On the Markets

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Think Like an Owner

Business managers are always looking for ways to maximize the value of the firm. One way to do that is to encourage everyone to think like an owner. After all, if employees are thinking like an owner they are more apt to act like one and do the things that will make the organization better and, therefore, more valuable in the long term.

One of my greatest challenges as both the chief investment officer and chief US equity strategist is providing advice to such a wide range of clients with disparate styles and financial goals. Perhaps the simplest distinction I can make among this wide-ranging clientele is that one group consists of asset *managers* while the other is made up of asset *owners*. I would characterize the large majority of Morgan Stanley Wealth Management clients as asset owners.

Last month, in the 2019 outlook, I made the case for a much better year than 2018. Such an outcome is predicated on two things happening, in particular: (1) The Federal Reserve pauses its rate hikes and maybe ends its Quantitative Tightening program; and (2) economic and earnings growth trough. Recall that our cautious view in 2018 was based on exactly the opposite—tightening financial conditions and peaking growth. I remain confident that the low in stock prices we saw in late December will prove to have been a smart entry point for investors. However, most major equity indexes are now 10% to 15% higher and, while Fed officials have said clearly they are going to hit the pause button on rate hikes, earnings and economic data are coming in below our expectations and getting worse. I think ignoring continued deterioration in growth at these higher prices is a bad idea for both asset managers and asset owners. Therefore, our advice is to wait for a pullback and a likely retest of the December lows for many individual stocks and some indexes.

Recently, our asset manager clients seem to disagree with that view. However, asset managers may also chase rallies in an effort to outperform. Asset owners, on the other hand, don't have such pressure to perform short term. Instead, they can focus on reaching their long-term financial goals. The bottom line is that broad equity markets aren't offering a sound pitch for new investments currently. At the same time, they're not overly expensive like last year, either—so there's no need to make sales, pay taxes and then be concerned about when to get back in. Instead, think like an owner: Be patient and wait for growth to trough, at which point the asset managers may then be happy to sell to you. ■

Deficits and Debt: The Legacy of QE

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The decade since the financial crisis has been unprecedented on many levels. The curative power of central bank Quantitative Easing (QE) has been validated; US banks have been reregulated and healed, and now have among the strongest balance sheets in the world; and investors in US assets have enjoyed strong returns, with a 60%/40% stock/bond portfolio delivering a near 10% compound annual return with about a third of the normal volatility.

December 2018 was the 113th month in the second-longest economic recovery since the Great Depression, and still corporate profits' share of GDP is at an all-time high. Inflation is at 2%, the Federal Reserve's official target, and unemployment, at 3.7%, is near a 50-year low. The household sector has deleveraged and most housing markets have recovered their lost value. QE also provided companies with higher net margins, a lower cost of capital, higher share repurchases and a boom in mergers and acquisitions (M&A). The federal government's debt level went up, but QE lowered the cost of financing it.

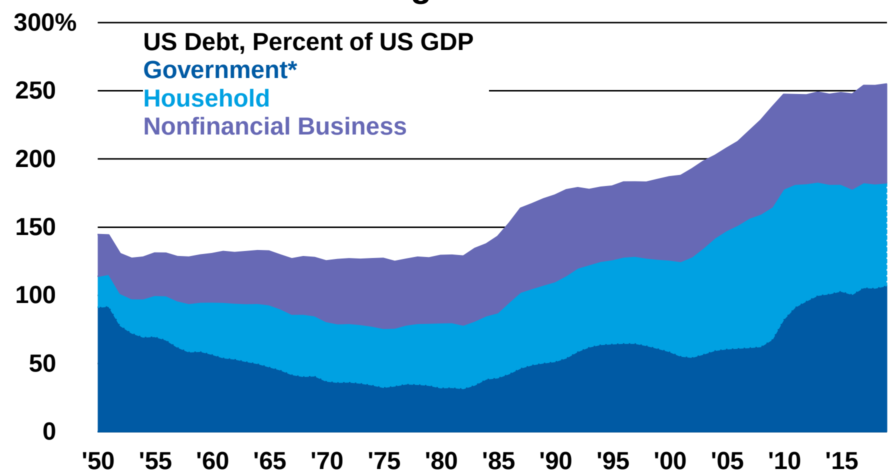
SUBPAR GROWTH. Not everything has thrived. Annual economic growth for much of the cycle, below 2.5%, has been subpar, and productivity gains have stalled below 1%. With traditional banks forced to cut back on lending, "shadow banking" took its place; markets for investment grade bonds, high yield bonds and private financing have expanded nearly fourfold. What's more, debt quality is deteriorating, a condition that has implications for market liquidity in the next downturn.

Rather than ushering in a new era of innovation, investment and vitality to the economy, much of this capital has been used for share repurchases, privatization and the sustenance of so-called "zombie" companies—old, economically unproductive firms. Meanwhile, inequality in the household sector has expanded to levels not seen since 1929, undoubtedly a factor contributing to our current level of political and social divisiveness.

DEBT DEPENDENCY. In the past two years, the Global Investment Committee has explored the QE era's investment implications with two special reports: "Beyond Secular Stagnation" in 2016 and "The Capex Conundrum and Productivity Paradox" in 2017. Now, we contemplate QE's most unintended consequences. In what is likely one of history's great ironies, the financial crisis' cure has ushered in a new era of US debt dependency. While households and the banks have deleveraged, the current ratio of nonfinancial (public and private) debt to GDP approaches 250%, a post-World War II high and a hugely complicating factor just as other forces are already conspiring to drive a bear market in bonds (see chart).

Offering up hypotheses about the impact of high debt levels for economies and capital markets is a well-worn science. Most experts agree that large debt loads and the growing burden of interest payments "crowd out" investment, leading to lower GDP growth and a lower standard of living. On one level this seems intuitive and, most recently, vivid images of debt crises driving Greek unemployment and Italian political chaos have validated these views. However, for many US investors, this argument has always seemed hollow and academic, with the US seemingly defying the theory due to sheer size, market liquidity, perceived high-quality credit rating and the dollar's role as the world's reserve currency. Although these factors have insulated US rates and markets for the past 80 years, we are

Debt as a Percentage of GDP Has Risen To a Post-World War II High



*Gross
Source: Federal Reserve, Haver Analytics, Bloomberg as of Dec. 28, 2018

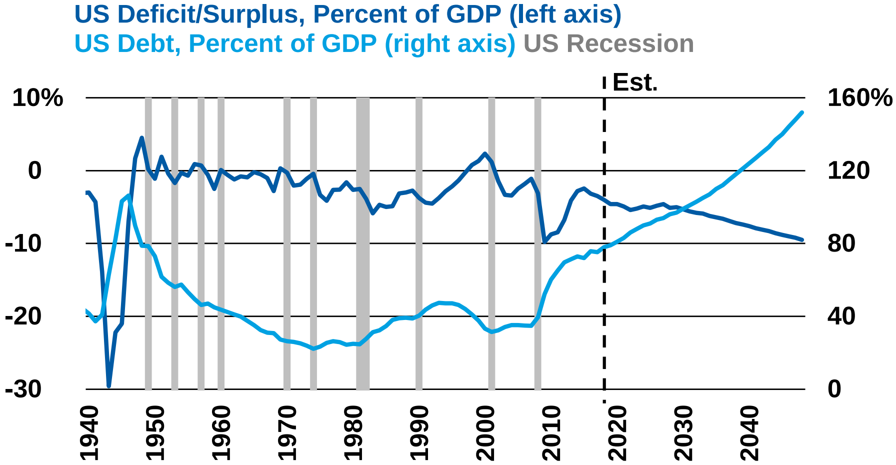
convinced that time is running out for the debt skeptics. We are poised to give way to Chinese dominance in both geopolitics and economic dynamism. Perhaps the most complicating factor is that the federal government has embarked on unconventional deficit-financed fiscal stimulus at the end of a business cycle.

UNPRECEDENTED BACKDROP. Recent legislation around tax reform and budget spending has established an unprecedented backdrop. Federal debt held by the public, which after decreasing relative to GDP between 2011 and 2017, is now poised to rise to 96% of GDP during the next decade from the current 78%. This would put the federal debt-to-GDP ratio on target to be the largest since WWII. Even if recent tax reforms expire under current law and are not made permanent, the Congressional Budget Office estimates debt to GDP could be at more than 150% by 2048 (see chart, upper right). While these numbers would not be out of line with other major developed countries, the IMF has named the US as the only major Western economy not expected to reduce its government debt in the next five years. Typically, cycle peaks are used to pay down deficits and debts creating capacity for stimulative fiscal spending in the event of a downturn or recession.

