ABBOT DOWNING

ABBOT DOWNING STRATEGY REPORT

Thinking About Thinking

NOVEMBER 2018

In this issue:

Contributors:

Abbot Downing Strategy Team

Douglas W. Evans, CFA
Senior Managing Director, Asset Management

Philip W. White, CFA
Senior Managing Director, Asset Management

Carol M. Schleif, CFA
Deputy Chief Investment Officer, Asset Management

Todd F. Rabold, CFA, CAIA
Regional Chief Investment Officer, Asset Management

Jeffrey R. Erickson, CFA
Managing Director, Asset Management

Robert B. Farrington, CFA, CAIA
Senior Portfolio Manager, Asset Management

Daniel P. Burke, CFA
Portfolio Manager, Asset Management

Doug R. Beath
Portfolio Manager, Asset Management

Thomas J. Raymond Jr., CFA
Portfolio Manager, Asset Management

Roger W. Adams, CFA
Business Support Consultant, Asset Management

Thinking About Thinking

> *"After a crisis we tell ourselves we understand why it happened and maintain the illusion that the world is understandable. In fact we should accept the world as incomprehensible much of the time."*
>
> Daniel Kahneman

October was a brutal month on portfolio balances and equity markets across the globe as multiple triple-digit down days erased much of the gain achieved during the prior nine months. The Morgan Stanley All Country World Index, representing essentially all[1] of the world's public equity exposure, ended September with a year-to-date (YTD) price gain of 3.9%, only to find itself down 3.4% YTD in dollar terms a month later.

As the month wore on, pundits rushed to put context around the volatility—an arguably futile exercise if the quote above from one of the founding fathers of behavioral finance is to be believed. And indeed, none of the woes blamed for the pummeling were new: ongoing trade war, Iraq, Iran, Syria, rising interest rates, unease over mid-term elections, strengthening inflation, unsettled news on the Brexit front, and Italian bonds to name but a few.

It could be argued that part of what shifted was investor *perception*. While economic fundamentals in the U.S. in particular remain strong,[2] there seems to be a growing unease both about how much better things can get and about how much longer the strength can be maintained. While we would hardly deem October's market performance a "crisis," it did bring into stark relief some of the psychological ways that investors seem to do themselves harm over the short run. As behavioral economics has taught us over the past couple of decades, humans are not naturally hard-wired to thrive in volatile, unpredictable environments. Fight, flight, and freeze mechanisms can kick in rapidly when daily news flow is worrisome and stress levels escalate. For those with especially powerful and negative memories burned into brains amidst prior downturns like 2001 to 2002 and 2008 to 2009, responses can be almost PTSD-like in intensity. In fact, as behavioral economists have been learning via a growing body of studies, many of our innate hard-wired survival tendencies actually work against us in the investment arena. To be wise stewards of long-term assets, therefore, we need to "think about our thinking," often overriding what our natural born instincts would be during stressful market times.

Cognitive Bias and Investing

The word "bias" has been in the news a lot lately across a broad spectrum of human endeavor. It's frequently been accorded a negative overtone, but all of us are born with cognitive or so-called "thinking biases." It's the way our species has continued to thrive over many millennia. The key comes in identifying the ones we lean on the most; those that potentially may be the most obstructive to our long-term health and well-being. In essence, we have to think about our thinking, putting a pause between our hard-wired stimulus and response mechanisms in order to choose a more helpful course when necessary. This can be particularly true with investing, spending, and financial topics where our natural tendencies often lead us in a direction diametrically opposed to what could be most helpful.

Wikipedia lists over 185 different examples of cognitive bias and the way our brains tilt our behavior.[3] We deploy bias so frequently, in fact, that we often don't recognize them in ourselves. As humans, it's tempting to think we are always in control of our bodies, our decisions, and our "minds"—yet our "hard wiring" is calling the shots much more than we are aware. Think, for example, about what happens to your mouth when someone mentions the word "lemon slice" or what happens to your previously quiet stomach when confronted with the irresistible smell of freshly baked chocolate chip cookies. Against the backdrop of October's volatility and the responses it evoked, we figured it was an opportune time to revisit some of the biases most pertinent to the investing arena and offer a few suggestions regarding how to circumvent them. We strongly suspect that increased volatility is here to stay—not a single month one-off—and the ability to recognize and circumvent our own inherent biases may come in handy in the months and quarters ahead.

