next year. Fears of stagflation could also contribute to curve flattening. We see the yield curve ultimately inverting in 2022 as the market prices a high terminal rate (the level at which the Fed stops increasing fed funds) in the front end, well above the long-run neutral rate anchoring the back end.

EURO ZONE. Following the sharp rise in Bund yields through our previous 1% target, we see a further, though more limited, increase in the second half. Consistent with our year-end forecast of 1.35% for the 10-year Bund yield, this increase will be driven in part by ECB deposit rate normalization. Risks to our central scenario could be biased to the upside in the event of an early start to the ECB deposit facility normalization cycle and stickier inflation. Regarding the curve, we expect very limited movement between two- and 10-year yields through 2022, with more meaningful flattening beginning in the first half of 2023.

JAPAN. We expect Japanese government bond (JGB) yields to move modestly higher through 2023. Our economists expect the Bank of Japan (BoJ) to expand the 10-year yield curve control (YCC) band from 25 basis points to 50 basis points in October, but they don’t anticipate removal of its negative interest rate policy (NIRP) throughout our forecast horizon. Speculation regarding future policy tweaking will likely be expressed beyond the 10-year tenor, leading to a steeper curve. ■

Morgan Stanley & Co. Bond Yield Forecasts

Maturity	Two Years		Five Years		10 Years		30 Years	
Country	4Q '22	2Q '23	4Q '22	2Q '23	4Q '22	2Q '23	4Q '22	2Q '23
US	3.30%	3.25%	3.15%	3.25%	3.00%	3.15%	3.05%	3.10%
Germany	0.60	0.80	1.00	1.05	1.35	1.25	1.25	1.25
Japan	-0.10	-0.05	0.05	0.10	0.25	0.30	1.00	1.10
UK	1.50	1.50	1.60	1.60	2.10	2.25	2.20	2.25

Source: Morgan Stanley & Co. Research as of May 10, 2022

This article was excerpted from the May 10 report from Morgan Stanley & Co. Research, “The Tempest.” For a copy of the full report please contact your Financial Advisor.

COMMODITIES

Enduring Tailwind: Energy Over Metals

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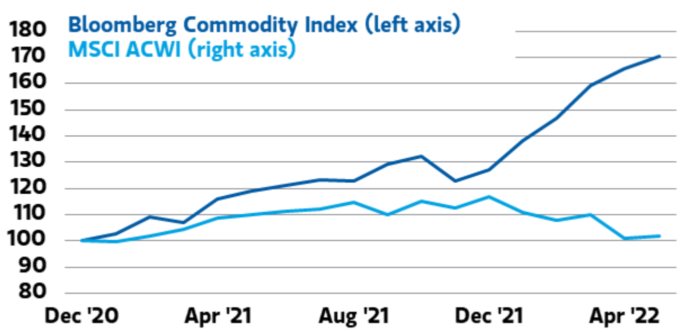
Amy Sergeant, Commodities Strategist, Morgan Stanley & Co. International plc+

The Bloomberg Commodities Index has risen approximately 35% this year, outperforming the MSCI World Index significantly. If sustained, this would make 2022 the second consecutive year that commodities have outperformed equities—a historical rarity (see chart).

Amid the year-to-date strength, we believe the thesis we outlined in our January report, "Five Enduring Tailwinds," remains relevant: Commodities have historically performed well during inflationary periods; they offer a degree of protection against geopolitical risk; they are likely to see their prices boosted by the energy transition practically across the board; they have suffered from a long down-cycle in investment already; and they are still exposed to the remaining elements of "reopening" (e.g., jet fuel).

ENERGY. Although the nature of our thesis in regard to oil has changed since the start of the year, we continue to see price upside and prefer energy over metals. Earlier on, we expected healthy demand growth to further tighten the oil market. However, a sharp weakening of the global economic outlook, especially as related to the strict COVID lockdowns in China, has taken the wind out of those sails. We now assume that oil demand will fall by approximately 600,000 barrels per day by the end of 2022 compared to last year's fourth quarter.

Commodities Are Outpacing Global Equities for the Second Straight Year



Source: Bloomberg, Morgan Stanley Wealth Management Global Investment Office as of May 31, 2022

In the meantime, a number of supply risks have arisen, primarily in Russia and Iran. Russia's oil production is reported to have fallen by approximately 1 million barrels per day already. Given the wide range of sanctions applied by the US and Europe, as well as the self-sanctioning by several Western oil companies and trade houses, we assume a further reduction of 1 million barrels lies ahead, with additional potential downside from there.

We also see growing risks that our supply forecasts for Iran will not materialize. Negotiations around a nuclear agreement between Iran and the P5+1 countries (China, France, Russia, UK, US and Germany) have been going on for well over a year but have not yet led to a deal. Perhaps one could still materialize, but the probability has fallen sharply. Without a deal, Iran's oil export volume will likely remain constrained.

With those assumptions, we estimate approximately 1 million barrels per day of oil undersupply during the rest of 2022. Already-low global inventories are likely to end the year even lower. On top of that, we expect OPEC+ spare capacity to be eroded this year. The combination of low and falling inventories, low and falling spare capacity and still-low levels of investment creates a particular tightness that can only be resolved via higher prices. As such, we forecast a $130 per barrel third-quarter price for Brent crude (see table).

Prices for European natural gas are roughly five times higher than in the US, reflecting the increased risk to Russian supply created by the conflict in Ukraine. While those high prices attract significant quantities of liquified natural gas (LNG) to the continent, so far, Russian gas has by and large continued to flow. Combined with relatively mild winter weather, this has allowed inventories to build well ahead of seasonal norms, and near-term market fundamentals are relatively soft.