Equally unprecedented this cycle is the size of corporate capital markets debt relative to bank debt. While less than 20% of all corporate debt was financed through bond issuance in 2000, today it is nearly 35%; this shift has tripled the size of the market to more than $4.6 trillion from less than $1.5 trillion. Most important, the fastest-growing tranche of corporate debt is the BBBs, which now account for roughly 52% of all outstanding investment grade issues. While corporations have used leverage to improve returns on equity, now the highest in decades, the proceeds have largely been used to fund share buybacks, dividends and M&A, and not to improve productivity. As a result, despite earnings at their peak, interest coverage has slipped below the 2007 level. As we have cautioned, the risk for this market is less about defaults than liquidity because a downgrade of BBB bonds in the next recession could swamp the ability of the high yield market to absorb them. This lack of liquidity could, in turn, widen credit spreads even further.

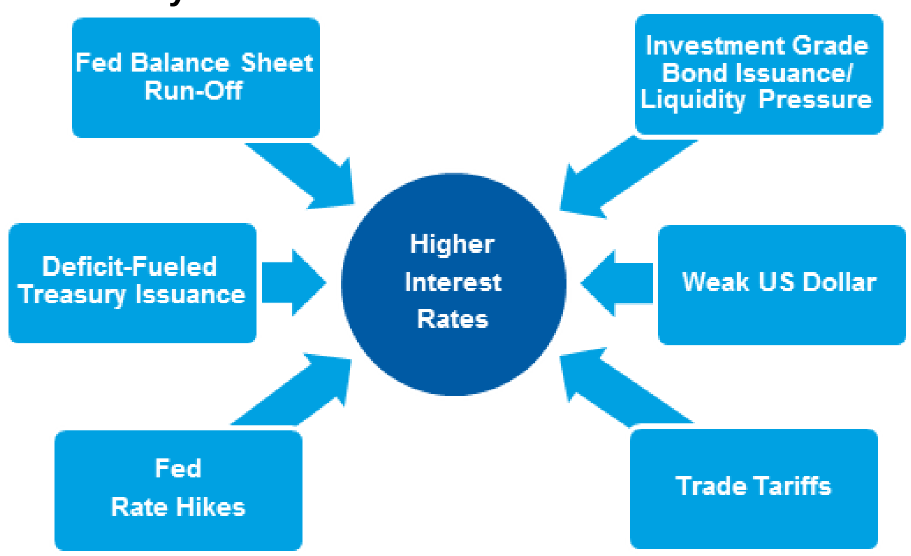
BOOM/BUST SCENARIO. What are the implications of this development at this point in this unique business cycle? For starters, because fiscal stimulus has added fuel to the fire, GDP growth has been pushed well above its natural rate, raising the odds of a boom/bust ending to the cycle. Volatility is moving higher and is likely to stay higher, and the zombie companies kept alive by low interest rates are ever more vulnerable. Secondly, and potentially most dangerously, are the risks to intermediate-term interest rates, which will potentially face the confluence of four major headwinds as Fed hikes combine with higher required Treasury issuance and Fed balance sheet runoff, not to mention competition from the swell of investment grade bond refinancings during the next five years (see chart, below). The inevitable conclusion is that term premiums, which have been negative for this cycle, will need to rise, adding to higher rates. A third factor, which we believe has decent odds of occurring, would be if interest rate risk premiums have to go even higher because of a

Projections Show Debt/GDP Ratio at 150% by 2040



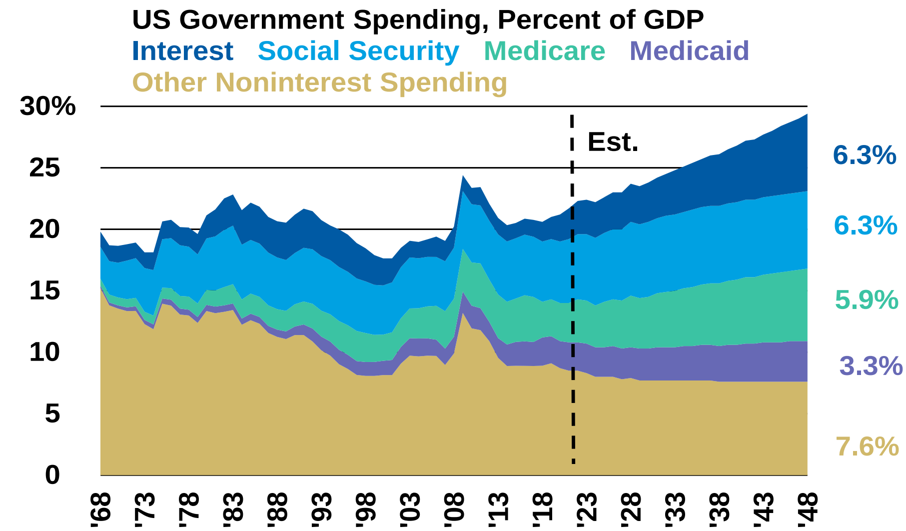
Source: Congressional Budget Office, Office of Management and Budget as of April 30, 2018

How Policy and Market Pressures Affect Interest Rates



Source: Morgan Stanley Wealth Management GIC

Interest Payments Could Overwhelm Federal Budget



Source: Congressional Budget Office as of April 30, 2018

weakening dollar, as 40% of US debt is now held by foreigners. The last issue is the magnitude of "crowding out" as debt-service payments and deficits grow, creating a self-reinforcing expansion of the debt.

Compounding a growing debt burden is the rate of interest itself, which is affected not only by Treasury issuance, but also investment grade bond issuance, Fed policies and the dollar. In the current scenario painted by the independent and nonpartisan Congressional Budget Office, we will be facing this two-pronged challenge—rising principal and rising rates. It is now estimated that net interest payments will rise to 21% of the annual budget by 2048 from 8% now, significantly squeezing discretionary expenditures (see chart). In the same period, US government spending relative to GDP expands to 29% from 21%. In essence, net interest payments soar to 6.3% from 1.6% of GDP, a level that annual economic growth may be unable to outrun. A final point is that government will have few options to actually react in a downturn, once again placing the policy onus exclusively back on the Fed.

MUTED RETURNS AHEAD. There is little debate that the Fed and QE saved the world from another depression and the US banking system is stronger than it has been in 80 years. However, the legacy of growing debt and deficits convinces us that equity returns will be muted and below average during the next decade. What's more, interest rates may be 100-to-150 basis points higher than the Fed estimate of the neutral interest rate, which is 3.0% to 3.5%. The concentration of debt growth among lower-quality companies poses a cyclical liquidity risk to holders of investment grade bonds, while a higher-than-normal cost of capital will likely inhibit investment in the next cycle, short-circuiting some of the positive growth developments coming from improved demographics and a more robust technology/productivity cycle.

With discretionary government spending ever more constrained and squeezed out by interest payments, efforts to sustain global leadership in education, technology, defense and medicine may dwindle, as will any hope of repairing the country's aged infrastructure. Equally important, the debt surge has contributed to the de-equitization and privatization of America. Complicating investment strategy is our belief that a secular bear market in bonds is upon us. Rising rates should provide some income opportunities for those who can effectively manage cash and ladder maturities, but will challenge principal preservation for those with long-duration holdings. In this environment, cash should once again be a critical portfolio allocation and favorable investments will have an even greater reliance on companies with low leverage, quality cash flows and the ability to pay growing dividends. ■

For a complete copy of this Special Report, *"Deficits and Debt: The Legacy of QE," please contact your Financial Advisor.*

A Soft Landing for China Could Bolster EM Assets

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In 2018, many sectors and asset classes had sharp corrections and became victims of a "rolling bear market." Emerging market (EM) assets were hard hit, with the MSCI Emerging Markets Index falling by 26.6% peak to trough and the JP Morgan Emerging Markets Bond Index down 7.2% for the year. This downturn was driven by geopolitical tensions, decelerating global trade and fundamental weaknesses in select EM economies. The rebound in the US dollar and US interest rates made matters worse.

Investors have also been concerned about further slowing in China, whose estimated 6.4% annualized GDP growth rate in the fourth quarter of 2018 was already the lowest in nearly 10 years. China's woes can have a further negative impact on those EM countries with which the nation has strong trade links or those dependent on its commodity purchases.

FIRMER FOOTING. Thus, we believe that a soft landing in China could place the emerging markets on firmer footing. Last year's sell-off in the Chinese stock market weakened EM sentiment overall. This was primarily driven by the government's intentional deleveraging effort to reduce systematic risk, which has caused an onshore liquidity crunch and pushed corporate default rates above previous stressed periods. In fact, both the number of defaults and the total default value have been higher than the most recent stretched period from 2014 to 2016, but they seem to have peaked in the fourth quarter. Rising trade tension with the US likely contributed to the bearish tone.

