On the Markets

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Fireworks or Duds?

This week is the Fourth of July and, while it's probably not as popular as Thanksgiving, it's likely a close second in terms of American holidays. After all, it's during the summer when the kids are out of school and the weather is typically nice everywhere. Of course, the best part of this holiday is the fireworks, even with the occasional dud.

The Fourth of July is also the halfway mark for investors, and a time for reflection about the first half of the year and how the second half will pan out. Will it be fireworks or a dud? So far, 2018 has been pretty much as we described in our year-ahead outlook ("Don't Expect an Encore," *On the Markets*, January 2018). First, economic and earnings growth have been quite strong and impressive. However, financial conditions have tightened significantly, too. This tug of war has led to rising earnings estimates but lower valuations. As a result, global equity markets are down about 1% for the year to date and have exhibited much higher volatility. In our outlook, we explicitly said to expect at least one, if not several 10% corrections in 2018. So far, we have experienced several across various markets, including the vaunted S&P 500.

Meanwhile, the bond market has been worse, with interest rates rising and credit spreads widening. While it's unusual for bonds to do worse than equities when stocks are down, this was our call, too. It makes sense to us given the extreme valuations for bonds relative to stocks when we started the year. Meanwhile, several commodities have generated solid returns this year, led by oil, up 20%, and energy-related securities, up between 5% and 10%.

So what should we expect in the second half? More of the same—continued high volatility with several 10% corrections in global equity markets at different points. In the near term, we expect trade tensions and the uncertainty that creates for economic and earnings growth to weigh on stocks. In addition, credit markets are likely to feel the Federal Reserve's June rate hike. This argues for being more defensive, and it's why we recently upgraded utilities. We think this defensive posturing will continue to pay off until the Fed eventually decides to pause its rate hikes, which we expect it will do in September. Once that happens, we could experience a strong finish to the year, a typical pattern in midterm election years. ■

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Higher Health Care Costs, Higher Inflation

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Why was inflation low all these years? The reason was medical. From mid-2013 through year-end 2017, growth in the portion of the Personal Consumption Expenditures Index (PCE) comprising health care services was subdued, at a year-over-year pace between 0.5% and 1.5% (see chart). The reason is largely regulation, which includes the Affordable Care Act and cuts to Medicare payments triggered by the Budget Control Act of 2011, also known as the "sequester." Since health care services account for about one-fifth of core PCE, this had a material impact on core PCE inflation.

Since the turn of the year, however, there has been a marked acceleration. PCE health care services inflation spiked to 1.8% year over year by Mayl, helping to drive overall core PCE inflation to the Federal Reserve's 2.0% goal. We find that Medicare reimbursement rates to hospitals drove the recent move up in prices.

HIGHER PRICES. Our analysis suggests that the higher prices will be sustained. Projected increases in Medicare reimbursement rates for both hospitals and physicians show higher health care inflation is likely. We forecast that inflation in PCE health care services will rise to 2.6% year over year by the end of 2019, and projections from the Centers for Medicare and Medicaid Services (CMS) show inflation persisting in the 2.5%-to-2.8% range between 2020 and 2026.

Health care costs could even lift PCE inflation moderately above the Fed's target. We estimate that inflation in health care services should contribute 0.50 percentage points to core PCE inflation in 2019, up from the 0.25-to-0.30 percentage point range between 2011 and 2017.

LIFTING INFLATION FORECAST. In light of this, we have taken our forecast for 2019 core PCE inflation higher by 0.10 percentage points to 2.2%. With this upward revision, we now expect inflation will begin to surprise the Federal Open Market Committee (FOMC) to the upside next year. To be sure, in its June Summary of Economic Projections, the FOMC median expectation for core PCE inflation by the end of 2019 was 2.1%.

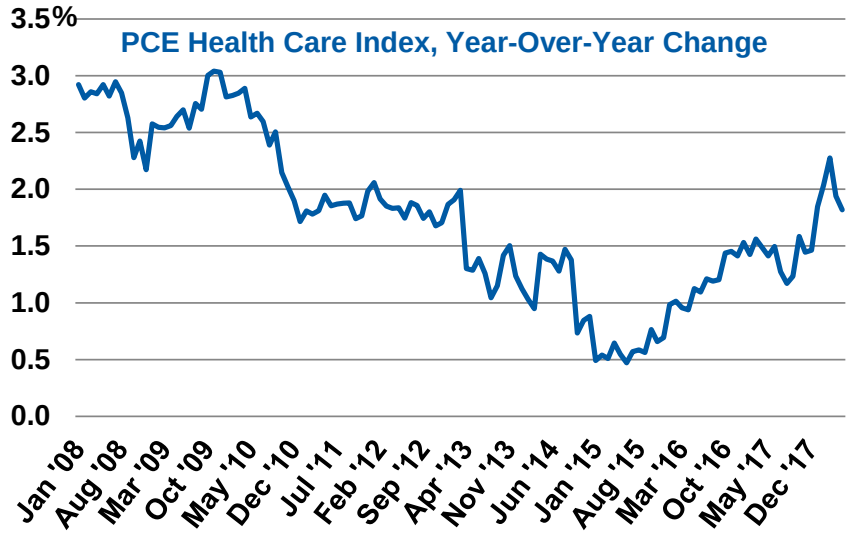
Moreover, we see the risks to our 2019 core PCE forecast as skewed to the upside, acknowledging that anticipating the indirect effects of higher govern-ment payment rates on private payment rates is highly uncertain. Should there be a larger impact than we expect, inflation could surprise us, the Fed and financial markets to the upside next year.

HYBRID SYSTEM. Health care costs in the US are largely determined by the government. The health care system is a hybrid of public and private ecosystems, but almost half of overall personal health care spending in the US is driven by the public sector—largely Medicare, which accounts for 23% of spending, and Medicaid, at about 19%. The other half of spending on health care largely comes from the employer-driven insurance market and the individual insurance market, which together account for 34% (see chart, page 3).

While there is debate about whether private payment rates move in tandem with government rates or offset them, a number of studies posited significant, positively correlated knock-on effects. It is these effects that help transform changes in Medicare payments into higher health care inflation.

PAYMENT RATES. In our view, government payment rates lead private rates, but with limits. One of the easiest ways to see the effects of Medicare inflation is in the health care inflation

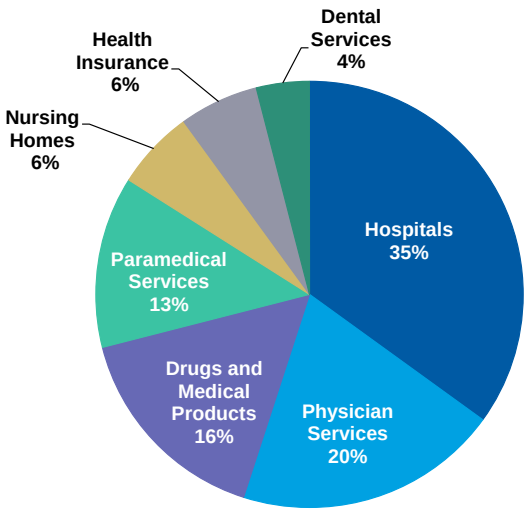
Health Care Inflation Has Accelerated Markedly in 2018



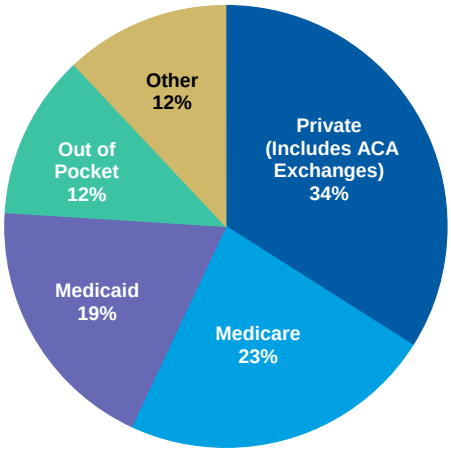
Source: Morgan Stanley & Co. Research as of June 29, 2018

Who Takes What Share of Health Care Expenditures?