Looking ahead, however, we expect that Europe will follow through on its stated intention to phase out Russian gas. The various scenarios in which this could take place all have two things in common: a reduction in gas demand and a sharp increase in LNG imports. Neither is likely at low natural gas prices.

Given soft short-term fundamentals, we do not see much upside to near-term natural gas prices, barring an abrupt halt in the flow of Russian gas, which is not our forecast. However, we expect prices to stay well ahead of historical norms in 2023 and 2024.

Morgan Stanley & Co. Brent Crude Oil Forecasts

Period	Bear	Base	Bull
2Q '22	75	110	150
3Q '22	70	130	150
4Q '22	65	120	150
2023	65	105	125

Note: forecasts in US dollars per barrel.
Source: Morgan Stanley & Co. Research as of May 10, 2022

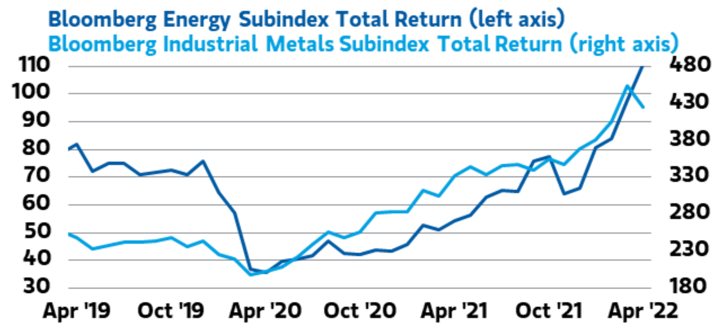
PRECIOUS METALS. Consistent with our preference for energy over metals (see chart), we generally see downside to precious metals over the next 12 months amid the higher rate outlook. In the near term, the price of gold is being supported by heightened geopolitical risks, although more hawkish rhetoric from the Federal Reserve on interest rates is causing some of the risk premium to unwind. From here, we expect gold to be volatile but to trend lower as markets navigate stagflation risks, geopolitics and rising rates. We continue to expect gold to outperform silver.

Among the essential and precious metals (platinum, palladium, rhodium, iridium, osmium and ruthenium) known as platinum group metals (PGMs), we see a wide range of outcomes. To the downside, growing risks to auto volumes, which drive demand for several of the PGMs, are arising from both auto demand destruction and ongoing supply chain disruption. However, supply remains tight. Additionally, while metal continues to flow from Russia, the suspension of some Russian refiners from the London Platinum and Palladium Market (LPPM) and Chicago Mercantile Exchange (CME) highlights the ongoing risk of supply disruptions. Overall, we prefer platinum, given its more diversified demand base and depressed starting point, over palladium, for which demand is concentrated in the auto sector and prices are already high.

BASE METALS. Base metal inventories are low across the board. Still, prices have given back most of their year-to-date gains since mid April as concerns about demand from China, which accounts for around 50% of demand for most metals, have outweighed fears of supply disruption from Ukraine and other challenges.

Aluminum remains our top pick over the next 12 months, with the recent move lower providing a good entry point, in our view. We expect to see more aluminum supply disruptions in Russia and challenges sourcing it from Ukraine and Australia. The key downside risk for aluminum is faster return of supply from China, but we think that even this won't be enough to balance the market. ■

Our Preference for Energy Over Metals Continues



Source: Bloomberg, Morgan Stanley Wealth Management Global Investment Office as of May 31, 2022

This article was excerpted from the May 10 report from Morgan Stanley & Co. Research, "The Tempest." For a copy of the full report please contact your Financial Advisor.

FOREIGN EXCHANGE

Waiting on the US Dollar Turn

Matthew Hornbach, Global Head of Macro Strategy, Morgan Stanley & Co. LLC

Much like the meeting of multiple bodies of water, several themes have converged in 2022, generating choppy conditions: Inflation remains elevated, and central banks continue to march toward restrictive territory; geopolitical uncertainties continue to rise; commodity price gains are impacting trade around the world; and COVID lockdowns are producing residual challenges.

We expected the US dollar (USD) to keep strengthening into the first half of the year, with rising real yields and Federal Reserve hawkishness fostering a policy-divergence narrative. Market projections for the Fed have moved in this direction, but an unexpectedly weak global growth outlook and geopolitical uncertainties have bolstered the dollar more than expected, particularly as US data has remained relatively immune to the global slowdown (see chart). What started as "policy divergence" evolved into "growth divergence." We expect these trends to continue into the summer, with modest but broad-based USD strength into the third quarter propelling the US Dollar Index (DXY) to 105. The dollar should peak by early autumn, driving the DXY to the top of its long-term range without a breakout.

Central bankers have accelerated their normalization efforts, and many (including the Fed) will likely be close to restrictive territory, if not already in it, by early 2023. The urgency to return policy to neutral may not be matched by an urgency to make it actively restrictive should inflation come off the boil and growth concerns rise. Though relative performance will matter, this type of environment tends to be USD-negative, and we expect risk-sensitive G-10 currencies to outperform.