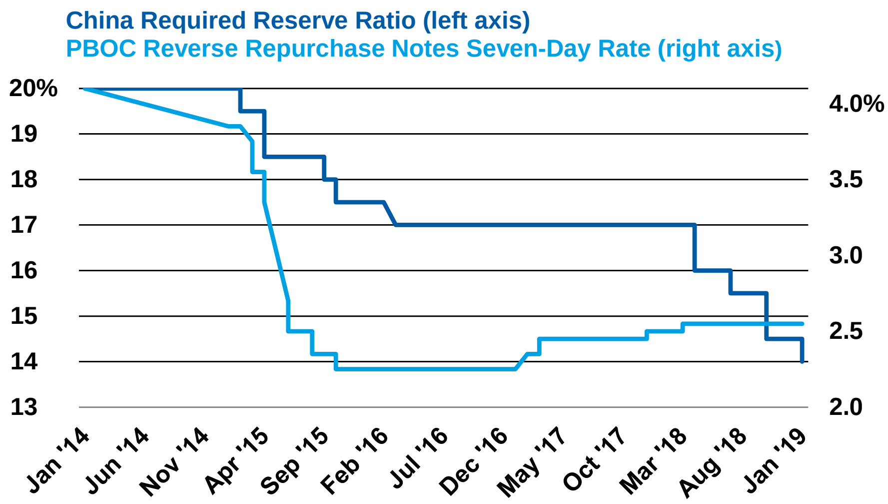
More recently, we've seen further data declines in China: November industrial profits growth slowed to the lowest level in two years; December's manufacturing Purchasing Managers' Index dropped into contractionary territory; and trade has shown some weakness. In December, exports dropped 4.4% year over year and imports fell 7.6%. These have all sparked more concerns over a slowing Chinese economy, and policymakers now view GDP growth as the top priority for 2019.

MORE STIMULUS. To step up easing efforts, the People's Bank of China (PBOC) cut banks' reserve requirement ratios (RRR) by another 100 basis points to bring it to 14% (see chart). That's the fourth such cut since last April, and we expect three more 1% cuts this year. Similarly, the central bank has committed to keeping the reverse repurchase notes seven-day rate, the interest rate at which banks lend to each other, low and stable. Also, the central bank has recently rolled out a targeted policy tool to spur lending to small and private firms. Together with the RRR cuts, the PBOC released 800 billion renminbi in long-term liquidity to the market, which benefits banks and the bond market. In the past four months, the yield on 10-year Chinese government bonds has fallen 50 basis points to 3.20%.

On the fiscal front, Beijing continues to step up stimulus with more infrastructure approvals. In fact, infrastructure investment growth, which is considered a leading indicator, troughed last year. Also, Beijing is allowing local governments to front-load their annual debt issuance quotas in January, which, in previous years, have not been approved until March. In addition, a 2% to 3% cut in the value-added tax, aimed at restoring business confidence, is expected within the next two to three months.

What could really improve China's prospects would be reaching a deal to avert new tariffs—now threatened by the US for March 1—and cut existing ones. Deal or no deal, our colleagues on Morgan Stanley & Co.'s China Economics Strategy team say growth could bottom this quarter. Furthermore, they say credit growth should pick up by March when the stimulative policies fully kick in. For more details, see the January 2019 issue of *Topics in Portfolio Construction.* ■

China Cut Required Reserves to Stimulate Lending



Source: Bloomberg, Morgan Stanley Wealth Management GIC as of Jan. 21, 2019

Belts, Roads and Global Infrastructure

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World population is set to grow 29% to 9.8 billion by 2050 from 7.6 billion today, according to United Nations' forecasts. In this time, an estimated 1.3 billion people will migrate to urban areas to join the 4.2 billion already in cities around the globe. These trends will strain existing infrastructure and new projects will be needed.

Global infrastructure generally includes transportation, power, water and telecommunications. Transportation, the largest component, is subdivided into rails, roads, airports and ports. Power consists of electricity generation and transmission, as well as pipelines for oil and natural gas. Water refers to the supply of clean water, as well as the movement of wastewater. Telecommunications includes telephone, broadband and wireless.

SPENDING GAP. At current trend growth of 1.8%, the world is expected to spend $79 trillion between now and 2040. The Global Infrastructure Outlook G20 working group and Oxford Economics forecasted that needed investment is $94 trillion, leaving a $15 trillion deficit. Whether or not spending accelerates to close the gap, the market size and investment potential associated with global infrastructure is significant.

Increased spending means more opportunity for the private sector across a range of support activities like construction and facilities maintenance. What's more, the longer the gap persists, the faster infrastructure will have to expand in later years, providing an additional tailwind. Finally, even if the spending increases do not materialize, there will be a greater need for maintenance and related services.

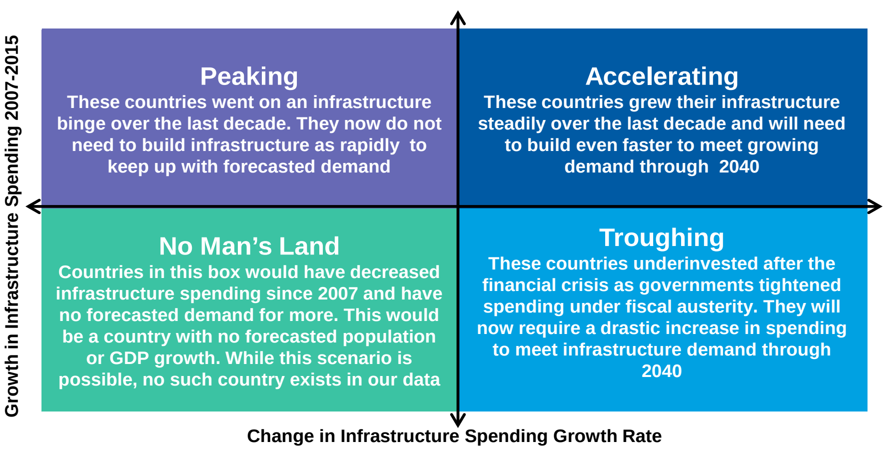
TRADING LANES. The single most significant infrastructure effort, and probably the most geopolitically controversial, is China's "One Belt, One Road" initiative. One portion focuses on overland rail routes linking China with Western Europe, while the maritime plan connects China with ports in Asia, Oceania and Africa. The proposal calls for building roads, rails and ports in more than 70 countries. That should support energy and communications investment, too. China has indicated interest in spending more than $1 trillion building this network, and has so far spent about $250 billion.

There are spending needs elsewhere. The American Society of Civil Engineers grades US infrastructure a "D+" and believes that $2 trillion in spending is needed between now and 2025. Morgan Stanley & Co. forecasts that spending on 5G networks will be $225 billion. Online commerce, which grew 16% in 2018 will drive demand for transportation infrastructure. Finally, water scarcity in China and the Middle East will force governments to make needed investments.

INVESTMENT FRAMEWORK. The investment framework builds off of prior infrastructure spending and future needs to identify areas of opportunity (see chart). Countries with high prior infrastructure spending growth with slowing forecasted future investment are considered "peaking." Some players and market segments may still do well, but the industries are generally more likely to face overcapacity that weighs on growth and margins. Countries with high historical spending and higher future spending needs are classified as "accelerating." Those with low prior spending growth, or even contraction, and increasing spending needs are considered "troughing." These represent the most potentially undervalued opportunities. Finally, there are no countries in our data with low prior spending and low future spending. ■

The above is an excerpt from the Dec. 20, 2018 issue of AlphaCurrents. *For the full report, please contact your Financial Advisor.*

Matching Prior Development With Future Needs



Source: Bloomberg, Morgan Stanley Wealth Management Market Strategy as of Dec. 20, 2018

Get Ready for Flying Cars

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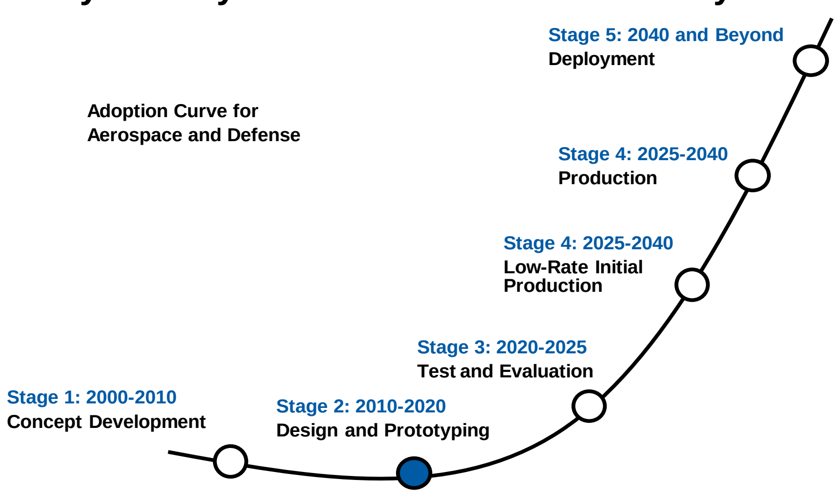
If you're bullish on autonomous cars, it's time to start looking at autonomous aircraft—that is, flying cars. This is not a far-fetched idea. Military drones have been around for years, and now electrified, autonomous vertical takeoff and landing vehicles (VTOLs) are gaining traction. Drone package delivery is in active testing, and in November, NASA launched a "grand challenge" to accelerate the development of urban air mobility (UAM), which it defines as a "safe and efficient system for air passenger and cargo transportation within an urban area." NASA is taking the approach of the Pentagon, which launched a challenge in 2004 to accelerate the development of autonomous vehicle technology for military use (see chart).