Type of Payer



Categories of Services Rendered



Source: Haver, BEA, Morgan Stanley Research

data itself. Most large changes to Medicare hospital rates are followed by similar changes in the "private and other" Producer Price Index. A San Francisco Fed blog post explains this well: "When Medicare reduces its payments, physicians and hospitals lose bargaining power in their negotiations with private insurers."

There are limitations to how much the government can depress prices. To wit, as government policies clamped down hard on Medicare costs in recent years, private health care inflation costs remained at about 2% per year. However, after many years of low inflation, we suspect private health care costs may respond promptly to any increases in Medicare rates.

What's Going on With Drug Prices?

Drug prices make up about 15% and 20% of the health care price index for the PCE and the Consumer Price Index (CPI), respectively—accounting for nearly one-fifth of medical cost inflation in the US. While there has been less regulation in prescription drug prices than for health care services, recent comments from the Trump administration have increased focus on the possibility of government involvement in drug prices as well. However, we do not expect major changes in total US market drug-price inflation.

Average inflation for prescription drugs has been slightly higher in the past five years than in the years prior. According to an estimate from CMS, prescription price growth is expected to be higher in 2018 than in recent years as the dollar value of drugs that lose patent protection has been lower.

PRICING OUTLOOK. Given recent trends and the administration's blueprint, we think drug-price inflation under PCE is likely to trend in the low single digits. However, more drugs are set to lose patents in the next five years than in the past five years, which could put some downward pressure on drug prices. In addition, we cannot rule out the possibility that government initiatives dampen prices more than we currently assume.

Pharmaceutical drugs are broadly classified into prescription drugs and nonprescription drugs. For the past 15 years, the pattern of price inflation has been about the same. Prescription drug prices make up a large majority of overall drug-price inflation in CPI and PCE, given that prescription drugs also account for the majority of consumer spending on drugs.

DETAILS LACKING. While President Trump's highly anticipated drug-pricing speech provided some interesting snippets, we do not anticipate transformational changes in the US. The administration's blueprint consists of mainly high-level proposals that currently lack implementation details. One proposal is to require foreign governments to pay more for drugs, thereby alleviating some of the cost for US consumers. We have trouble envisioning just how that could be implemented. Another proposal calls for list prices to be required in drug ads, which appears intended to put pressure on drug companies. However, that may be ineffective if many patients ignore the prices, much as they do the listing of adverse reactions, or realize they are unlikely to pay list price.

Still, in our view, many of the proposals that could be enacted, even the "immediate actions," are likely years away. US Health and Human Services Secretary Alex Azar admitted as much during his comments, saying, "It's going to take years of restructuring the system." We found it reassuring that Azar stressed private-sector solutions. We take this to signal possibly minimal government intervention. ■

By David Risinger, Onusa Chantanapongwanij and Guneet Dhingra, CFA

Trade Tensions Intensify

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For much of 2018, markets have looked through protectionist rhetoric coming out of Washington as political posturing, aimed at solidifying the Republican base ahead of November's midterm elections and establishing an opening negotiating position for a president bent on bilateral gamesmanship. At its highest level, the administration's objectives, grounded in so-called fairness, have really been aimed at reducing a massive trade deficit that has been six decades in the making, hopefully forestalling the inevitable march of China's industrial policy toward becoming not only the largest economy in the world, but also the most technologically advanced. On a more tactical level, the rhetoric has appeared surgical, aimed at correcting specific imbalances that special interests have lobbied for years.

On its face, in neither case did this originally appear as a massive philosophical shift from a country whose companies have seen extraordinary expansion of profit margin as a result of globalization. Rather it seemed like business as usual executed in the unique style of the current president. One-off headlines have continued to roll out, building off last year's washing machine and solar panel tariffs, first against China and then around global steel and aluminum imports and then European autos. All the while, the Wall Street consensus has focused on the usual data-driven, analytical approach to assessing impact rather than questioning a regime change in US trade policy.

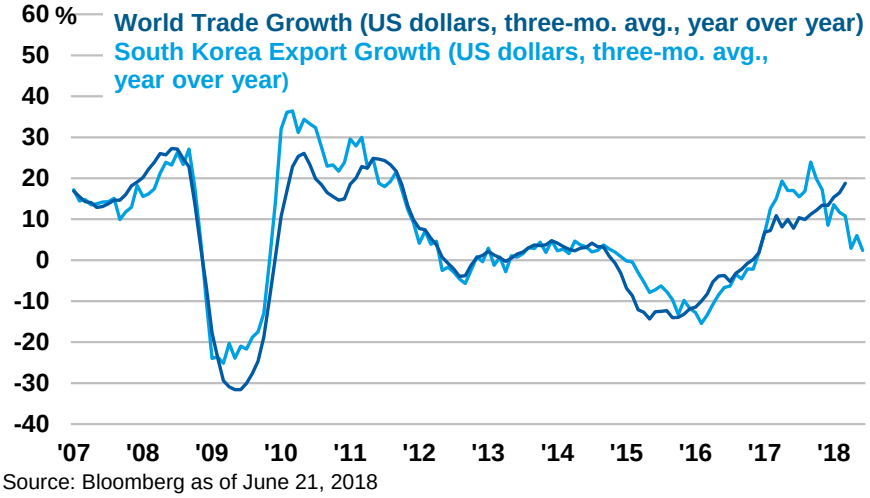
BROADER IMPLICATIONS. As is typically the case, this exercise has resulted in the chorus of economists and strategists, suggesting that, all told, the implications for the economy and markets are modest and not likely to shave more than a few tenths of a percent off global and regional GDP growth. While the Global Investment Committee doesn't dispute the top-down arithmetic of these exercises, we fear that they don't sufficiently capture the broader context and the reality of the policy change around globalization and the risks associated with America's increasingly aggressive position on trade.

Rather than a series of bilateral negotiations, we see a multifront trade confrontation. The battlefields are now extending to our borders, with Canada and Mexico, as well as to our historic allies, the G-7 countries, trampling existing free-trade pacts and inviting retaliation. With uncertainty rising, we no longer believe that the implications of Washington's trade talk are benign. What's more, this intensified headwind to growth may be coming just as growth momentum in global trade has started to wane (see chart).

ADDING UP. To begin with, the economic and market scope of the trade disputes are starting to add up. A recent report from Bernstein Research noted that, of the $2.5 trillion in US imports, the initial round of tariffs impacted roughly $120 billion, or 5%, of the total; this includes the steel and aluminum tariffs and the first $50 billion in China-related goods. Now, Bernstein has raised that estimate to $520 billion, around 21% of the total, including the administration's threats to add $200 billion in additional tariffs on Chinese goods and $200 billion on European and Japanese automakers. Tariffs on at least $34 billion of this total are set to take effect July 6. Perhaps of more concern, the focus of tariffs has come from only 107 product categories that the US Dept. of Commerce is investigating under Section 232, "national security threats," and Section 301, "alleged intellectual property theft." We see a risk in the administration taking an ever broader interpretation of these rules or an abandonment of them altogether as a rationale for trade actions.