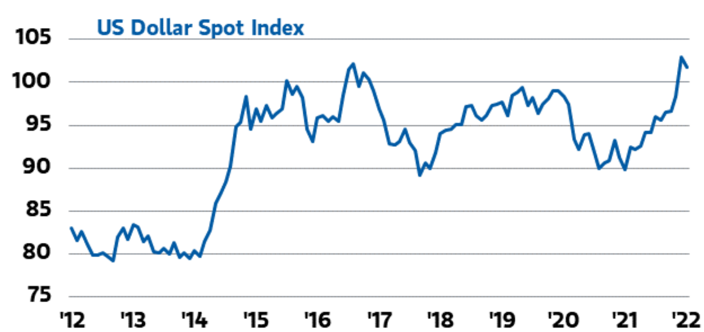
G-10 CENTRAL BANKS AND CURRENCIES. We expect the euro (EUR) to continue softening, falling to 1.03 to the dollar by the third quarter and potentially overshooting to parity as geopolitical and commodity concerns intensify. However, we believe a modest EUR rebound will begin in the fourth quarter and extend into 2023. Upside will likely be driven by reduced fixed income outflows and a weaker USD but limited by a continued geopolitical risk premium, somewhat tepid growth and relatively low local returns. Further optimism on EU integration and accelerated European Central Bank (ECB) normalization could bring the EUR/USD exchange rate toward our bull case of 1.14, while growth below expectations may keep it under 1.10.

The British pound/USD exchange rate should remain near the 1.20 range before turning modestly higher to 1.28 by mid-2023, as political risks may persist and Bank of England hawkishness may fail to validate market pricing and concerns about local growth. The high-beta Norwegian krone and Swedish krona should lead the charge once the dollar turns, supported by a stronger euro and policy normalization. Meanwhile, we see the EUR/Swiss franc exchange rate rising to 1.05, aided by a more hawkish ECB (relative to the Swiss National Bank) and higher German yields.

The Japanese yen should lag G-10 currencies over the next 12 months. Policy divergence between most G-10 central banks and the Bank of Japan should continue, and we expect the yen to be the preeminent funding currency heading into the second half of 2022 and beyond. The Canadian dollar should lead gains in the dollar bloc, falling to 1.20 by mid-2023 as above-consensus growth keeps the Bank of Canada hiking and external tailwinds from strong US growth and energy prices support the currency. We expect the Australian dollar and New Zealand dollar to lag the most versus the US dollar this summer as global growth and risk-asset pessimism weigh on them, though we expect mean-reversion to near-current levels by mid-2023.

EMERGING MARKET EXPECTATIONS. We anticipate a weaker EM foreign exchange complex versus the US dollar over the next one to three months. Still, we expect EM to trough sometime in the third quarter as the dollar turns around, with plenty of differentiation within the broad EM index. A key contributor to the weakness of EM currencies will be the Chinese renminbi, which we see weakening further and spilling over to the currencies of other Asian nations that trade with China. In Latin America, the Mexican peso should be the relative outperformer, supported by decent growth in the US and an outperformance of oil versus base metals. Across Central and Eastern Europe, the Middle East and Africa, we expect outperformance from the Polish zloty, which, despite vulnerabilities to the European growth slowdown and regional political risk, may see support from an increasingly hawkish central bank. ■

The US Dollar Is Near the Top of Its Long-Term Range



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FIXED INCOME

Munis: Return of the Late-Cycle Haven

Michael Zezas, Chief US Public Policy & Municipal Strategist, Morgan Stanley & Co. LLC

Down more than 7%, the municipal bond market has experienced heightened volatility in the past six months as higher rates, accompanied by mutual fund outflows, have punished the asset class (see chart). Still, with those declines have come healthier valuations. In the context of the sector's durable credit quality and history as a late-cycle haven, we believe valuations now offer investors a solid risk/reward opportunity.

We maintain a constructive outlook for munis. Notably, credit fundamentals recovered quickly—and almost uniformly across sectors—from the pandemic's early days. Given continued positive real GDP growth and an understanding that inflation is generally a neutral credit factor, we believe these improvements should be locked in through the end of the year.

Against this backdrop, municipal yields relative to US Treasury yields offer clearer relative value, with ratios having moved away from extremely rich levels, especially at the long end of the curve. In fact, ratios are closer to levels seen in some more "normal" prior outflow cycles despite credit quality now being stronger. Furthermore, when considering valuations versus corporate credit, munis have settled through long-term historical averages.

Our outlook accounts for lingering risks from weak market technicals—namely those cited in our "modern monetary uncertainty" thesis. Federal Reserve uncertainty has inhibited muni market demand while key macro factors—like the runoff of excess household savings—have been fading. Despite ongoing volatility and negative total return-driven investor outflows, we would still buy munis today, as returns generally bottom before the end of an outflow cycle.

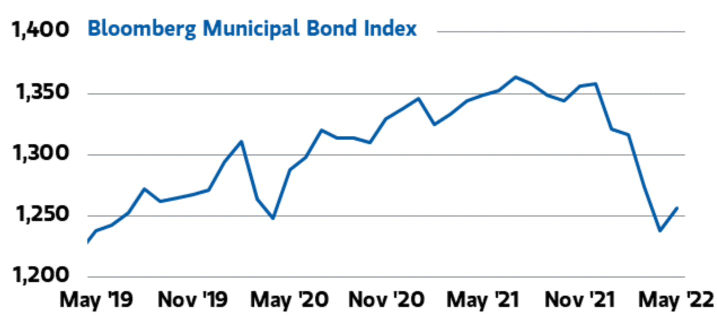
LATE-CYCLE HAVEN DYNAMICS. With recession being factored into many bear cases and the possibility for corporate credit spreads to widen, it's reasonable for investors to consider that we are moving toward a late-cycle environment. Late-cycle conditions have been relatively friendly waters for munis, and we attribute their outperformance during these periods to several factors. For one, credit quality appears better for munis than other sectors based on fundamental and reporting lags. Audited government financials are only available annually and typically with a delay. In turn, rating agencies base their decisions partly on that information. At first blush, this data lag may make credit quality appear to outperform at the end of a cycle, although the upgrade/downgrade ratio can be perceived as countercyclical.