To be clear, this is a long-term project, but capital is flowing into UAM initiatives. Major aerospace and defense companies are investing in such fields as helicopter ride-hauling services and electric—that means quieter—choppers.

COMPELLING ECONOMICS. UAM's economics could be compelling. Think of a 20-mile trip with a ride-sharing service home to the suburbs after a night in the city. Averaging 25 miles per hour (mph), it takes 48 minutes to get home. At $1.50 per mile, the trip cost $30. At 10 trips per shift (a busy day), this can bring in $300 of revenue for the driver or $75,000 per year—revenue that, with an autonomous vehicle, flows to the company.

Now, what if a large drone or autonomous aircraft could make the 20-mile trip at 100 mph and $2.50 per mile? Assuming you'd be willing to pay up for speed, you'd be home in 12 minutes for $50. Faster speeds mean more trips, as many as 40 in an eight-hour shift. Thus $2,000 of revenue per shift and more working hours could yield close to $1.5 million of revenue per year per flying car.

Military Already at Work on Urban Air Mobility Vehicles



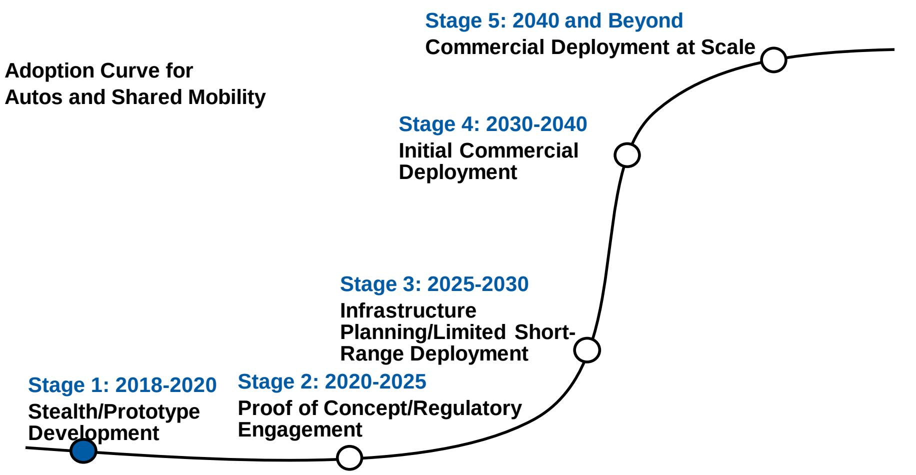
Source: Morgan Stanley & Co. Research as of Dec. 2, 2018

We would describe the current state of technology for electric autonomous aircraft as underdeveloped, but rapidly improving in areas of pilot substitution, safety and efficiency (see chart, top page 8). Widespread VTOL adoption faces serious technological hurdles, including battery energy density and noise. Fully functional autonomous aviation may need to improve to a level significantly greater than that of conventional electric autonomous vehicles for road transport.

TEST FLIGHTS. It's early days for UAM payloads and ranges, as well as information. A German-based company began testing its electric VTOL aircraft prototype in Singapore this year. Currently, the maximum payload is about 350 pounds, with a maximum range of 17 miles at an optimal cruise speed of 43 mph. Most companies keep their data in stealth mode and their testing specifications close to the vest. Many private companies say they can achieve a maximum range of some 250 miles per charge at speeds of 150 mph to 200 mph with payload capacities of four or five people, including the pilot. If so, that equates to about 600 pounds.

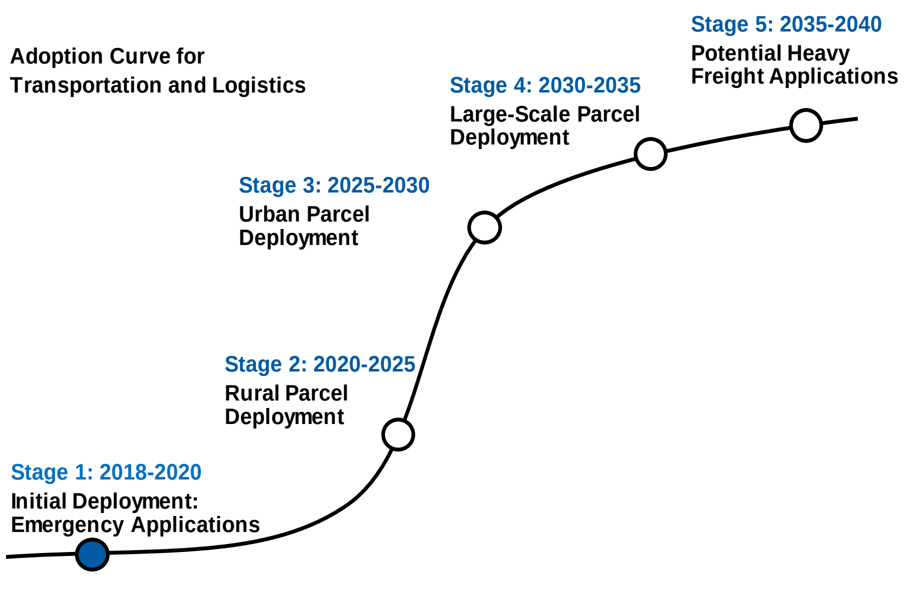
Most package drone prototypes can carry a maximum of 10 pounds. A major online retailer has said it plans to fly drones weighing 55 pounds at speeds of 55 mph for packages of five pounds or less. A major defense contractor has begun testing autonomous flying technologies on its helicopters, which have a maximum payload of nearly 16 tons. The chasm between military-grade aircraft and urban e-VTOL and drone technology exists because battery technology, the primary noise litigant, is quite underdeveloped. A 50-fold increase in the global annual production of electric vehicles (EV) by 2030 and as much as $100 billion or more of capital investment directed at the mass production of EV batteries could reasonably drive technology and costs to levels that significantly enable the e-VTOL market.

Will We Be Traveling in Flying Cars by 2030?



Source: Morgan Stanley & Co. Research as of Dec. 2, 2018

Autonomous Air Delivery Likely to Start in Rural Areas



Source: Morgan Stanley & Co. Research as of Dec. 2, 2018

CRITICAL TECHNOLOGIES. Battery technology and advanced propulsion systems will be critical to UAM. We believe that current lithium-ion battery technology is largely workable and, near term, will support EV adoption. However, we believe that a material change in battery technology will be needed to achieve the levels of charge rates, cycle life and capacity that companies are targeting. Potential battery technologies include lithium sulfur or solid-state lithium-ion batteries, both of which are years away for operation in terrestrial vehicles, let alone electric aircraft. In our view, the push for electric vehicles to reach cost parity with internal combustion engine vehicles will accelerate the demand for advanced battery technologies.

The hurdles for flying cars are not just technological. Regulatory, legal and behavioral factors come into play. Still, we see early commercialization of shared autonomous cars as an incubator and accelerator for the framework of regulation and consumer acceptance of flying-car tech. In fact, in estimating UAM's potential market, we consider state, local and regional government intervention, regulation, infrastructure barriers and, of course, public acceptance.

How likely is all of this to come together? Here are our assessments.

Base Case: Advanced technology, obstructive policy. Technology outpaces regulations, infrastructure and budgets. VTOL and drone adoption is snarled by red tape and a legislative slowdown. The global total addressable market is about $1.5 trillion by 2040, or 1.2% of projected global GDP.