Anchoring – The tendency to pin one's decision making on a single (often recent) point of reference. Remember how hung up the headlines got about broaching "Dow 20,000" or a "3% 10-year U.S. Government Yield"? Similarly, home buyers can anchor to sub-5% mortgage rates and slow purchases once that level is hit, though mortgage rates have been above 8% as recently as August 2000[4] and home sales/purchases still happened. Anchoring to market levels, individual stock or bond price levels, interest rates, etc. can shift focus from where it needs to be—the relationship between price and economic value.

Recency Bias – The propensity to give recent history or recent events too much weight in decision making, thereby discounting the potential for other events to occur. This faulty analysis is based on presuming history always repeats itself, particularly recent history. But thorough analysis incorporates changing demographics; personal financial means; and political, environmental, and economic shifts that impact both near- and long-term events. Tax law and incentives written into systems also change.

Confirmation Bias – Intentionally or unintentionally seeking out evidence that supports one's viewpoint. Intentionally seeking *non*-conforming viewpoints is essential for long-term survival in the investment arena. Poking holes in theories and asking "what if X didn't happen that way?" are vital components of thorough due diligence. Probabilistic thinking and analysis can also help broaden horizons by facilitating analysis of a wide range of potential outcomes. Investing is seldom either/or, though the media loves to tee up disagreements this way. It's seldom "growth vs. value" or "active vs. passive" as much as it's "X *and* Y". Dynamic, diversified portfolios contain a mix of investments to cushion and participate in a variety of potential outcomes.

Availability Heuristic or Cascade – Basically the more an item is repeated, the more it becomes believed. For example, the notion that a 20% decline means a bear market is technically just an oft-repeated headline, not a hard-and-fast rule written in any textbook.

Overconfidence Effect – Having one decision or bet "pay off" especially in a big and/or emotion-filled way has been shown to release powerful endorphins. Our brains are naturally drawn to such powerful chemical rewards and prompt us to seek more of the same. So one prognostication or investment working out in the way we estimated can lead to more confidence in our next pick—even if the thinking that went into it is faulty or the context is markedly different.

Loss Aversion and Negativity Bias – The tendency to be more pained by losses than excited by gains. Humans also have a greater propensity to recall negative events, particularly when the events were laced with strong emotion, and to react with undue force to future situations that evoke those prior memories.

Herding Instinct – We have survived for millennia by being part of the pack. In the not-too-distant past, for example, being ostracized from the pack would be a true matter of life or death. Even today, when we are excluded from a group—say picked last in grade school for the kick ball team, or not allowed into that great secret investment club that everyone else is getting into—our brains flood our bodies with negative chemicals that come from the very same sites as physical pain. We are hard wired to want to be part of the "in" crowd. That knowledge is why going against the investment herd—trimming when markets are going up and headlines are positive, or buying when proverbial knives are falling all around—can seem so terrifying. Developing a plan ahead of time to regularly rebalance based on basic valuations and ranges established during quieter market times can circumvent these powerful influences. It is one of the primary reasons we work with clients to establish appropriate long-term asset allocation ranges, and to understand cash flow, planning, and risk mitigation needs.

Thinking About Thinking *(Continued)*

The list goes on and on *(refer to Citation 3 at the end of this document)* but the bottom line is similar: as part of our species' long-run survival, our brains are wired to expect order, consistency, and routine. None of these factors are prevalent in day-to-day markets no matter how much effort we expend trying to predict outcomes. As such, we need to set up systems to circumvent some of our worst tendencies (for example, regular rebalancing to predetermined ranges; valuation and probability analysis; dollar cost averaging in and out of assets) and take the time to pause, reflect and think about our thinking…especially when volatility is rampant.

Factor Investing

> *"Ninety percent of most magic consists of knowing one extra fact."*
>
> Sir Terry Pratchett

Sir Terrance Pratchett was possibly England's most prolific author not named Shakespeare or Rowling. He wrote over 70 books that sold more than 85 million copies. Best known for his humorous, satirical fantasy novel series *Discworld*; he was, and remains, beloved by his fans. Pratchett's quote about magic is relatable for most investors. According to *Webster's Dictionary*, magic is defined as "the power of apparently influencing the course of events by using mysterious or supernatural forces." The only real difference is that investors are looking to influence the course of events by using known forces. In investing, some of these forces are often referred to as "factors." This article will detail how we use factors in our investing process across all four pillars of our activity: asset allocation, portfolio construction, manager selection, and risk management.

What Are Factors?