As expected, our trade partners are fighting back. On June 22, the EU targeted $3.2 billion of US exports of consumer

Global Trade Already Cresting



Source: Bloomberg as of June 21, 2018

products like motorcycles, jeans, and liquor in retaliation for the US' steel and aluminum tariffs. What's more, some 36% of US exports are agricultural and energy-related commodities—so foreign buyers can easily find substitute supplies.

SUPPLY CHAINS. A less appreciated fact is that the imposition of tariffs in a world of integrated, multinational supply chains may be completely self-destructive. Chetan Ahya, Morgan Stanley & Co.'s chief economist and global head of economics, estimates that roughly two-thirds of all goods traded globally are leveraged to global supply chains. He further points out that when such supply chains are disrupted, they impact the profits of foreign affiliates. As an example, he cites a 2014 study by the Peterson Institute for International Economics that shows that 60% of US imports from China originated from facilities owned by US, Japanese or Korean manufacturers. In the categories of goods critical to US high-tech companies that were targeted in the first $50 billon of tariffs, the numbers are even higher; foreign affiliates account for nearly 90% of Chinese imports of computer and electronic parts and 60% to 65% in electrical equipment, industrial machinery and transports.

MANUFACTURING PROFITS. Finally, investors may not be properly discounting trade tensions' impact on profit margins. Michael Goldstein of Empirical Research Partners points out that while manufactured goods, the target of trade confrontation, comprise only 12% of the US economy and 8.5% of the workforce, they currently account for more than 40% of S&P 500 profits. Indeed, manufacturing firms have profit margins that are roughly twice those of the remainder of the index, which is weighted toward services; manufacturers have driven nearly half of the growth in profits due to their outsized productivity gains.

Furthermore, by failing to understand how supply chains operate, Washington may be allowing the tail to wag the dog. Some $1.6 trillion in US exports are vulnerable, but that's dwarfed by the fact that US multinationals have $6 trillion in foreign-affiliated sales to globally integrated supply chains. All told, a trade war is not simply about trade deficits, growth and inflation, but it is also about US company profits—and pass-through inflation to US consumers.

BOTTOM LINE. In 2017, fiscal policy provided huge positive surprises to the economy in the form of tax reform. In 2018, with the economy humming and corporate earnings surging, the multifront escalation of a trade war into outright retaliatory measures risks short-circuiting the business cycle. Policymakers in Washington who focus only on reducing bilateral trade deficits may not appreciate that globalization has created complex supply chains where reducing and taxing imports hurts only US companies and consumers. In this charged environment, investors should watch for the cresting of S&P 500 earnings revisions' breadth and momentum. Increases could be a sign that trade is starting to bite. As such, investors should consider paring outsized gains in small caps and NASDAQ leaders and rebalancing toward a more sector- and capitalization-neutral exposure. ■

What Will Slow Tech Stocks' Momentum?

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In the past six months, we have seen a rolling correction across cryptocurrencies, high-dividend stocks, emerging market equities, money center banks and long-duration government bonds. Amid this rotation, market leadership has narrowed to a select group of high-growth technology and consumer stocks. This group has shaken off company-specific issues related to data privacy and monopolistic concerns; late-cycle economic worries, combined with surging fundamentals, have put a premium halo around their growth. While investors may think this group can evade the market's scorn, we remind them that Icarus could fly only so close to the sun.

IMPACT OF HIGHER RATES. Technology stocks are considered long-duration assets, as much of their value is derived from future growth. Because of this relationship, these stocks have tended to lag in periods of sustained higher rates. The 10-year US Treasury yield has risen to 2.8% from 1.4% in July 2016, yet this doubling of the interest rate has not affected technology stocks because rates are still historically low (see chart).

Additionally, many of these higher-growth companies have more cash than debt on their balance sheets and have transitioned their businesses to more subscription-based recurring revenues. Interest rates may prove to be a headwind again in the future, but we are not certain they are negatives for technology valuations today.

LAW OF LARGE NUMBERS. Another historical precedent would warrant caution on technology: concentration risk. Currently comprising 26% of the S&P 500's market capitalization, technology stocks have become a dominant force. The next largest sector is health care, at just 14%. Only three times in modern history has a sector grown to these heights: energy in the early 1980s, which peaked at 28%; technology during the dot-com bubble in the 1990s, at 36%; and financials prior to the crisis in the mid 2000s, at 22%. Notably, in all of these scenarios, a price decline of more than 50% followed the peak (see chart, page 7). While upcoming changes to sector classifications may shift the headline weightings, the influence of these stocks on overall market direction is likely to persist.

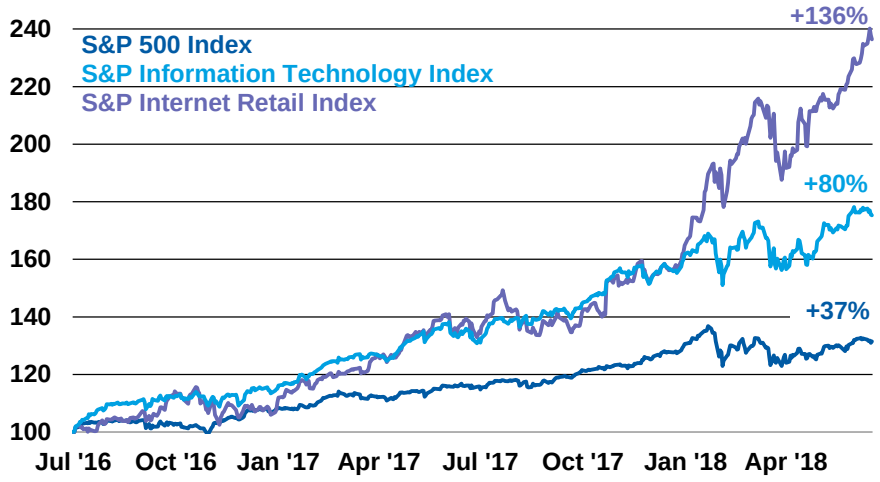
REASONABLE VALUATIONS. Last, we note that technology valuations are not as extended as they were in the 1999-to-2000 period, as robust earnings growth has helped support stock prices. The sector trades at a reasonable 18 times consensus forward earnings per share, a 10% premium to the market. This pales in comparison to the dot-com boom, when the sector traded at an earnings premium that was more than twice that of the market. What's more, record share buybacks have supported valuations, too, as tech companies put to work the excess cash balance resulting from tax reform.

While the current valuation seems benign from a broad sector perspective, subsectors tell a different story. For example, internet retail companies, trading at 58 times forward earnings, and software services, at 24 times, are both well above the current market multiple of 16. Indeed, the majority of broader sector-level performance has been driven from these more expensive areas, as momentum has propelled them at all-time highs.

So, if higher interest rates and valuation are not as concerning, what could derail these stocks?