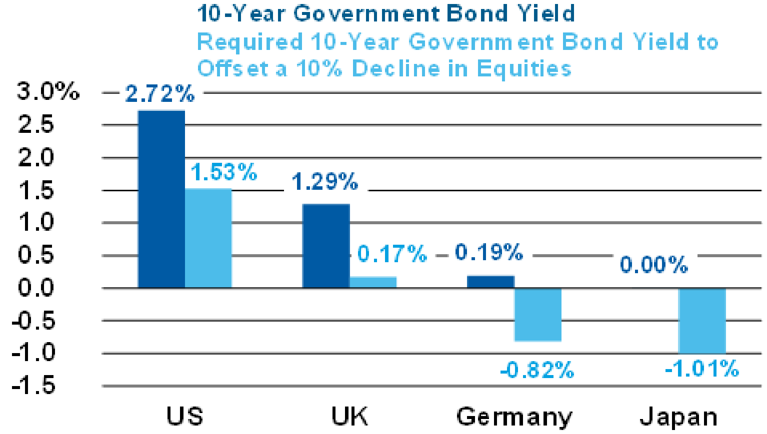
Bull Case: Advanced developed technology with accommodative policy. VTOL/drone transportation of goods and people achieves mass acceptance and adoption. Technology accelerates and becomes cost effective for both consumers and businesses as it proves more efficient than existing transportation models. Policy is flexible and infrastructure is readily available or easily adapted. Regulations permit "easy" VTOL/drone usage and adapt to changing consumer and business demands. The global total addressable market is about $2.9 trillion by 2040, or about 2.2% of projected global GDP.

Bear Case: From hobbyists to commercial novelty. Underdeveloped, unsuccessful technology combines with obstructive policy. There is mass rejection and minimal adoption of VTOL/drone transport of goods and people. Technology stagnates as it is not cost-effective for consumers or businesses. It is less efficient than current transportation models and encounters critical technological barriers to adoption, including weight, noise, range, payload and safety. Policy is restrictive and infrastructure cannot support adoption. Regulations hinder VTOL/drone usage and impede widespread global adoption. The global total addressable market is $615 billion by 2040, or about 0.5% of projected global GDP. ■

For a copy of this Morgan Stanley & Co. Bluepaper, *"Flying Cars: Investment Implications of Automous Urban Air Mobility," please contact your Financial Advisor.*

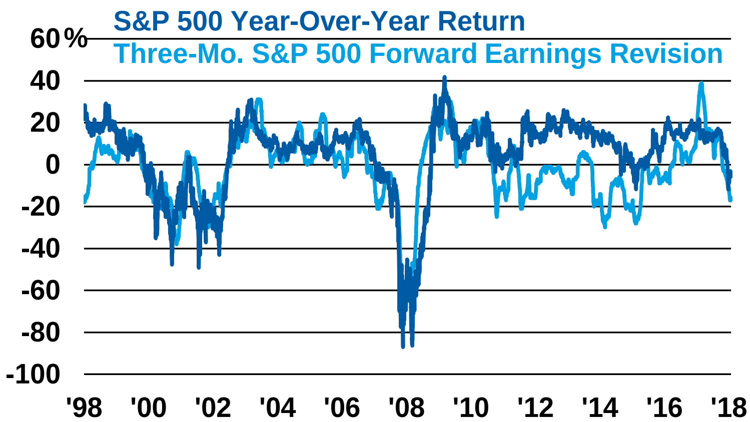
Bonds Have Become a Less Reliable Portfolio Diversifier for Investors

Investors have long used bonds as a portfolio diversifier. Bonds usually go up in price when stocks go down—and so their yields decline. However, bonds have become a less reliable offset to stocks. For example, during the January/February 2018 US stock market decline, the 10-year US Treasury yield rose 30 basis points, even as the S&P 500 fell 10%. This is not just a US phenomenon. German Bund yields climbed as European stocks fell. While global government bond yields have bounced off postcrisis lows, they are still historically low. That means to offset a 10% decline in equities today, bond yields must fall even further. In Germany and Japan, yields would need to drop well into negative territory, while even in the US, the yield would have to be halved (see chart). As these outcomes seem unlikely, investors might consider alternative diversifiers.—*Aili Chen*



Source: Bloomberg as of Jan. 21, 2019

Negative Earnings Revisions a Likely Headwind for US Stocks

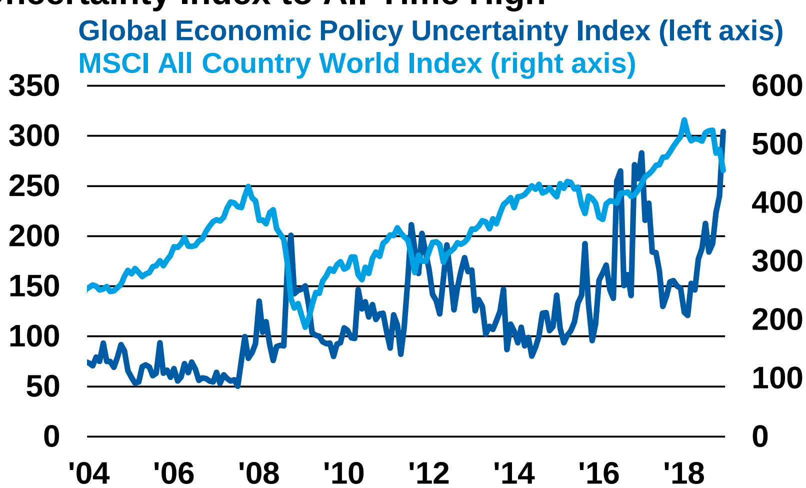


Source: FactSet, Bloomberg as of Jan. 22, 2019

Over time, equity returns have closely tracked revisions to analysts' estimates of forward earnings per share. Negative earnings revisions typically correspond to falling prices, while positive earnings revisions have generally led to higher prices (see chart). As of the latest reading, the three-month trailing earnings revision for 2019 is -16%, indicating a greater number of negative than positive revisions. Earnings estimates began to turn down last year as analysts grew more concerned about 2019's economic and earnings growth. Looking ahead, Mike Wilson, Morgan Stanley & Co.'s chief US equity strategist, believes that earnings revisions may soften further, creating near-term headwinds for stocks. His base-case forecast anticipates S&P 500 earnings to increase to $176 from $171, suggesting that earnings revisions may turn more neutral later this year.—*Nicholas Lentini*

Concerning Headlines Send Global Uncertainty Index to All-Time High

The Baker, Bloom & Davis Index of Global Economic Policy Uncertainty uses global periodicals to identify economic and political developments that affect investor sentiment and stock market returns. As there has been a bumper crop of concerning headlines, the index hit an all-time high in December (see chart). Equity investors were looking at the same headlines; the 11.2% decline last year marked the worst showing for the MSCI All Country World Index since the financial crisis. Although pockets of uncertainty remain, we believe that the risk of a global recession is low; should growth maintain its current trajectory, global equities have modest upside, supported by more attractive valuations. Nonetheless, investors may expect elevated volatility in the near term in light of central banks' monetary policy normalization and those headlines.
.—*Christopher Baxter and Vibhor Dave*



Source: Bloomberg as of Dec. 31, 2018

ETFs That Try to Beat, Not Just Match, a Benchmark

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When most investors think of exchange-traded funds (ETFs), they tend to think of passive vehicles whose mission is to replicate the performance of an index, such as the S&P 500 or the Russell 1000. However, not all ETFs track an index. Active ETFs are managed by one or more portfolio managers who implement an investment process not simply to match an index return but with the goal of beating a benchmark.

Active ETFs are a relatively small but growing segment of the ETF universe. As of year-end 2018, there were 255 actively managed ETFs with $69.2 billion in assets. This is an increase of more than 400% since 2013 when assets in actively managed ETFs were only $13.8 billion (see chart). Even so, relative to the broader ETF universe, which collectively has some $3.5 trillion under management, active ETFs account for about 2% of assets.

CONCENTRATED ASSETS. Assets are concentrated in the 20 largest funds, which comprise roughly 75% of the active asset base; the five largest management companies control nearly 75% of actively managed ETF assets. The majority of actively managed ETFs are fixed income, including ultrashort-, short- and intermediate-term bonds, as well as bank loans and high yield. Actively managed equity ETFs are somewhat scarce. This may be because equity managers, who may spend a considerable amount of resources on research and portfolio construction, are not inclined to reveal their holdings on a daily basis, which active ETFs must do; mutual funds are required to disclose their holdings quarterly. Fixed income managers are apparently less concerned about showing their hands.