There are several available definitions for factor investing. In the book, *Your Complete Guide to Factor Based Investing: How the Smart Money Invests*, authors Andrew Berkin and Larry Swedroe define factors as, "properties or a set of properties common across a broad set of securities." Size is a common factor. Grouping stocks together into small cap (short for capitalization), mid cap, and large cap results in creating groups of securities that have common properties. For example, small cap companies tend to have less leverage; large cap companies tend to have more international exposure. As a result, size as a factor, can tend to drive how one group of stocks performs relative to another. Quality is another common factor. Quality can have multiple definitions, but it generally refers to companies that have low leverage, consistent profitability and steady earnings. Like size, grouping stocks into varying levels of quality can uncover differences in performance that investors can seek to take advantage of.

Choosing Factors

In a 2011 speech, Professor John Cochrane of the University of Chicago stated, "We now have a zoo of new factors." By some estimates, researchers have sought to define more than 300 different factors that investors can choose from. So, how do we determine which factors to use? At a minimum, we think a factor should meet the following five criteria to be useful: it should be backed by extensive academic research and data, there should be an economic intuition that makes sense supporting it, it should be easily implementable, it should be additive to returns, and it should help diversify—not compound—existing drivers of portfolio returns.

Using this framework, we have found six factors to be worth consideration when constructing portfolios. We agree that quality and size (described previously) are relevant. In addition, we think portfolios can benefit at times from tilts toward value, low volatility, momentum, and illiquidity.

Using Factors

As we mentioned, we use factors in all four pillars of our investing process. For example, when determining our tactical asset allocation tilts we may favor small cap stocks over large cap stocks, utilizing the size factor. In the portfolio construction process, we can utilize passive factor exposure to correct for unintended tilts present across our active managers. If our active manager lineup tends towards smaller cap and higher growth, we can use large cap, value exposure to bring the total portfolio back into alignment. During our manager selection process we spend considerable time separating a manager's skill from their exposure to certain factor exposures. If a manager's returns are highly correlated with high quality and low volatility factors, it may not be worth it to pay active manager fees for such exposure. Finally, understanding factor exposures can help manage risk. Combining a value and growth manager may seem like a fairly intuitive risk management technique, but if both managers also have outsized exposure to momentum, simply combining them may actually increase risk as measured by tracking error. Deconstructing how certain investments behave can help us uncover and hedge against these unintended risks.

Just as important in understanding what factors are, is understanding what factors are *not*. Factors are not designed to outperform in all environments, so merely selecting a factor and allocating to it does not guarantee out-performance and/or lower risk. Factors, like all things in investing, move in and out of favor cyclically. At any given time, a single factor such as value, size, or quality can be out of favor and can lag the performance of the market overall. Building a portfolio with diversified exposures to multiple factors can help reduce the overall risk and improve the potential of the portfolio to generate alpha.

Conclusion

Factor based investing is a complex process, but we believe it can add value to portfolios, specifically the implementation of factors based on investment quality, valuation, volatility, size, liquidity, and momentum. Factors can be implemented within an individual product/strategy or at the portfolio level. We also recognize that adding tilts can add significant risks to a portfolio. Therefore, any factor tilt should be added only after rigorous evaluation. Perhaps that's the other major difference between magic and investing—magicians never reveal their secrets, where as a Google search for "factor investing" generates 137 million results. Pratchett was so protective of his secrets that in his waning years he provided clear instructions that no other author was allowed to finish any of his works in progress. After his passing, pursuant to his wishes, and in keeping with his humorous style, his hard drive with as many as 10 unfinished works, was run over by a steamroller and then put through a stone crusher for good measure.

Key Market Events

Listed below are key upcoming events and/or accelerating trends we're watching especially closely, as well as a few comments related to how they may impact short-term markets.

The Return of Volatility

After 74 consecutive days without a +1/-1% move in the S&P 500 (10th longest streak in history), and the VIX fluctuating between just 10 to 15 during Q3, volatility returned with a vengeance in October. The Dow and S&P 500 finished the month down 5.1% and 6.9%, while developed and emerging markets were off by 8.0% and 8.7% respectively. There is certainly no shortage of explanations for the plunge in stock prices: U.S./China trade tensions, rising interest rates, corporate earnings season, mid-term elections, and fears of a global economic slowdown are just a few examples. Markets rebounded in early November as investors refocused on earnings' momentum and away from the U.S. midterm elections. As expected, Democrats took control of the House of Representatives, and Republicans maintained the majority in the Senate.