MARGIN RISK. Technology stocks are currently operating at peak profit margins. However, in our view, recent concerns about privacy and trade conflict pose real risks to this dynamic. As data collection and privacy issues have been identified at some of the largest tech companies,

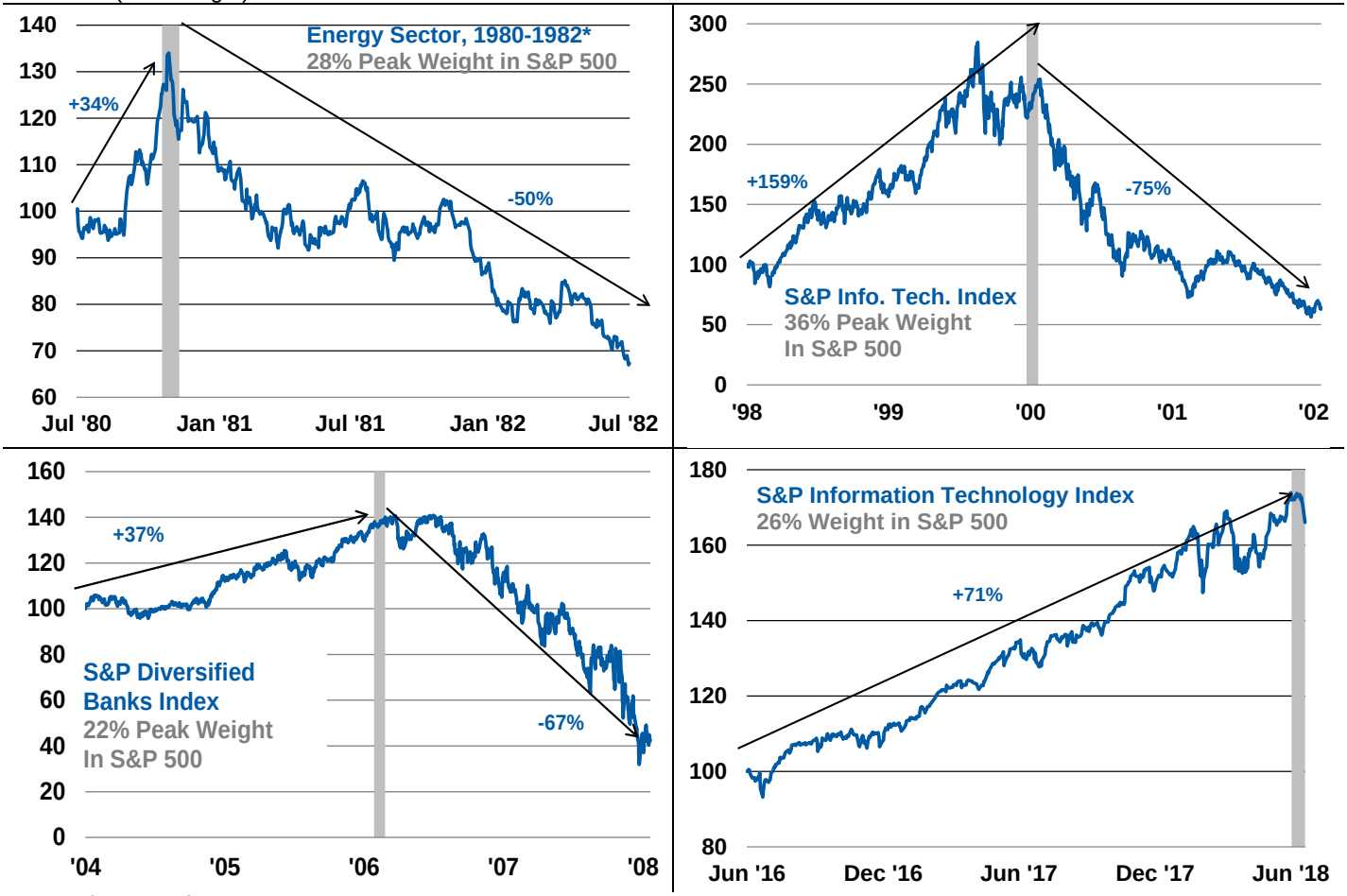
Tech Stocks Have Far Outperformed the S&P 500 Since Long-Term Interest Rates Bottomed in 2016



Source: Bloomberg as of June 27, 2018

After Sectors Hit Peak Weights, Subsequent Declines Were More Than 50%

Energy stocks in the early 1980s (top left), tech in the dot-com era (top right), bank stocks prior to the financial crisis (bottom left). They all surged as percentage of the S&P 500, and they all had major declines in the aftermath. Now, tech stocks comprise 26% of the index (bottom right).



*Uses Chevron and Exxon as a proxy
Source: Bloomberg as of June 25, 2018

regulators and the public are pushing for more oversight. This will likely lead to increased costs for compliance and security. As seen in other industries, an increase in regulatory scrutiny can impact profitability.

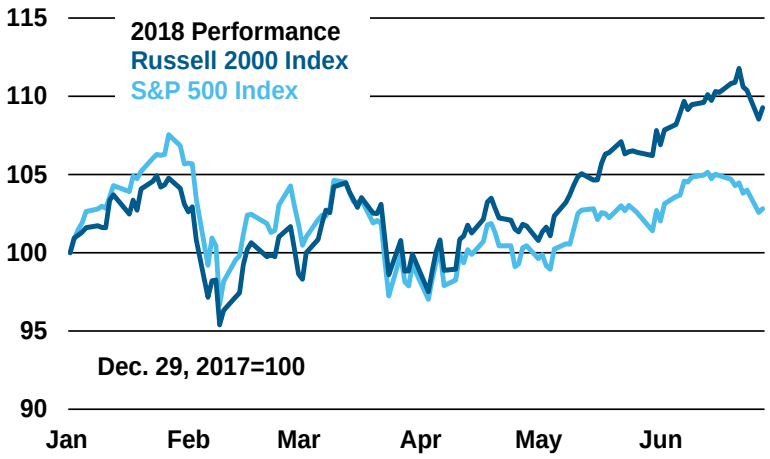
Additionally, tariffs are worrisome as many technology companies have benefitted from lower-cost global supply chains (see page 4). In fact, with most of the sector's supply chain in Asia, tariffs could cause a spike to costs and negative impact to margins. Thus, we are taking a more cautious view on consensus earnings estimates, which may prove aggressive as the full impact of these headwinds work their way into the numbers.

ADVERTISING CYCLE. Many leading technology and e-commerce companies rely heavily dependent on advertising revenues. Despite the secular trends, advertising is cyclical and directly linked to economic growth. While Morgan Stanley & Co. economists expect 2.5% real US GDP growth in 2018, there are some red flags. For instance, the difference between two-year and 10-year US Treasury yields is just 32 basis points, bringing the yield curve to its flattest point this cycle. Additionally, the Federal Reserve continues to raise interest rates, which, in addition to a stronger US dollar, will serve to tighten financial conditions. In sum, while advertising is strong today, it will likely suffer in a garden-variety consumer recession.

As the market has punished some weaker areas of capital markets, investors have shifted toward growth stocks for perceived safety. Michael Wilson, chief investment officer for MS & Co. and Morgan Stanley Wealth Management and MS & Co.'s chief US equity strategist warns that these dislocations have led to crowded positioning in what investors now view as defensive assets. However, when the "growth trade" reverses, the unwinding could be painful. In short, investors should review technology and e-commerce exposures, watching margins and cyclical risks. We are not yet at risk of a meltdown, but the temperature is rising. ■

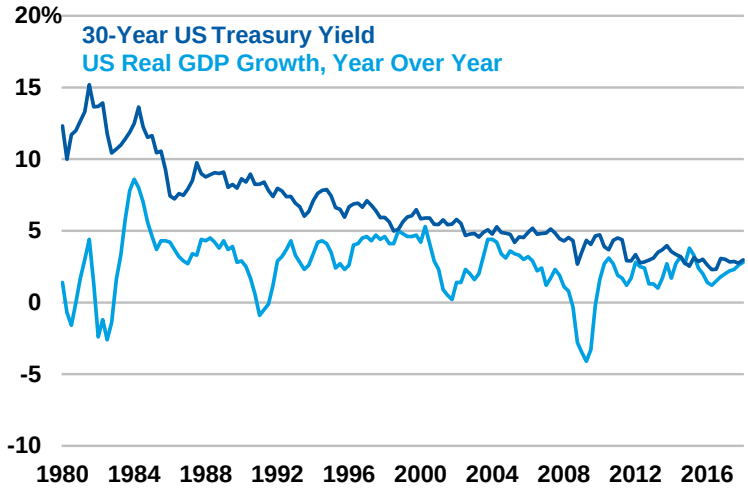
Small Caps Outpace Large Caps, a Trend With Potential to Continue