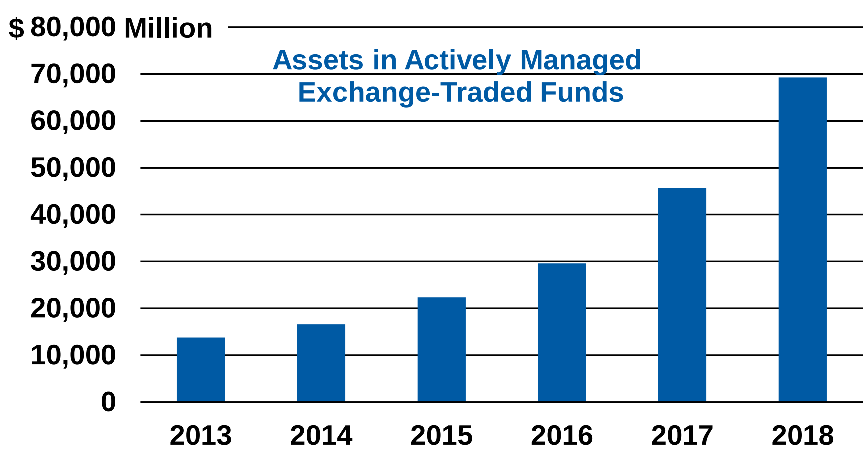
Why choose an actively managed ETF rather than a conventional mutual fund following a like strategy? Mutual funds are priced at the end of the trading day, and can only be bought and sold at the closing price. Closed-end mutual funds, which are close cousins of the actively managed ETFs, have a fixed number of shares, so the market price can deviate from its net asset value (NAV). Like open-end mutual funds, ETFs typically trade at their NAVs.

CONTINUOUS TRADING. Whether active or passive, all ETFs trade throughout the day. Most of the intraday trading is in the secondary market, meaning buying and selling activity by the investors of an ETF does not necessarily have an impact on the fund's underlying securities. The creation and redemption mechanism, on the other hand, is a unique aspect of the ETF structure, which occurs in the primary market for large-scale transactions, helping to facilitate liquidity. This also contributes to an ETF's tax efficiency as actively managed ETFs rarely pay capital gains. Lastly, unlike mutual funds, there is no minimum for an initial investment.

The actively managed ETFs world is still fairly small and dominated by a few large firms, resulting in fewer choices compared with the broader mutual fund universe. Given the association with passive investing, investors may still require some education in understanding how an actively managed ETF functions. While a firm may close an actively managed mutual fund due to capacity constraints, this is complicated by the ETF structure. Furthermore, the daily liquidity feature of the ETF is not important in a tax-qualified account such as an Individual Retirement Account, as there are no immediate tax consequences to trading.

While there are benefits to having an actively managed portfolio in the ETF structure, at the end of the day, the strategy still has to perform and achieve its investment objective. ■

Actively Managed ETFs Command Nearly $70 Billion



Source: Bloomberg, Morgan Stanley Wealth Management ETF Research as of Dec. 31, 2018

An Opportune Time to Add Mortgage Securities

DARREN BIELAWSKI, CFA
Fixed Income Strategist
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After a volatile year for financial assets, the Bloomberg Barclays US Aggregate Index rallied to end 2018 with a microscopic 0.01% total return. The investment grade (IG) corporate bond portion returned -2.51% on the combination of wider spreads and higher interest rates, while the US agency mortgage-backed securities (MBS) segment generated a 0.99% total return.

MBS showed yet again that they can provide ballast to a diversified portfolio. Now, as conditions have stabilized, we believe this to be an opportune time to consider reducing IG allocations in favor of MBS. The structural advantages of MBS include collateral and the benefits of amortization and monthly income.

QUANTITATIVE TIGHTENING. Technical factors support mortgages, too. One headwind to risk assets has been the Federal Reserve's interest rate hikes and balance sheet normalization. After Quantitative Easing (QE) enlarged the Fed's balance sheet to more than $4.2 trillion, held mostly as US Treasuries and agency MBS, Quantitative Tightening (QT) began in October 2017 and has reduced Fed holdings by about $150 billion. These moves have reduced liquidity, and thus rattled markets.

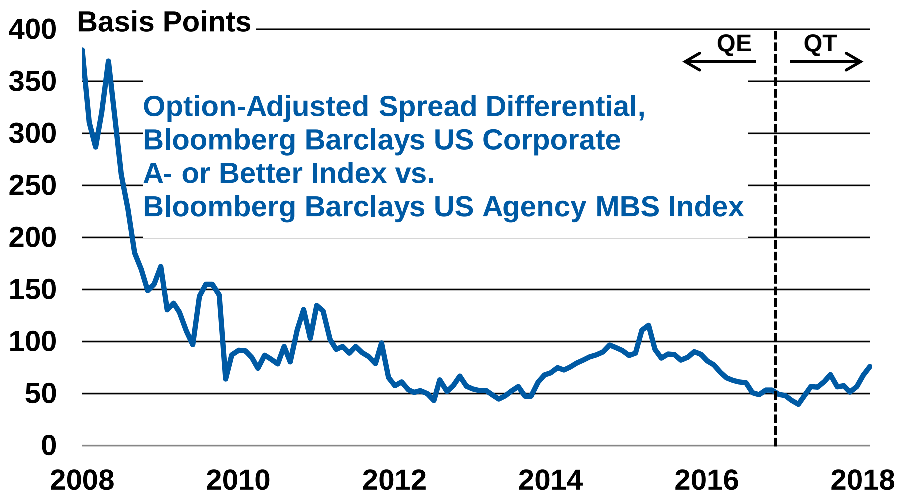
An important consequence of QE's programmatic, price-agnostic purchases of US Treasuries and agency MBS was the reduction in the outstanding supply, which drove up prices and drove down yields. In the search for yield, one of the beneficiaries was IG credit as investors overweighted their exposure compared with an allocation in a more normal environment. Now, QT's pressure on mortgage spreads has begun to attract flows to MBS and away from IG bonds. The differential between option-adjusted spreads of MBS and credit has begun to rise, albeit from a low base (see chart). This indicates there is still relative value in mortgage-backed securities, especially considering their higher-quality, collateralized, AAA rating in contrast with A- to AAA-rated corporate bonds, which are unsecured.

Furthermore, Morgan Stanley & Co. strategists found that since the onset of QT, the beta of both spreads and excess returns of MBS versus investment grade corporates declined as compared with the QE period. This implies that, for a given change in IG bonds, the expected volatility of mortgages has declined. With corporate credit fundamentals expected to deteriorate in coming years—a result of an aging business cycle—this reduced sensitivity to corporate spreads is a positive for mortgages as an asset class, in our view.

DECLINE IN CORRELATIONS. Similarly, the strategists found a decline in the correlation of mortgage spreads and excess returns relative to investment grade corporates. In a portfolio context, reallocating some credit exposure to mortgages may improve portfolio efficiency through the benefits of diversification. MS & Co. calculates, for investors who are overweight credit by 10% and equal weight mortgages, moving to a 10% overweight mortgages/neutral credit position would reduce annualized portfolio risk relative to the Bloomberg Barclays US Aggregate Index to six basis points from 19 basis points.

While the ultimate outcome of balance sheet normalization is uncertain—MS & Co. strategists expect normalization to end in September—Fed officials previously indicated the end-state balance sheet will mainly consist of Treasuries rather than mortgages. This wind-down in the mortgage portfolio may continue to widen MBS spreads, increasing the attraction of this higher-quality asset class relative to IG credit. Combined with weaker credit fundamentals, a rotation into mortgages may give investors an opportunity to dial down their portfolio risk. ■

Spread Differential Makes Mortgages More Attractive



Source: Bloomberg as of Dec. 31, 2018

Finding Value in Short-Term Fixed Income

For most of the time since the financial crisis, the yields on short-term fixed income investments were a big yawn. Now, interest rates on these investments have come up significantly, giving investors reason to consider them, especially in light of greater volatility in equity markets. "We feel there's a lot of value in short-term credit," says Joanne M. Driscoll, CFA, who manages short-duration and money market funds at Putnam Investments. "The absolute yields are at the highest level we've seen in almost a decade, and there are decent opportunities in both investment grade corporate credit and commercial paper."

Driscoll recently spoke with Morgan Stanley Wealth Management's Tara Kalwarski about the outlook for short-duration investments. The following is an edited version of their conversation.

TARA KALWARSKI (TK): Before we dive into specifics, what is your view of the US economy and where we are in the cycle, specifically looking at the short end of the yield curve?

JOANNE DRISCOLL (JD): Financial market volatility has many investors pushing for a pause in the tightening cycle. That, along with the trade conflict, the rising rates, and the underperformance of risky assets, could create negative economic consequences for the US. Fed officials appear to be reacting. A lot of commentary has come out in the last few weeks. They're taking a more balanced view and re-evaluating the pace of the tightening cycle.