Historically, equity markets have corrected in the run-up to midterm elections, but once this uncertainty has been removed following the election, stocks have performed well over the following 12 months—regardless of which party was in charge before or after the election. Looking forward however, inflation, deficits, regulation, fiscal spending, and tariffs could all add to market volatility at least through the end of the year and likely beyond. Economic and corporate earnings data must be thoroughly monitored for signs of overheating and the potential for bottlenecks.

Global Trade

While negotiations will likely win out over an all-out trade war, the risks of damaging trade conflict between the U.S. and China have risen. The U.S. announced tariffs on $200 billion worth of Chinese goods starting at 10% before climbing to 25% on January 1st. The latest tariffs come on top of the $50 billion worth already applied earlier this year, meaning nearly half of all Chinese imports into the U.S. will soon face levies. Key demands from the U.S. dictate that China open its markets, increase its imports, stop protecting its favored industries, and change rules to prevent the theft of U.S. Technology. Although escalating punitive policy responses would produce unfavorable economic circumstances for both countries, investors (for now) believe that China has more to lose than the U.S., based on the sharp downturn in the Yuan and emergence of a bear market for the Shanghai Stock Exchange. Significant attention will be focused on the planned meeting between Messrs. Trump and Xi at the Group of 20 leader's summit in Buenos Aires in late November.

The U.S., Mexico, and Canada announced a revised North American Free Trade Agreement (NAFTA), renamed the United States-Mexico-Canada Agreement, or U.S.M.C.A. This all comes as U.S. and EU trade negotiators attempt to follow up on an agreement last summer to pursue "zero tariffs" and "zero subsidies" on non-auto industrial goods.

Global trade negotiations have evolved into a political chess match that is highly unpredictable and we feel they thus carry a greater than average risk of "surprising" investors and markets.

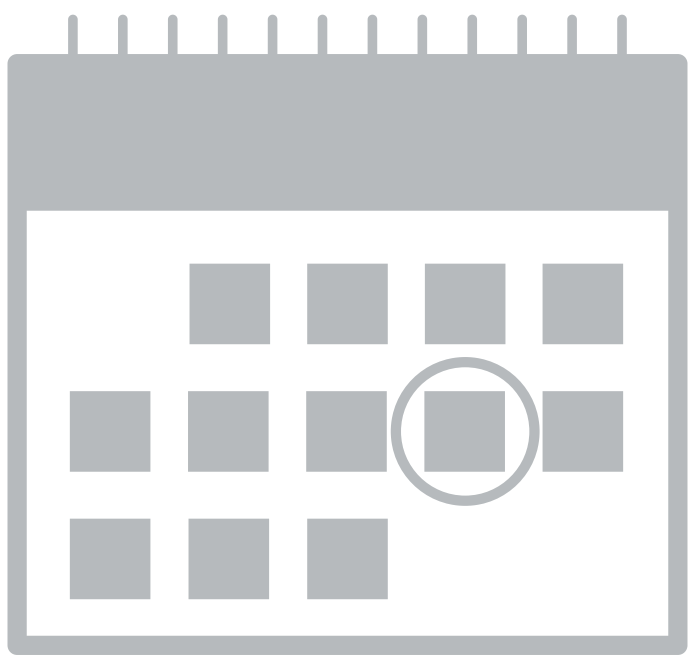
Domestic Geopolitical Concerns

The new U.S. tax bill and reduced regulatory constraints appear to be having a salutary effect on corporate psyches. From our perspective, spending and hiring plans are firm and corporate optimism is running high. So high in fact, that from what we hear and read, some bottlenecks appear to be emerging in selected industries. Industries with the tightest labor bottlenecks include construction, transportation (especially long-haul truckers), technology (including data scientists), and many areas of retail and food service. We still believe that on balance, we can expect potentially more economic stimulus and equity-market support than forecasted even a few quarters ago.

With permanently lower corporate tax rates, immediate write off of capital expenditures for the next five years, and a host of devilish details, the law in full bloom is liable to yield a number of modifications in business behavior, many with a growth bias.