Strong economic momentum and business confidence, driven by tax cuts and deregulation, have been offset by increasing concerns about tariffs. Small-cap stocks are beneficiaries of these policy crosscurrents given their greater domestic exposure—and thus greater earnings impact from tax cuts—and lower exposure to trade-driven revenues than their large-cap counterparts. Additionally, small caps did not have significant margin expansion under Quantitative Easing (QE) as they could not readily access capital markets as large caps did, notes Michael Wilson, MS & Co.'s chief US equity strategist. Therefore, their margins face less pressure as QE is withdrawn. These dynamics have not been lost on the markets: The Russell 2000, a small-cap index, is up 8.6% this year, reaching a new high, and the S&P 500 has gained 2.6% (see chart). While small caps broadly may continue to rally, investors should focus on quality companies with strong balance sheets, reasonable valuations and solid long-term outlooks.—*Dan Skelly*



Source: Bloomberg as of June 27, 2018

While GDP Growth Could Beat Long-Term Borrowing Costs, It May Not Help Stocks

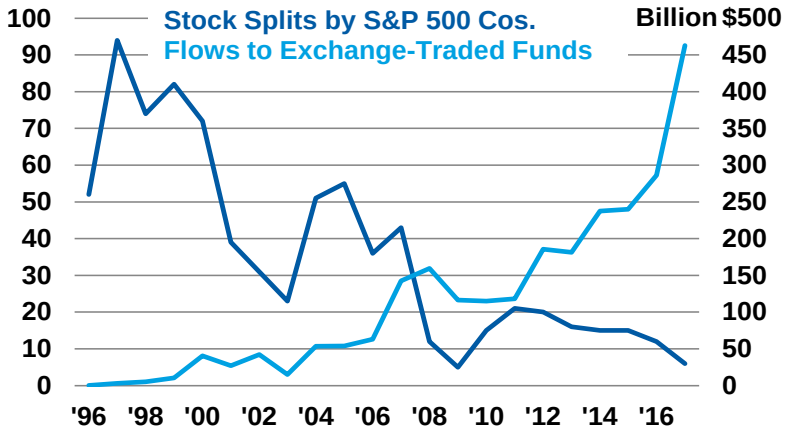


Source: Bloomberg as of March 31, 2018

For only the second time in the past 35 years, the US economy is expected to grow at a faster rate than the current 3.0% yield on long-term bonds (see chart). Real GDP, an indicator of economic activity, ran at a 2.8% annual rate in the first quarter and, with easy financial conditions, low unemployment, healthy earnings and an increase in consumer confidence, that pace likely accelerated in the second quarter. Ellen Zentner, Morgan Stanley & Co.'s chief US economist, lifted her GDP second-quarter growth outlook to 4.1%. After incorporating the second quarter's numbers, real growth would be outpacing long-term borrowing costs. That means, even though it is late in the cycle, companies would still be incentivized to invest in expansionary projects. However, given full valuations for US equities and the potential for a slowing pace of earnings growth, this economic strength may not translate into bullish conditions for risky assets.—*Chris Baxter and Vibhor Dave*

What Ever Happened to Stock Splits?

Historically, when the price of a share of stock rose into the triple digits, the companies would declare a stock split of, say, three to one, so one $120 share becomes three $40 shares, but a shareholder's ownership is still worth the same. The idea is to lower the stock price, making it more attractive to investors who might buy 100 shares of a $40 stock, but not 100 shares of a $120 stock. However, in recent years, the number of S&P 500 companies splitting shares has plummeted. In 1997, there were 94 splits; last year, just six (see chart); and, so far this year, three. Why is this practice falling away? Individual investors are increasingly accessing the stock market via exchange-traded funds (ETFs), mutual funds and managed accounts—and to those institutional investors, share price does not matter. In fact, the decline in stock splits is the mirror image of the rise in flows to ETFs.—*Denny Galindo and Gray Perkins*



Source: Bloomberg, Morningstar as of June 21, 2018

Long-Term Yield in Check, Even With Strong Economy

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After rising above 3% in mid-May, the benchmark 10-year US Treasury yield has retreated to 2.83%. Meanwhile, short-term yields, which are now being driven by the Federal Reserve's gradual policy tightening, have continued to climb. The upshot is a flattened yield curve: The spread between the yields on the two-year and 10-year Treasuries is just 32 basis points.

DIVERGENT PATHS. One factor holding down long-term yields is the diverging paths of global monetary policies. US Treasuries have long served as a safe-haven asset for investors in periods of heightened market volatility. German Bunds have also served this flight-to-quality role within the Euro Zone. However, the 10-year Bund currently yields 0.32%, leaving a spread of 252 basis points versus the 10-year US Treasury—the largest gap in the past five years (see chart).

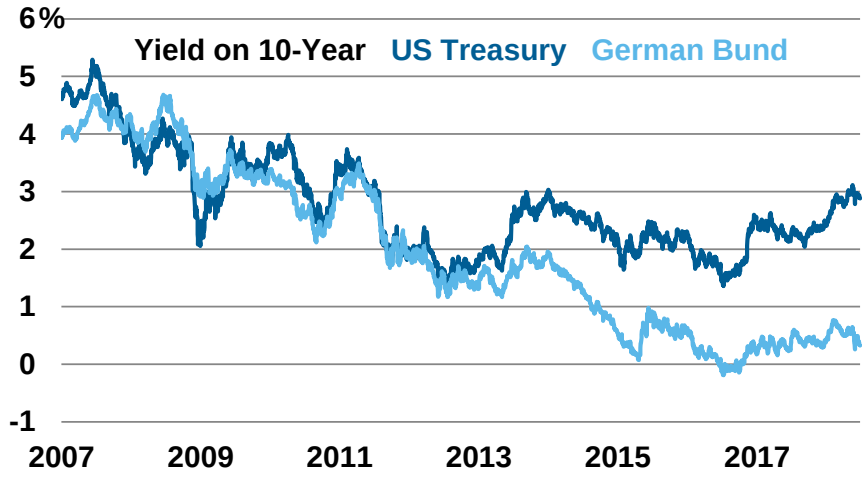
The June meetings of policymakers at the Federal Reserve and the European Central Bank (ECB) highlighted the diverging paths that monetary policy is taking on both sides of the Atlantic. The Fed raised the federal funds rate by 25 basis points, the seventh such increase since 2014, and increased its median policy rate forecast for year-end 2018 to allow for two additional rate hikes. In contrast, the ECB announced it would delay its initial rate hike from the current -0.40% until at least the fall of 2019, if not later, and begin tapering asset purchases starting in the fourth quarter of this year. While the Fed is reducing the size of its balance sheet, the ECB will continue expanding its balance sheet by purchasing assets until the end of the year.

BETTER GDP GROWTH. Recent economic data also helps to explain the growing rate differential. US GDP is expected to have accelerated in the second quarter, bolstered by low unemployment, strong consumption and increased business investment. The Federal Reserve Bank of Atlanta's GDPNow Forecast Model, a real-time estimate of GDP growth based on available data, currently anticipates annualized growth of 4.5% for the second quarter, while the Fed recently upgraded its full-year 2018 GDP estimate to 2.8%. In contrast, the ECB recently lowered its Euro Zone GDP growth forecast for fiscal-year 2018 to 2.1% from 2.4%, though it left its 2019 and 2020 forecasts unchanged at 1.9% and 1.7%, respectively.