Second, a lower ceiling for rates, which may more typically characterize late cycles, means less risk to total returns. With less room for rates to run, muni total returns are likely to find firmer footing. Moreover, a flattening yield curve should limit the effects of negative convexity, volatility and liquidity risks. These factors, in turn, may create an environment that encourages healthy investor demand. With this in mind, we anticipate outperformance versus Treasuries, with positive total and excess returns through the end of the year.

SECTOR PREFERENCES. We prefer muni bond sectors that allow investors to lean into normalization—i.e., those that will benefit directly as fundamentals continue to improve via the normalization of consumer behavior through the ongoing pandemic recovery. Among these are transportation, particularly airports, and higher education. Credit fundamentals for airport systems, which maintain high balance sheet liquidity, should continue to improve as confidence in travel is supported. Morgan Stanley & Co.'s airline equity analysts expect strong demand for consumer travel to continue, with corporate travel also recovering but on a delayed basis. High energy costs and low mass transit ridership, on the other hand, are potential threats to the transportation sector generally.

On the higher-education front, we note that, as a result of vaccination requirements, frequent testing and virtual flexibility, most colleges are better able to recapture the on-campus value proposition. This supports top-line revenue, as in-person activities drive rebounding revenue from auxiliary services. Within the sector, we favor higher-rated, market-leading universities with multiple income streams and international appeal that should have the revenue flexibility to withstand long-term business model challenges. Potential negative factors include higher labor costs and inflation, as well as extended market weakness, which could jeopardize endowments and compromise fiscal cushions. ■

Muni Prices Have Declined Amid Higher Rates



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Q&A

How Human Behavior Influences Investing: A Conversation With Dr. Richard Thaler

Investors have experienced an emotional rollercoaster over the past six months, on top of a dramatic two-plus years with COVID. And we know—thanks to groundbreaking research published by Dr. Richard Thaler—that people make emotional decisions when investing, resulting in the unfortunate "buy high, sell low" phenomenon. "The worst thing that individual investors can do is think that they can time the market," he explains. "It's so hard to make predictions. I don't know of any professional investment firm that has successfully done that, and individual investors are notoriously bad at it." Dr. Thaler was awarded the Nobel Memorial Prize in Economic Sciences in 2017 for his contributions to behavioral economics. In addition to co-founding Fuller & Thaler Asset Management in 1993, he is the Charles R. Walgreen Distinguished Service Professor of Behavioral Science and Economics at the University of Chicago Booth School of Business. He recently shared his take on the market environment with Dan Skelly, Morgan Stanley Wealth Management's head of market research and strategy. The following is an edited version of their conversation.

Dan Skelly (DS): How does your research influence your investment philosophy, and what are some of the key takeaways for investors?

Dr. Richard Thaler (RT): I started out doing behavioral economics, where the most important implication is that people make predictable mistakes, and therefore their behavior differs—in predictable ways—from what would be predicted by the standard economic model of rational agents.

I started dabbling in finance because my graduate student, Werner de Bondt, was interested. We published a paper called "Does the Stock Market Overreact?" in 1985. It showed that if you took the stocks that went down the most over the past three to five years and compared them to the ones that went up the most, the losers outperformed the winners over the next three-year period.

That sounds reasonable and sensible but is inconsistent with the "efficient-market hypothesis," a term coined by my colleague Gene Fama. (Fama, regarded as the father of modern finance, is the Robert R. McCormick Distinguished Service Professor of Finance at the University of Chicago Booth School of Business.)

Our little paper attracted a lot of attention, so I started writing more. The underlying philosophy at Fuller & Thaler is based on the premise that markets are not perfectly efficient, and investors and other market participants—like analysts—make predictable errors. If we can identify the situations in which that's likely to happen, we may have a small edge in investing.

DS: That reminds me of something someone once told me about a competing strategist: As long as he's consistently wrong, there's value in that.

RT: Yes! If we know someone who is always wrong, we're going to make a lot of money. If you know somebody is right 55% of the time, that's enough of an edge to make you a hero in asset management.

DS: When you think about the pandemic as an unprecedented backdrop, are there any behaviors that have changed or emerged that will have lasting impacts?

RT: As Yogi Berra famously said, predictions are hard, especially when it comes to the future. The pandemic forced society into a big experiment. I think the thing that's most likely to stick is the question of whether it's necessary for people to go to work five days a week.

A lot of people found not having to commute was a big benefit. Many companies let employees move somewhere less expensive or closer to family. It's not that everybody loves that. Some companies found that it's important for everybody to be in the same place every day—but some companies found that they could save a lot of money and make their workforces a lot happier.

DS: The Federal Reserve's pivot has triggered tremendous investor agita over the last six months. We've also had extreme supply shocks—between labor and supply chain impacts from COVID and the food and energy supply shock from the Russian invasion in Ukraine. How will the Fed raising rates and the cost of capital help to solve some of the supply-oriented inflation issues? Is the Fed making the most rational economic choice?

RT: It seems unfortunate that economists have this big toolkit, but when it comes to putting the brakes on inflation, they only have one policy tool: the Fed raising interest rates. It's more complicated than that, of course, but monetary policy seems to be the only tool that's available.

Part of that is because Congress is dysfunctional. Even if we all agreed on a set of actions that Congress could do that would help, it's almost certain they wouldn't pass it. I think economists probably would agree that there are steps one could take. We have a very tight labor market, and it's still very hard for anybody to get a visa to come to work here. Personally, I would love to see immigration go up and make that process speedier and more transparent, but it isn't obvious what you would do.

DS: Some have speculated that the Fed has to force some type of economic recession to combat inflation. Is that rational?

RT: You hear people talk about wage inflation as if that's a big worry. Certainly, if we talk about the bottom half of the income distribution, I think some wage growth is a good thing, and the wage growth we're seeing is less than the rate of inflation.