TK: Do you think the Fed was too aggressive in 2018? What about now?

JD: It's a new situation for them where they're winding down the balance sheet at the same time that they're raising rates. So it's definitely a risk that they could have overshot. That's something we've been thinking about for some time. Months ago, everybody was thinking it was going to be two to three tightenings this year. Now the thinking is less than a 15% chance that there's even one.

TK: Amid this in-between stage, where are the investment opportunities?

JD: There's a lot of value in short-term credit. The absolute yields are at the highest level we've seen in almost a decade. There are decent opportunities in both investment grade corporate credit and commercial paper.

Since the market has priced in only about a 15% chance that the Fed will hike rates this year, we don't want to be too long on the curve. One-year, fixed-rate paper, either in corporates or commercial paper, is what we consider the sweet spot in terms of both return and how well these securities held up during the risk-off market in the fourth quarter.

Another thing we've liked during the past three years is floating-rate securities—plain vanilla investment grade bonds or commercial paper that reset off of one-month or three-month Libor. This allows the yield to rise in tandem with the rising rates. They're still trading cheap to their fixed-rate equivalents in the market.

With the market volatility, we also continue to be more conservative in our positioning. We're maintaining a larger liquidity buffer, which has served us well in the front-end space as we saw in the fourth quarter.

TK: There has been a sell-off in corporates on the short end, yet you are favoring investment grade. Where are you finding opportunities in short corporates?

JD: The fourth-quarter widening in short corporates was more of a supply-demand imbalance rather than a deterioration in corporate fundamentals—and that was driven by liquidity, which was constrained into year end due to dealer balance sheet pressures from regulatory factors, heavy inventories and limited investor participation.

One of our top picks in the front end is the financial sector, which remains highly liquid. That's obviously a positive attribute, but it can lead to some volatility in an environment like we saw in December, because the banks are often the easiest to sell in a stressed market.

TK: What might compel you to change your positioning?

JD: Starting with the positives, we believe the credit fundamentals for financials will remain strong. There has been some major risk reduction and balance sheet repair since the financial crisis. We think their risk profiles are going to be maintained going forward, because the regulatory oversight is so strong, especially in the US, and the operating environment is supportive.

With better operating efficiency and greater liquidity, the banks are well positioned to face this more-challenging environment. We think the highly regulated nature of that sector means company-specific risk is low relative to other sectors. We are emphasizing US banks in the portfolios and being much more selective in Europe in terms of the size and maturity of what we own. We want to underweight the countries that show heightened political volatility.

In terms of concerns, trade has led us to more conservative positioning in both banks and corporations that might be exposed to China's growth. One example is the chemicals sector, where we have a deteriorating outlook as we see slowing in their key markets and in China and Europe, There's also a lot of volatility in raw materials, and uncertainty around tariffs.

In contrast is health care, which we believe will face only minimal impact from the ongoing trade concerns. In that sector, we see a stable fundamental trend in 2019, as we've seen reimbursements rise and commercial rates normalize.

TK: In managing short-term investments, what are the levers for getting more conservative versus going more aggressive?

JD: Our primary focus when you have a risk-off-type market is to get more conservative. That means going up in quality. We do buy BBB securities, but you'll see us increasing the quality within the portfolio as well as getting shorter in durations and in overall spread duration. For example, this past year we had more than half of our securities maturing within the year, which is high. Our BBB exposure was somewhat reduced in our spread duration as well. Because we buy floating-rate instruments, the weighted average maturity of our ultrashort fund is going to be longer, as the floating-rate instruments have final maturities of two to three years.

TK: Are there sectors that are by nature more conservative versus others that are more aggressive?

JD: Many competitors could have 30%, 40% or even 50% of their portfolios in structured product. We've limited this to roughly 10% because of the lumpy nature of payments within some of these mortgages, or the fact that they tend to be a little less liquid, and a little more volatile. They are a nice diversifier; in the fall, they held up better than what we saw in corporates.

TK: When an individual investor is trying to identify where to put cash or cash-like investments, what are some of the options and some of the risks investors may not be aware of when going into some short funds versus Treasuries or a CD?

JD: The first thing to consider is how sensitive they are to losing money. If they don't want to lose even a penny or have a very short time horizon and this is transactional money, then they should stick to a money market type of product.

The second consideration is liquidity. Is this money needed in the short term? Can they invest in something longer dated? Do they need daily liquidity? Are they willing to hold the security to maturity? If they went to their bank and got a CD, they may not be able to access that money until that CD actually matures.

Once they've made those decisions, they can look at their options. If someone is willing to take a little volatility, they can find an ultrashort strategy with daily liquidity and a bit of extra yield. The yields are higher than they've been in the past 10 years, so there's nice income to be had. If you get volatility in the net asset value (NAV), there's still enough income to offset that, so the investor typically has a positive total return at the end of their time horizon.

TK: Are you finding good opportunities in these pockets of volatility?

JD: That's what active management in an ultrashort portfolio like this is made for, to be able to capture those opportunities. If you've got good research and good analysts looking at the different issuers you're buying, you can generate a decent return and a decent amount of yield in ultrashort investments.

TK: Do all ultrashort funds invest alike?

JD: Not at all. There is a wide range of strategies. Managers may be taking more risk through large mortgage allocations. It's difficult to predict the chunky cash flow situation there, and that goes directly to NAV volatility. Some managers buy below-investment-grade securities that can be more volatile, and some buy emerging market debt or take currency risk.

TK: What happens when the economy moves into the contraction phase?

JD: We still feel financials are at a good position because of how they've been able to get themselves to this point postcrisis. That's going to remain a top pick for us, but we would become more defensive in a contraction. You'd see us owning fewer floating-rate securities, and probably extending duration a bit. Our duration has been less than two-tenths of a year for three years, so we'd be looking to reverse that—to not be as sensitive to the interest rate mood, and to be a bit more neutral.

TK: Seeing that international investments could benefit perhaps from a dollar going in the opposite direction, what role does currency play?

JD: We do buy securities of companies domiciled outside of the US—like Canadian and Australian banks, and other multinationals—but everything we buy is denominated in US dollars.

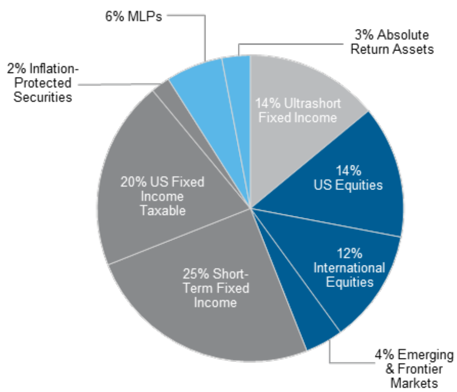
We will take into account the performance of those firms, especially the banks in the various countries. This is why we're very selective in Europe and we're looking to avoid banks and corporations that have any sort of large exposure to the trade issues we're seeing with China. ■

Joanne M. Driscoll is not an employee of Morgan Stanley Wealth Management. Opinions expressed by her are solely her own and may not necessarily reflect those of Morgan Stanley Wealth Management or its affiliates. ■

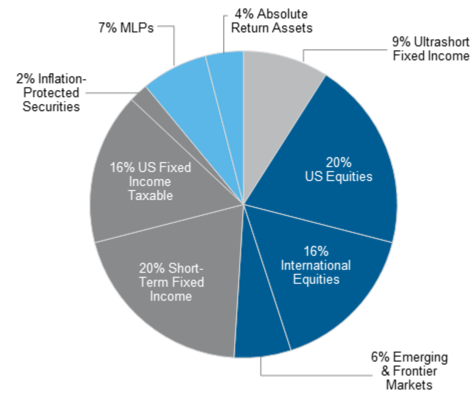
Global Investment Committee Tactical Asset Allocation

The Global Investment Committee provides guidance on asset allocation decisions through its various 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.