While the US/Germany yield differential may continue to widen, the spread between the yields of the US and other developed market debt may also drive funds into Treasuries, thus keeping longer-term yields constrained. This dynamic was evidenced in trading following June's central bank meetings. After yields rose as much as five basis points intraday and closed at 2.97% following the Fed's statement, Treasuries rallied and yields fell the next day after the dovish ECB announcement; the 10-year Treasury yield fell to 2.93% and the 10-year Bund slid six basis points to 0.42%.

FED HIKES. Should the Fed hike five times through 2019, in line with its Summary of Economic Projections, the federal funds rate would reach 3.125%. If at that time the 10-year yield does not exceed the prior-cycle high of 3.12%, the central bank may find it increasingly difficult to push the policy interest rate any higher. Such a scenario would result in an inverted yield curve, which many market participants view as a harbinger of recession. While this does not imply an economic decline is imminent, we believe policymakers will be hesitant to raise interest rates in such a scenario. At a time when the US economy seems to be driving global growth, external factors and policies may soon exert increasing influence on the path of US monetary policy. ■

Wide Gap Between US and German Yields



Source: Morgan Stanley Wealth Management as of June 25, 2018

Unconstrained and Unconventional

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Fixed Income Analyst
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The financial crisis ushered in unprecedented global central bank interventions, financial repression and historically low interest rates. From December 2008 to December 2015, the federal funds rate ranged from 0 to 50 basis points; in July 2016, the benchmark 10-year US Treasury note reached a multidecade low of 1.37%. Hungry for yield, income-oriented investors looked toward unconstrained bond funds. Morningstar Inc. counts about $128 billion in 340 Nontraditional Bond funds, the firm's term for these mutual funds.

What makes them nontraditional or unconstrained is that they have wide latitude in portfolio construction as well as duration management—including negative or short duration. Traditional bond funds typically stick to specific markets or maturity ranges. We see unconstrained bond funds as a complement to a well-diversified fixed income allocation.

While these funds may perform relatively better when interest rates rise, they also may exhibit greater correlation to risk assets such as equities and high yield corporate bonds. For the 10 years ending March 31, 2018, the Morningstar Nontraditional Bond category had a correlation of 0.95 to the Bloomberg Barclays US Corporate High Yield Index and 0.70 to the S&P 500 Index. Many unconstrained bond funds also exhibited especially strong correlation to the high yield sector.

We consider unconstrained bond funds to be absolute-return assets within the broader grouping of alternative investments. They actively seek returns without reference to a particular benchmark. They sometimes have negative correlations to fixed income assets and positive correlations to equities. At times, they may also have higher risk than traditional fixed income investments.

In our analysis, unconstrained funds fall into one of three categories:

Macro-oriented funds. These funds tend to utilize interest rates, duration management and global sector allocations, both to emerging markets and currencies. They are flexible with duration, and have often turned to negative duration. Such funds may exhibit greater volatility due to concentrated country and currency positioning and sizeable duration bets.

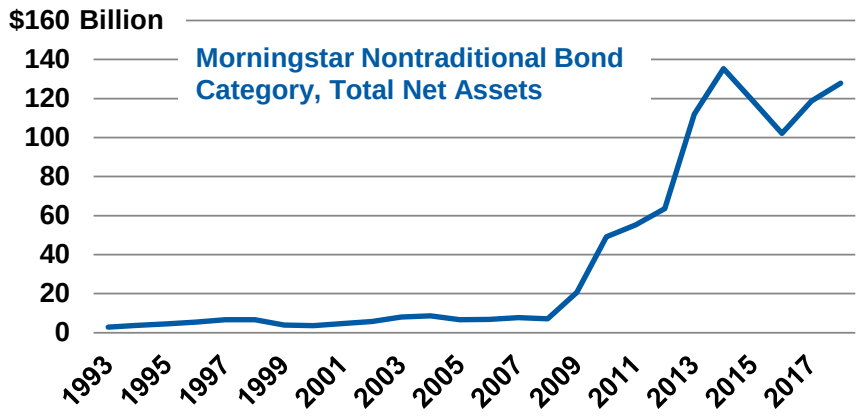
Credit-sensitive funds. These funds have been highly correlated to the high yield sector, with significant allocations to not only high yield bonds but also bank loans and emerging market debt. In some cases, high yield has exceeded 50% of the portfolio. Credit-sensitive funds also have duration flexibility, but typically remain in a tight range of one to five years.

Diversified funds. These funds manage interest rate risk while diversifying across many sectors, including securitized subsectors. They also have duration flexibility but, like credit-sensitive funds, generally remain within a range of one to five years. These funds tend to have lower risk, as measured by standard deviation, and usually have volatility comparable to that of the Bloomberg Barclays US Aggregate Bond Index.

Ultimately, unconstrained bond funds should match the individual's portfolio objective and tolerance for risk. Given the recent increase in volatility and the Federal Reserve's plan for future interest rate hikes, the current economic environment may provide both challenges and opportunities for managers of this relatively new type of investment strategy. Depending upon the type of fund, unconstrained bond funds may be used to hedge specific portfolio risks or simply to augment a well-diversified fixed income portfolio. ■

Also contributing to this article were Steve Lee, CFA, Olga Pujara, CFA, and Jim Szestowicki.

Assets in Nontraditional Bond Funds Soared as Income-Oriented Investors Sought Higher Yields



Source: Morgan Stanley Wealth Management as of March 31, 2018

Looking Toward a New Age in Transportation

SCOTT HELFSTEIN, PhD

Senior Investment Strategist
Morgan Stanley Wealth Management

Are you ready to hop into an autonomous shared electric vehicle to whiz you to the other side of town? Maybe? How about climbing into a flying taxi for the ride home? Not yet? Would a 700-mile-per-hour loop train or people mover be an appealing way to get home? Why not opt for one-hour delivery as drones take to urban skies and jockey for air space like taxis do on today's streets?