Am I worried that wages are going to go up so fast that we're going to have what economists call "cost-push" inflation? I don't quite see where that's coming from. I'm not convinced yet that we have inflation rather than high prices.

We know oil is very high right now, and airline tickets are high. It's hard to buy a new appliance because of supply chain problems. So there are high prices, but what you're worried about is that one year of inflation causes another year—that there's a spiral.

Interest rates have been essentially negative for a decade. It's not that getting interest rates up to 2% or 3% in and of itself is a terrible thing, but do we have to cause a recession to deal with inflation? I don't know, and I'm not sure that it would work.

DS: As your Hollywood cameo in "The Big Short" suggested, there was clearly egregious behavior in the housing sector in the period that preceded the Great Financial Crisis. When you think about the setup in this cycle—notwithstanding what's happened in the last six months to growth stocks—it doesn't appear within the real economy that there's a single industry that's poised to blow up and have an outsized negative impact the same way that housing, banks, tech and maybe energy did earlier this century. Is there a particular industry out there today where you are seeing more concerning or aggressive behavior?

RT: If there is such an industry, I can't directly point to it. But remember, the point of that scene I filmed was that people were betting on other people's bets. If you and I make a bet, I would like to know what I'm going to have to pay if I lose.

The leverage was what really caused the financial crisis. Yes, housing crashed, but it was the financial side that caused the problems. Of course, if the Fed raises interest rates enough this time, we could see a substantial hit to housing markets, which are very dependent on buyers being able to get mortgages. We could see the cost of owning a home double. In my naive view of the world, that's inflation.

The same is true for cars. Very few people buy a car for cash. They lease or get a loan. If interest rates go to 4% or 5%, what's that going to do to the cost of consumer finance? Another area that I could see fretting about is credit card loans. There's already such a big spread between the cost of borrowing and the rates they're charging. I'm not sure how much pass-through of higher rates there would be.

If there is a completely speculative bubble out there, one place you might point to would be crypto. I don't understand crypto, so I don't really have an informed opinion about it. But even crypto isn't a real risk unless people have levered positions that we're not seeing.

DS: One thing that hasn't changed over the past two years is that no one got any younger, which I say because I'm wondering: Is there a ceiling for how high rates can go over the next five to 10 years, given aging populations and other demographic challenges? Do we get to a point where rates reach a level where they become attractive again to people who need income, in particular retirees?

RT: Higher interest rates are certainly good for old geezers like me and bad for people starting families. The coupon-clipping class is looking good: They got a big Social Security raise, and they'll start earning positive interest rates on whatever cash they're holding. The amount of money they have in their 401(k)s has probably taken a hit, but if we're talking about the retired set, most of them have conservative portfolios.

I think this is another way of looking at the distributional effects of the increase in interest rates. The part that I'm most skeptical about is that this is going to affect investment decisions in firms, because my impression is that when a firm is thinking about whether to go into a new line of business or build another factory, those kinds of decisions don't depend on whether we're using an 8% discount rate or a 9.4% discount rate. It involves a lot of very optimistic forecasts and managers competing with one another for who can hype their project the best.

What would be unfortunate is if some very low-risk investments—like making your plant or factory more energy efficient—got lost in the shuffle. A plan to put a lot of solar on top of roofs is very good for the world, but it's hard to get people excited about a 5% rate of return.

DS: What counsel do you have today to try to help people avoid common investing pitfalls?

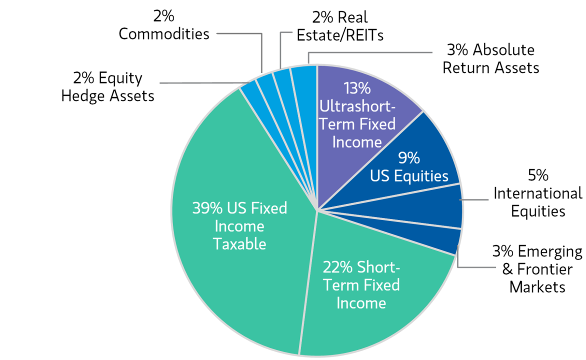
RT: In times like this, I tell people to switch off the financial news networks and watch the NBA. ■

Dr. Richard Thaler 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.

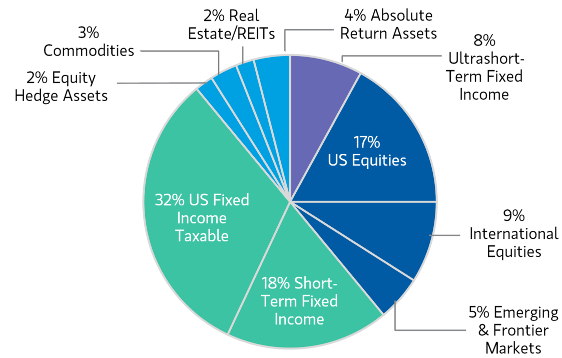
Global Investment Committee Tactical Asset Allocation

The Global Investment Committee provides guidance on asset allocation decisions through its various models. The five models below are recommended for investors with up to $25 million in investable assets. They are based on an increasing scale of risk (expected volatility) and expected return.