We feel that investor consternation is rising over the potentially inflationary/growth aspects of the law: Can we get enough growth without overheating an already arguably fully employed populace? Case in point: Americans are choosing to change jobs (as measured by the "quits" rate) at the fastest pace since the internet boom 17 years ago—and getting rewarded with higher pay at new positions. Additionally, commentary in quarterly earnings calls have pointed to additional employer perks like hiring bonuses, enhanced family leave, more generous training programs, and other enticements to keep key workers in place. Companies are also upgrading technology as evidenced by broad-based tech spending. While expenses like training and technology have the potential to pinch margins in the short run, they have more positive implications for productivity growth of the long pull.

We believe investors will be watching closely as we head into 2019 for hints of increased pressure on margins and the potential for inflation. Such intense focus could well lead to heightened volatility—even as the economy continues to perform solidly amidst the noise. Earnings and sales growth for U.S. companies continued to exceed expectations in Q3 without an erosion of their margins.



Central Bank Meetings – The Fed and The ECB

As expected, the U.S. Federal Reserve voted to maintain the target range for the federal funds rate from 2.00% to 2.25% at the November meeting. Expectations for rate increases as indicated by futures markets suggest one additional hike in 2018 at the December FOMC meeting—while the "dot plots" portend three more hikes in 2019.

A key question remaining in our mind: Will they move preemptively to tame inflation, or let it run on a bit? U.S. headline and core inflation, as well as employment cost indices, will be under extra scrutiny in months ahead. QE tapering will also be a focus, as the Fed reduces the bond purchasing program initiated in the wake of the financial crisis and the U.S. Treasury increases its issuance of T-bills, notes, and bonds to pay for an expanding deficit. Investors will be watching closely to see if yields are forced upward given the extra supply.

Employment cost index releases should continue to spawn market volatility. Recent monthly unemployment reports have reached the lowest levels since year 2000 and YOY wage gains improved to 3.1%. These are likely to be much-watched statistics for the remainder of the year, along with their inferred implication for Fed monetary policy decisions. The October report was encouraging in that the unemployment rate remained at the cycle low of 3.7%, while the labor force grew by 711,000 persons. However, the employment cost index was still constrained.

The European Central Bank (ECB) reiterated that it reduced QE from 30 billion euros of assets a month in September to 15 billion in October, and will stop purchases at the end of the year. It also pledged to keep interest rates unchanged "at least through the summer of 2019" now at minus 0.4%.

We feel markets will remain focused on the progress of inflation and the Fed's comments surrounding economic health. At it's November meeting the Fed remained upbeat on the economy, but also noted that growth of business fixed investment has moderated from its rapid pace earlier in the year. Capex spending will likely be a focus at future FOMC meetings, as it monitors how corporate tax cuts are creating new incentives for firms to make capital expenditures—hopefully leading to higher productivity growth.

Progress and commentary around the pace of balance sheet unwind will also bear watching for its impact on market levels of liquidity and pricing.

Markets will also continue to scrutinize ECB President Mario Draghi's comments. In October, the ECB shaved its forecast for growth in the 19-nation currency union by 0.1 percentage points for this year and next, to 2% and 1.8% respectively.

Commodity Prices

Based on historical data, commodities are knee-deep in a bear super cycle (a cycle that lasts 15 to 20 years where price moves typically occur in the first five years) that commenced in 2011 with, we suspect, the bulk of the damage having already occurred. Seven years into the cycle, individual commodities in aggregate are likely to be range bound—providing potential opportunities for investors. Indeed, the recent plunge in commodity prices, due to escalating tensions between the U.S. and China, combined with a strengthening dollar have made this asset class more favorable in the near term. Oil has been one of the few commodities with positive performance throughout 2018—mainly the result of geopolitical issues (OPEC, Iran, and Venezuela). However, crude prices have recently experienced a month-long slide, due to record U.S. production and a sharp rise in inventories.

Price volatility in commodities, especially to the upside, could further stoke investor nerves regarding inflationary pressures.

Techlash

In view of high-profile hacks, data misuse announcements, and potential meddling/manipulation of data feeds by a variety of bad actors, companies such as Facebook, Google, Twitter, Snap, UnderArmour, Aptiva, and Experian, are under an intense Congressional microscope. The industry is working to get in front of potential regulatory reforms, suggesting that instituting fixes and routines similar to those mandated in the EU are the first step. Scrutiny of the all-important technology sector is likely to continue and bears watching as any unexpectedly negative announcement—even if preliminary—could impact the stocks.

In addition to regulatory issues, tech stocks have come under pressure due to fundamentals; concerns of peak earnings, slowing revenue and high valuations have led to additional volatility for this sector.

The European Union is far ahead of the U.S. on this front and has already lodged fines on affected companies from Facebook to Apple.