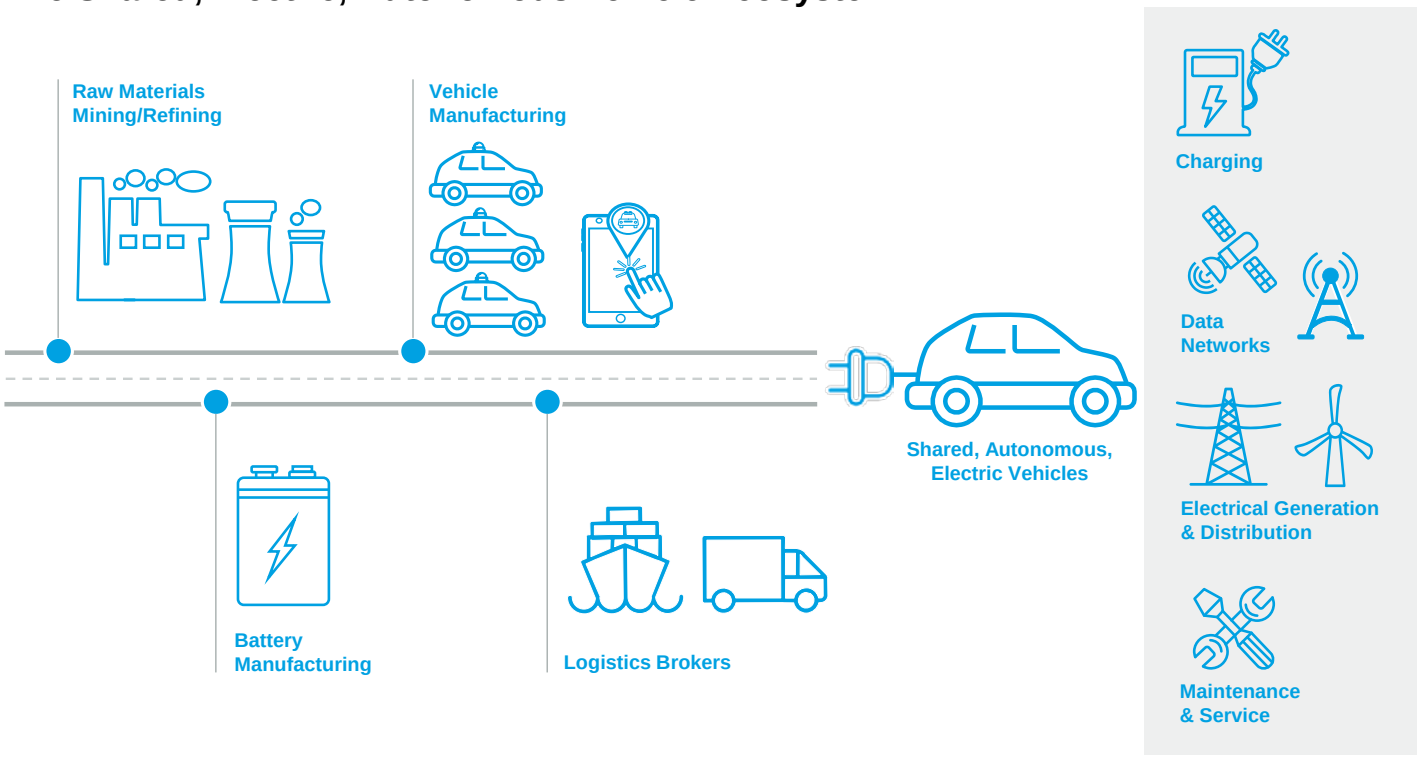
To many, ourselves included, this seems like a dizzying and even daunting future, but an exciting one as well. Some of this will likely not come to fruition but, after years of stagnation, the modes of future transportation seem ready for change.

Transportation technology has often overpromised and underdelivered. We still rely on an automotive ecosystem with minimal changes in the past 100 years. High-speed rail was first explored by Prussia in 1899 and Henry Ford started discussing flying cars in the 1940s. Many innovations in transport failed to achieve wide acceptance or even get off the ground. Separating hype from reality is difficult, but signs suggest that society may be reaching an inflection point.

MOVING AHEAD. The three fundamental technological and social innovations likely to push transportation into a new age are shared resources, alternative energy and autonomous systems (see chart). Each of these, on its own, offers solutions to certain challenges, but the opportunity to combine them could have a multiplicative impact. The transition to the transportation industry of the future will not happen overnight, but there is opportunity for investors to participate along the way, especially in the areas outside of the mainstream.

What does outside the mainstream mean? Quite frankly, this refers to much of the sector outside of passenger vehicles. Autonomous and electric autos have gotten the lion's share of attention as companies take test vehicles to the roads and market energy efficiency, respectively. Components like sensors and battery materials will almost certainly benefit as testing progresses, even if mass adoption is still some time off. Passenger cars, however, only make up 26% of the global transport sector, meaning there are

The Shared, Electric, Autonomous Vehicle Ecosystem



Source: Morgan Stanley Wealth Management

opportunities beyond autonomous electric autos. Advances in both shipping and aerospace have garnered less attention and might well be profitable before the mass adoption of new consumer autos.

INNOVATION NEEDED. The need for more radical transformation in a system that has advanced incrementally is apparent. Rapid growth of urban areas and the resulting congestion require innovative solutions. Changes in global consumption patterns like the growth of online retailing impact the demand for shipping. Climate risks become more acute as more people travel further to work in urban areas or ship more products to their homes.

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In short, the demand for a transportation system that looks very different 30 years from now is mounting, and there are multiple potential solutions for each challenge. Alternatively, rapid growth in the sharing economy might provide a solution, as fewer shared vehicles transport more people. Major changes in public transit systems offer another option, as high-speed trains and even customized pods can branch off to local stops. Perhaps the most exciting part is examining how these different solutions mix and match.

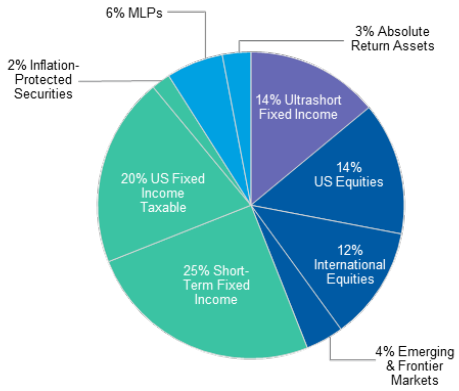
CHALLENGES. Technology, people and public policy each serve as both a driving force and barrier to progress. Half of all Americans say they prefer a combustion engine to an electric vehicle, and less than half would be comfortable riding in an autonomous vehicle. How public policy evolves to deal with the questions raised by autonomous vehicles in emergency situations is barely a glimmer on the legislative agenda. Yet these will be central to charting the course to the future and helping determine the transportation system of tomorrow. ■

Our full report, "Dow Transports 2050," is in the May 17 issue of AlphaCurrents, *a new publication on thematic investing.*

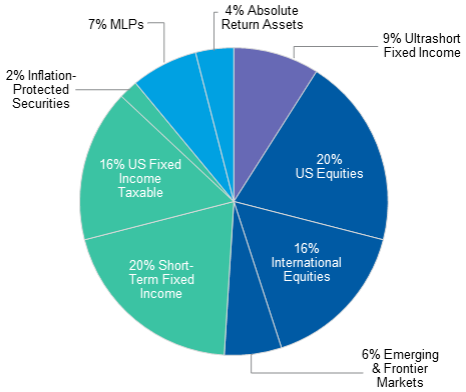
Global Investment Committee
Tactical Asset Allocation

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.