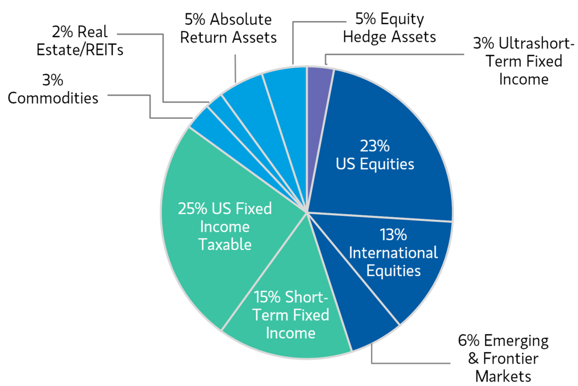
Wealth Conservation



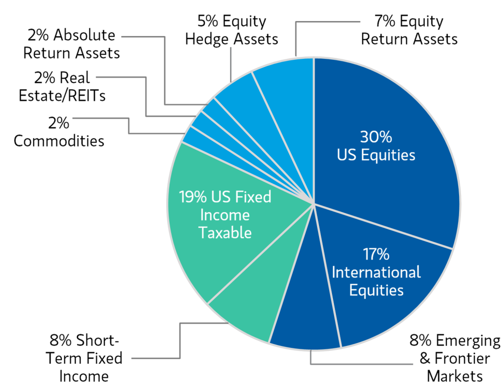
Income



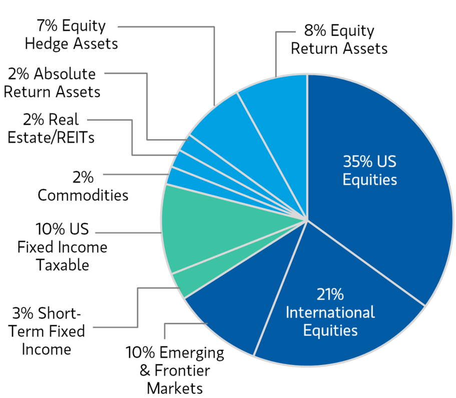
Balanced Growth



Market Growth



Opportunistic Growth



Key

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

Source: Morgan Stanley Wealth Management GIC as of May 31, 2022

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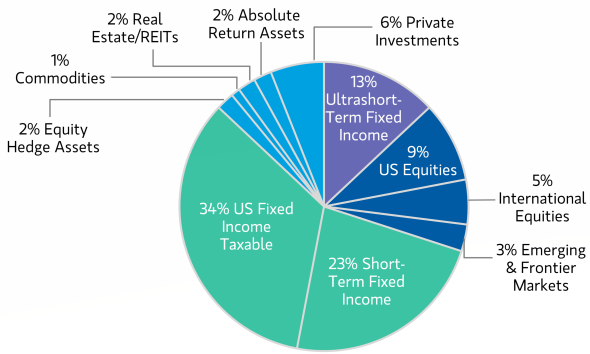

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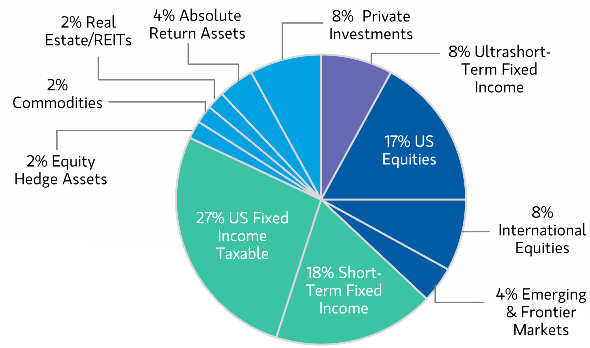

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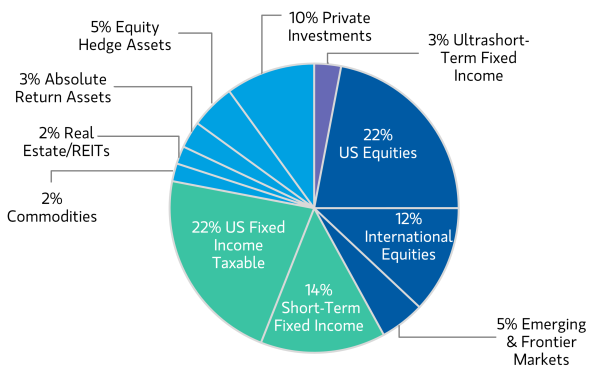

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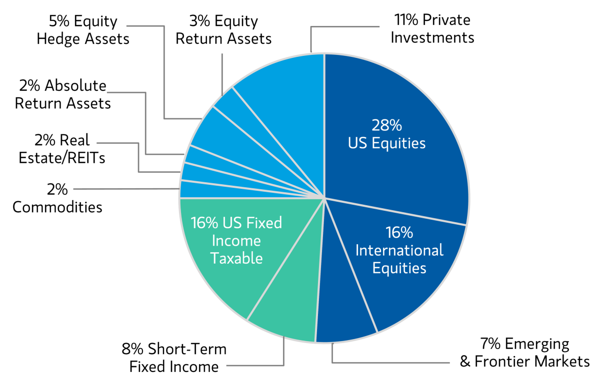
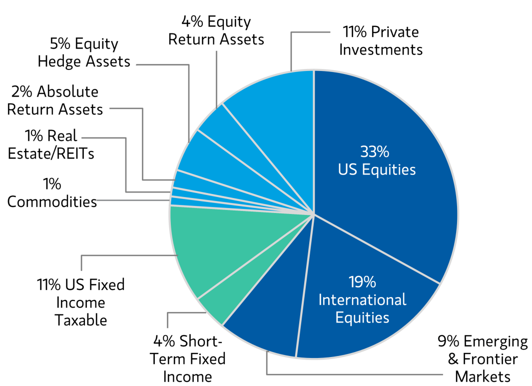