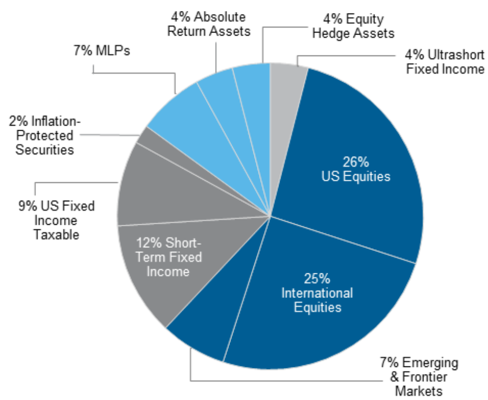
Wealth Conservation



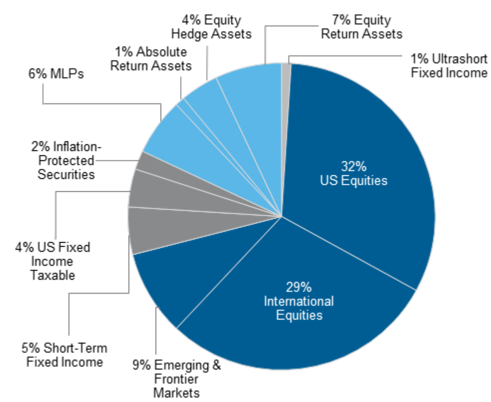
Income



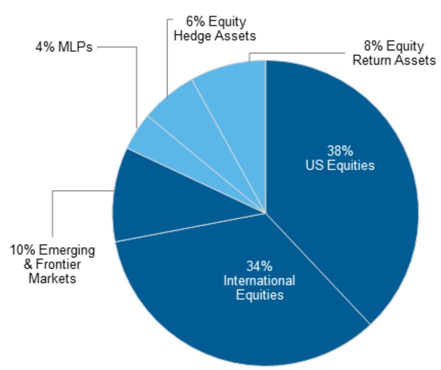
Balanced Growth



Market Growth



Opportunistic Growth



Key

Ultrashort Fixed Income

Fixed Income & Preferreds

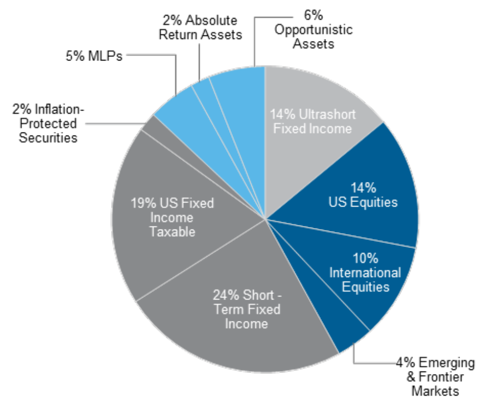
Equities

Alternatives

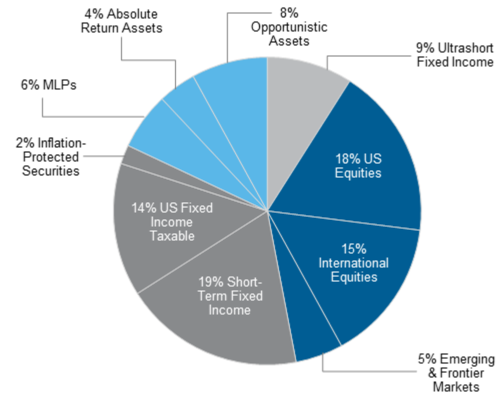
Source: Morgan Stanley Wealth Management GIC as of Jan. 31, 2019

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

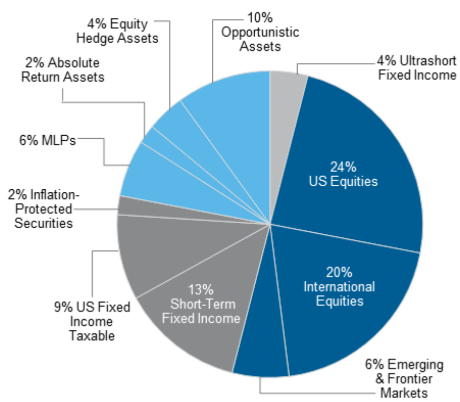
Wealth Conservation



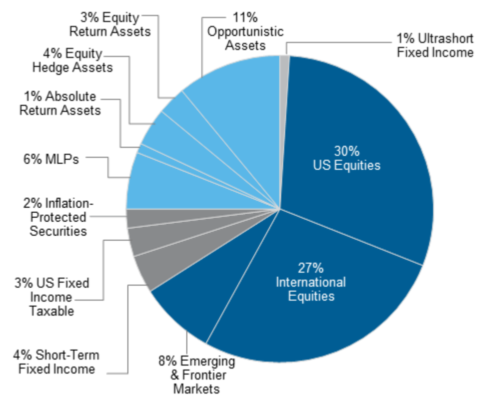
Income



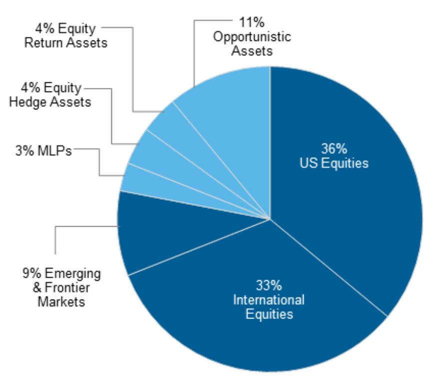
Balanced Growth



Market Growth



Opportunistic Growth



Key

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

Source: Morgan Stanley Wealth Management GIC as of Jan. 31, 2019

Tactical Asset Allocation Reasoning

Global Equities	**Relative Weight Within Equities**	
US	Underweight	US equities had a very difficult finish to 2018 after holding up better than other equity markets through the first three quarters. The highest quality market is always the last to fall and so we view the sell-off in US equities as a good sign that the worst of the cyclical bear market we expected at the beginning of 2018 is now behind us. We may look to revisit our position in US equities if the S&P 500 trades below 2,400 on a re-test of the lows made in December. From those levels, our target of 2,750 offers attractive upside.
International Equities (Developed Markets)	Overweight	We maintain a positive bias for Japanese and European equity markets. The populist movements around the world are likely to drive more fiscal policy action in both regions, especially in Europe, which will allow the central banks to exit their extraordinary monetary policies and valuations to rise.
Emerging Markets	Overweight	After a difficult first 10 months of 2018, emerging market (EM) equities have performed relatively well, a positive sign for future leadership. With the US dollar appearing to have made a cyclical top, global nominal GDP growth could trough in the first quarter as China's fiscal stimulus takes hold. This should disproportionately benefit EM equities.
Global Fixed Income	**Relative Weight Within Fixed Income**	
US Investment Grade	Underweight	We have recommended shorter-duration* (maturities) since March 2013 given the extremely low yields and potential capital losses associated with rising interest rates from such low levels. With the Quantitative Easing era now over, long-duration bonds are unlikely to provide the same level of portfolio diversification benefits as they have in the past. Therefore, we remain underweight long-duration bonds.
International Investment Grade	Underweight	Yields are even lower outside the US, leaving very little value in international fixed income, particularly as the global economy begins to recover more broadly. While interest rates are likely to stay low, the offsetting diversification benefits do not warrant much, if any, position, in our view.
Inflation-Protected Securities	Overweight	With the recent collapse in oil prices weighing on inflation expectations, these securities still offer relative value in the context of our expectations for global growth to accelerate, oil prices to trough and the US dollar to top. In short, inflation risk is underpriced
High Yield	Underweight	High yield bonds have recently fallen victim to the rolling bear market we predicted for global asset markets in 2018. They now offer better risk/reward, but equities still look more attractive given their recent correction. With a zero weighting in high yield since January 2018, we will revisit our allocation to high yield bonds during 2019 if spreads continue to widen.
Alternative Investments	**Relative Weight Within Alternative Investments**	
REITs	Underweight	Real estate investment trusts (REITs) have rebounded in the second half of 2018 as global growth fears returned and interest rates fell. However, REITs remain expensive and are vulnerable to credit risks. We will revisit our position as nominal GDP troughs and/or valuations become more attractive.
Master Limited Partnerships/Energy Infrastructure*	Overweight	Master limited partnerships (MLPs) rebounded sharply in the first half of 2018 only to give it all back as oil prices collapsed in the fourth quarter. With oil prices recovering again and a more favorable regulatory environment, MLPs should provide a reliable and attractive yield relative to high yield. The supply shortages from Iranian sanctions should also be supportive for fracking activity and pipeline construction, both of which should lead to an acceleration in dividend growth.
Hedged Strategies (Hedge Funds and Managed Futures)	Equal Weight	This asset category can provide uncorrelated exposure to traditional risk-asset markets. It tends to outperform when traditional asset categories are challenged by growth scares and/or interest rate volatility spikes. With the recent surge in volatility, these strategies could perform better on a relative basis.

Source: Morgan Stanley Wealth Management GIC as of Jan. 31, 2019

For more about the risks to Master Limited Partnerships (MLPs) and Duration, please see the Risk Considerations section beginning on page 17 of this report.

Index Definitions

For index, indicator and survey definitions referenced in this report please visit the following:
http://www.morganstanleyfa.com/public/projectfiles/id.pdf

Glossary

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

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

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 suitable 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 suitable 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.

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 suitable 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 suitable 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.

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.

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