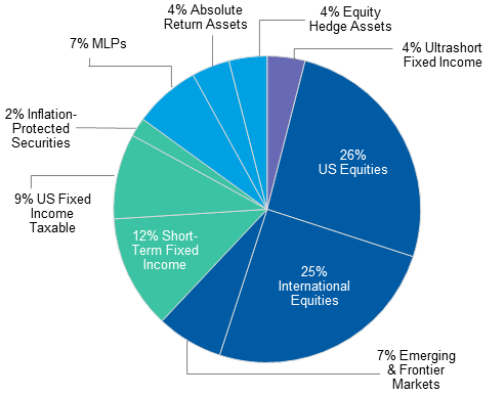
Wealth Conservation



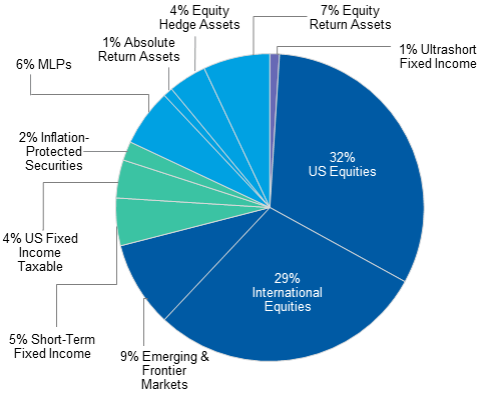
Income



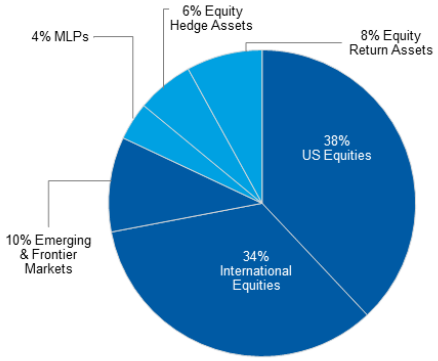
Balanced Growth



Market Growth



Opportunistic Growth



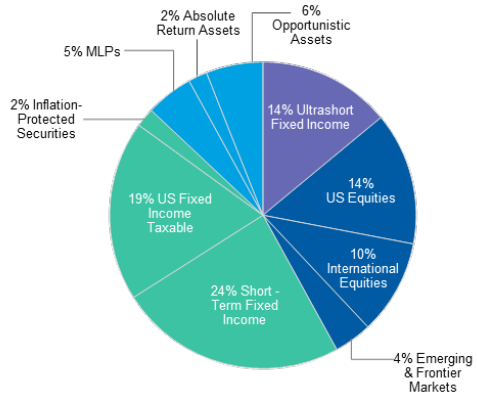
Key

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

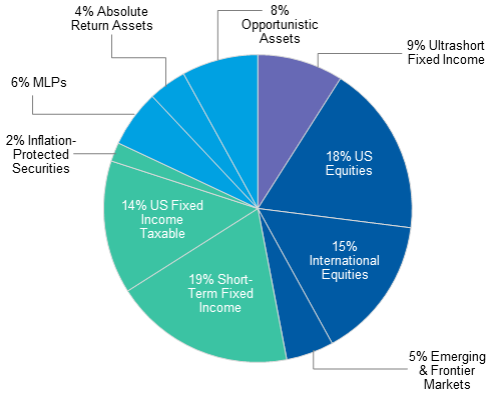
Source: Morgan Stanley Wealth Management GIC as of June 30, 2018

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.

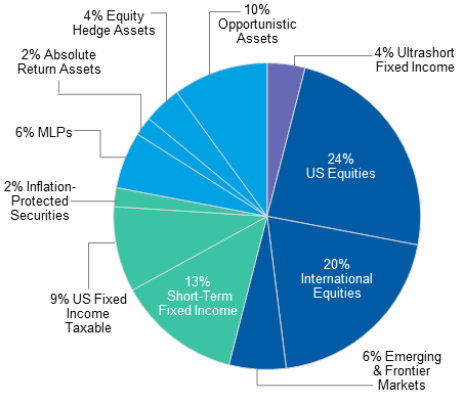
Wealth Conservation



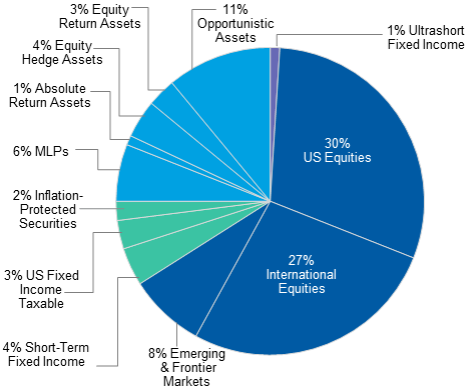
Income



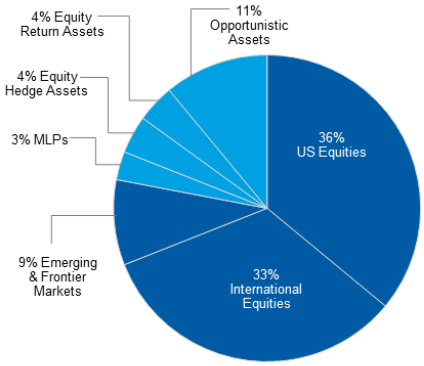
Balanced Growth



Market Growth



Opportunistic Growth



Key

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

Source: Morgan Stanley Wealth Management GIC as of June 30, 2018

Tactical Asset Allocation Reasoning

Global Equities	Relative Weight Within Equities	
US	Equal Weight	US equities have done exceptionally well since the global financial crisis, but they are now in the latter stages of a cyclical bull market. While the acceleration of the Trump/Republican progrowth agenda has created a booming economy and earnings outlook, it may also be sowing the seeds for the end of the cycle as the Fed is forced to raise rates and tighten policy in a more deliberate manner.
International Equities (Developed Markets)	Overweight	We maintain a positive bias for Japanese and European equity markets. The populist movements around the world are now spreading to Italy which may spur further fiscal support from Germany and France. This would be a potential positive catalyst but not likely to develop until September.
Emerging Markets	Overweight	Emerging market (EM) equities have been the best region over the past 24 months but are underperforming so far in 2018. Some of this is simply the result of a market that needs to consolidate spectacular gains the past few years. However, it is also directly related to the Fed's tightening campaign. We expect EM to find support not far from current levels and have a strong finish to the year.
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. While interest rates have remained exceptionally low, US economic data have been very strong recently and the Fed is now raising rates at an accelerating pace. Adding some longer duration when 10-year US Treasury yield is above 3% makes sense.
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 deflationary fears having become extreme in 2015 and early 2016, these securities still offer relative value in the context of our forecasted acceleration in global growth and our expectations for oil prices and the US dollar's year-over-year rate of change to revert back toward 0%. That view played out in 2016 and 2017 but has not yet run its course.
High Yield	Underweight	High yield has performed exceptionally well since early 2016 with the stabilization in oil prices and retrenchment by the weaker players. We recently took our remaining high yield positions to zero as we prepare for deterioration in quality of earnings in the US led by lower operating margins. Credit spreads have likely reached a low for this cycle.
Alternative Investments	**Relative Weight Within Alternative Investments**	
Real Estate/REITs	Underweight	Real estate investment trusts (REITs) have underperformed global equities since mid-2016 when interest rates bottomed. We think it is still too early to reconsider our underweight zero allocation given the further rise in rates we expect and deteriorating fundamentals for the industry. Non-US REITs should be favored relative to domestic REITs.
w	Overweight	Master limited partnerships (MLPs) have traded better since their capitulation in March around the FERC regulatory announcement. With oil prices much more stable and on an upward path, MLPs have garnered more interest given their 8%-to-10% yields.
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. As volatility becomes more persistent in 2018, these strategies should do better than in recent years.

Source: Morgan Stanley Wealth Management GIC as of June 30, 2018

For more about the risks to Master Limited Partnerships (MLPs) and Duration, please see the Risk Considerations section beginning on page 16 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

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.

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, 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.

CEFs

Credit quality is a measure of a bond issuer's creditworthiness, or ability to repay interest and principal to bondholders in a timely manner. The credit ratings shown are based on each fund's security rating as provided by Standard & Poor's, Moody's and/or Fitch, as applicable. Credit ratings are issued by the rating agencies for the underlying securities in the fund and not the fund itself, and the credit quality of the securities in the fund does not represent the stability or safety of the fund. Credit ratings shown range from AAA, being the highest, to D, being the lowest based on S&P and Fitch's classification (the equivalent of Aaa and C, respectively, by Moody's). Ratings of BBB or higher by S&P and Fitch (Baa or higher by Moody's) are considered to be investment grade-quality securities. If two or more of the agencies have assigned different ratings to a security, the highest rating is applied. Securities that are not rated by all three agencies are listed as "NR."

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.

Investing in foreign and emerging markets entails greater risks than those normally associated with domestic markets, such as political, currency, economic and market risks. These risks are magnified in **frontier markets.**

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.

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

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