Opportunistic Growth



Key

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

Source: Morgan Stanley Wealth Management GIC as of May 31, 2022

Tactical Asset Allocation Reasoning

Global Equities	Relative Weight Within Equities	
US	Market Weight	With the Fed launching aggressive tightening, supply chains improving and global growth slowing on the back of Russia/Ukraine war and China's COVID outbreaks, we see greater chances of stagflation and thus have reduced our overweight. While recession risks for the broad economy remain low, prospects for negative earnings revisions are rising as are and headwinds to valuation multiples. We expect volatile but rangebound trading plus/minus another 5% to 10%.
International Equities (Developed Markets)	Market Weight	The mix of all-time high inflation, existential risks associated with Russia/Ukraine and the European Central Bank's position that it has limited tools to help suggests that the odds of recession are over 50%. Developed market exposure should skew toward commodity and materials exporters, especially those in the Asia/Pacific region.
Emerging Markets	Overweight	China's regulatory crackdown and zero-tolerance for COVID cases have exacerbated the economic slowing that began last year. Odds are rising for China stimulus and growth linked to supply chains is rebounding in South Asia. We are opportunistically adding to positions there and in Latin America, which benefits from already tight central bank policy and commodity exporter windfalls.
Global Fixed Income	**Relative Weight Within Fixed Income**	
US Investment Grade	Overweight	Markets have aggressively priced the Fed's hawkish rate path and with yield curves apt to face ongoing flattening pressure as risks of a policy mistake rise. We are taking a more balanced risk-reward approach and have added to large underweight positions. With Quantitative Tightening ahead, execution risk remains large as do the risks from even higher inflation. However, with spreads widening and long-term rates reflecting a more reasonable terminal value, bonds are a decent relative portfolio hedge.
International Investment Grade	Underweight	Central banks' hawkish pivots have prompted a material move in global nominal rates. Risk premiums are moving up, too, creating opportunity. While timing and catalysts are still hazy, the amount of negative yielding debt is down by more than two-thirds since last summer. Prospects are brightening for fixed income investors, with opportunities to invest in local currencies that are expected to strengthen against the US dollar.
Inflation-Protection Securities	Underweight	TIPS yields have moved up as realized inflation remains near 40-year highs and geopolitical uncertainties add pricing pressures. However, real yields remain deeply negative, which suggests valuation is not compelling.
High Yield	Underweight	We recently halved our exposure to the equity-like asset class to reduce equity beta of portfolios. High yield bonds have rallied aggressively with the unprecedented provision of liquidity from the Fed and fiscal stimulus from Washington. Surging commodity prices have also repaired balance sheets of energy-levered companies. With spreads near all-time tights, the upside is limited.
Alternative Investments	**Relative Weight Within Alternative Investments**	
REITs	Overweight	With the debate between growth and rising rates moving to center stage, we recently added modestly to the asset class, believing it is a diversifying source of income that is also leveraged to reflation. With real interest rates still negative and inflation expectations rising, we expect to be selective opportunistic investors in the sector this year, with a focus on residential.
Commodities	Market Weight	Sooner-than-expected economic and COVID-19 recoveries in both China and the US have shocked supply chains drained from 2020's closures. Now most major commodities are rallying in a chase to keep up with improving demand. The impact is broad-based, affecting areas as diverse as industrial metals, soft agricultural, lumber and semiconductors. Longer term, increased global capital spending, a strong US housing market, a weaker US dollar and rising overall inflation suggest the asset class will likely remain opportunistically bid.
Hedged Strategies (Hedge Funds and Managed Futures)	Overweight	With broad market valuations rich, a majority of returns will be based on company earnings and managements' ability to navigate rising costs, surging demand and disruptive competition. These factors are constructive for hedge fund managers who are good stock-pickers and can use leverage and risk management to amplify returns. We prefer very active and fundamental strategies, especially low beta, low volatility and absolute return hedge funds.

*For more about the risks to Duration, please see the Risk Considerations section beginning on page 18 of this report.
Source: Morgan Stanley Wealth Management GIC as of May 31, 2022

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.

Jonathan Garner, Martijn Rats, Robert Rosener, Graham Secker, Amy Sergeant, Daniel Skelly, Ellen Zentner and Michael Zezas 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

Bloomberg Energy Subindex Total Return: Formerly known as Dow Jones-UBS Energy Subindex Total Return (DJUBENTR), the index is a commodity group subindex of the Bloomberg CITR. The index is composed of futures contracts on crude oil, heating oil, unleaded gasoline and natural gas. It reflects the return on fully collateralized futures positions and is quoted in USD.

Bloomberg Industrial Metals Subindex Total Return: Formerly known as Dow Jones-UBS Industrial Metals Subindex Total Return (DJUBINTR), the index is a commodity group subindex of the Bloomberg CITR. The index is composed of longer-dated futures contract s on aluminum, copper, nickel and zinc. It reflects the return on fully collateralized futures positions and is quoted in USD.

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

Risk Considerations

Alternative Investments

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 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 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.

Hypothetical Performance

General: Hypothetical performance should not be considered a guarantee of future performance or a guarantee of achieving overall financial objectives. Asset allocation and diversification do not assure a profit or protect against loss in declining financial markets.

Hypothetical performance results have inherent limitations. The performance shown here is simulated performance based on benchmark indices, not investment results from an actual portfolio or actual trading. There can be large differences between hypothetical and actual performance results achieved by a particular asset allocation.

Despite the limitations of hypothetical performance, these hypothetical performance results may allow clients and Financial Advisors to obtain a sense of the risk / return trade-off of different asset allocation constructs.

Investing in the market entails the risk of market volatility. The value of all types of securities may increase or decrease over varying time periods.

This analysis does not purport to recommend or implement an investment strategy. Financial forecasts, rates of return, risk, inflation, and other assumptions may be used as the basis for illustrations in this analysis. They should not be considered a guarantee of future performance or a guarantee of achieving overall financial objectives. No analysis has the ability to accurately predict the future, eliminate risk or guarantee investment results. As investment returns, inflation, taxes, and other economic conditions vary from the assumptions used in this analysis, your actual results will vary (perhaps significantly) from those presented in this analysis.

The assumed return rates in this analysis are not reflective of any specific investment and do not include any fees or expenses that may be incurred by investing in specific products. The actual returns of a specific investment may be more or less than the returns used in this analysis. The return assumptions are based on hypothetical rates of return of securities indices, which serve as proxies for the asset classes. Moreover, different forecasts may choose different indices as a proxy for the same asset class, thus influencing the return of the asset class.

An investment in a money market fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Although the Fund seeks to preserve the value of your investment at $1.00 per share, it is possible to lose money by investing in the fund.

ETF Investing

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.

MLPs

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.

Individual MLPs are publicly traded partnerships that have unique risks related to their structure. These include, but are not limited to, their reliance on the capital markets to fund growth, adverse ruling on the current tax treatment of distributions (typically mostly tax deferred), and commodity volume risk.

The potential tax benefits from investing in MLPs depend on their being treated as partnerships for federal income tax purposes and, if the MLP is deemed to be a corporation, then its income would be subject to federal taxation at the entity level, reducing the amount of cash available for distribution to the fund which could result in a reduction of the fund's value.

MLPs carry interest rate risk and may underperform in a rising interest rate environment. MLP funds accrue deferred income taxes for future tax liabilities associated with the portion of MLP distributions considered to be a tax-deferred return of capital and for any net operating gains as well as capital appreciation of its investments; this deferred tax liability is reflected in the daily NAV; and, as a result, the MLP fund's after-tax performance could differ significantly from the underlying assets even if the pre-tax performance is closely tracked.

Duration

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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

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

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.

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.

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.

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.

The **indices** are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment.

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

The returns on a portfolio consisting primarily of **environmental, social, and governance-aware investments (ESG)** may be lower or higher than a portfolio that is more diversified or where decisions are based solely on investment considerations. Because ESG criteria exclude some investments, investors may not be able to take advantage of the same opportunities or market trends as investors that do not use such criteria. The companies identified and investment examples are for illustrative purposes only and should not be deemed a recommendation to purchase, hold or sell any securities or investment products. They are intended to demonstrate the approaches taken by managers who focus on ESG criteria in their investment strategy. There can be no guarantee that a client's account will be managed as described herein.

<u>Important Information and Risk Considerations</u>

<u>Virtual Currency Products (Cryptocurrencies)</u>

Buying, selling, and transacting in Bitcoin, Ethereum or other digital assets ("Digital Assets"), and related funds and products, is highly speculative and <u>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, and ***<u>investors could lose their entire investment</u>***.
- Certain Digital Asset funds and products, allow investors to invest on a more frequent basis than investors may withdraw from the fund or product, and interests in such funds or products are generally not freely transferrable. This means that, particularly given the volatility of Digital Assets, an investor will have to bear any losses with respect to its investment for an extended period of time and will not be able to react to changes in the price of the Digital Asset once invested (for example, by seeking to withdraw) as quickly as when making the decision to invest. Such Digital Asset funds and products, are intended only for persons who are able to bear the economic risk of investment and who do not need liquidity with respect to their investments.
- 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.

- Certain Digital Assets are not intended to function as currencies but are intended to have other use cases. These other Digital Assets may be subject to some or all of the risks and considerations set forth herein, as well as additional risks applicable to such Digital Assets. Buyers, sellers and users of such Digital Assets should thoroughly familiarize themselves with such risks and considerations before transacting in such Digital Assets.
- The value of Digital Assets may be negatively impacted by future legal and regulatory developments, including but not limited to increased regulation of such Digital Assets. Any such developments may make such Digital Assets less valuable, impose additional burdens and expenses on a fund or product investing in such assets or impact the ability of such a fund or product to continue to operate, which may materially decrease the value of an investment therein.
- Due to the new and evolving nature of digital currencies and the absence of comprehensive guidance, many significant aspects of the tax treatment of Digital Assets are uncertain. Prospective investors should consult their own tax advisors concerning the tax consequences to them of the purchase, ownership and disposition of Digital Assets, directly or indirectly through a fund or product, under U.S. federal income tax law, as well as the tax law of any relevant state, local or other jurisdiction.
- Over the past several years, certain Digital Asset exchanges have experienced failures or interruptions in service due to fraud, security breaches, operational problems or business failure. Such events in the future could impact any fund's or product's ability to transact in Digital Assets if the fund or product relies on an impacted exchange and may also materially decrease the price of Digital Assets, thereby impacting the value of your investment, regardless of whether the fund or product relies on such an impacted exchange.
- 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.
- The exchange rate of virtual currency products versus the USD historically has been very volatile and the exchange rate could drastically decline. For example, the exchange rate of certain Digital Assets versus the USD has in the past dropped more than 50% in a single day. Other Digital Assets may be affected by such volatility as well.
- Digital Asset exchanges have limited operating and performance histories and are not regulated with the same controls or customer protections available to more traditional exchanges transacting equity, debt, and other assets and securities. There is no assurance that a person/exchange who currently accepts a Digital Asset as payment will continue to do so in the future.
- The regulatory framework of Digital Assets is evolving, and in some cases is uncertain, and Digital Assets themselves may not be governed and protected by applicable securities regulators and securities laws, including, but not limited to, Securities Investor Protection Corporation coverage, or other regulatory regimes.
- 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.
- The foregoing list of considerations and risks are not and do not purport to be a complete enumeration or explanation of the risks involved in an investment in any product or fund investing or trading in Digital Assets.

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