U.S. Economic Data Heading into 2019

According to the U.S. Bureau of Economic Analysis (BEA), the latest GDP report showed the U.S. economy accelerating 3.5% on an annualized basis in Q3, down from 4.2% in Q2—but still exceeding consensus expectations. We believe the latest data inputs support continued growth through 2018: leading economic indicators (LEI), quality corporate bond spreads, and manufacturing surveys are all forecasting solid expansion.

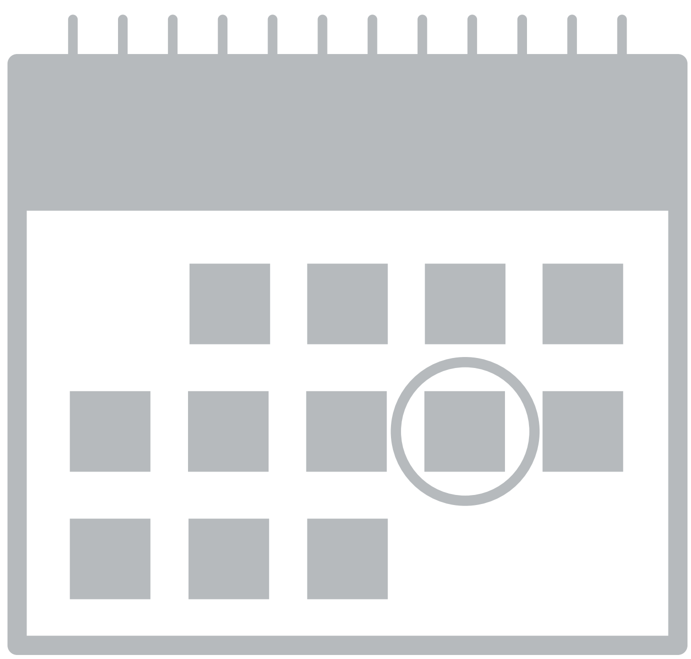
Although output has clearly accelerated throughout 2018, we believe monitoring incoming data late in a business cycle for signs of acceleration and deceleration is prudent.

Non-U.S. Fundamentals

Macro and corporate fundamentals in Europe have improved, though not in as robust a fashion as the largely tax-cut fueled strength of the U.S., but investors should still be aware of political risk in Europe and elsewhere. For example, a key sticking point with the Brexit talks over the last several months has been Ireland. The EU has proposed a "hard border" a custom border between Northern Ireland and the U.K. that would leave Northern Ireland subject to a broad set of EU rules—effectively dividing Northern Ireland's economic rules from the rest of the U.K., a proposal that Prime Minister May has deemed unacceptable. The longer Brexit negotiations continue without a resolution, the more uncertainty it creates for European businesses and capital markets.

Based on election results from last March, Italy currently has a coalition government formed by two populist parties: the left-wing Five Star Movement and the right-wing Lega party, which presents a complicated situation. Indeed, the Italian parliament produced a budget that was rejected by the EU based on spending rules and debt levels. Brussels has demanded that Italy revise and resubmit its budget by mid-November. Moody's has downgraded Italy's debt, while Standard and Poor's has "lowered its outlook" on Italy. Yields on the country's 10-year government bonds hit a 4½ year high, rising to 3.86% in mid-October, but have since declined to 3.3%.

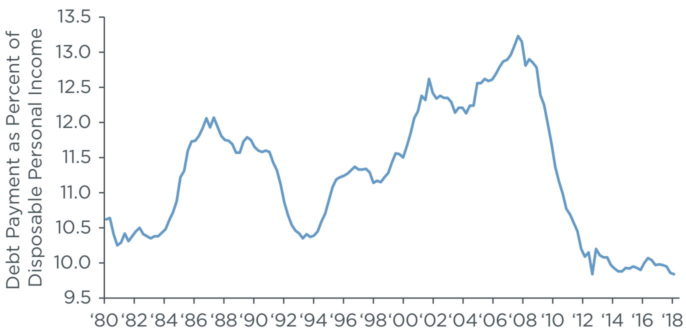
While European governments in general have shifted toward pro-growth policies, investors are keenly aware of intense political divisions within the bloc that could be disruptive. In addition to the aforementioned examples in the U.K. and Italy, Spanish lawmakers recently ousted its prime minister, and Chancellor Merkel has stepped down as leader of her Social Democratic party in the wake of another regional election disappointment.



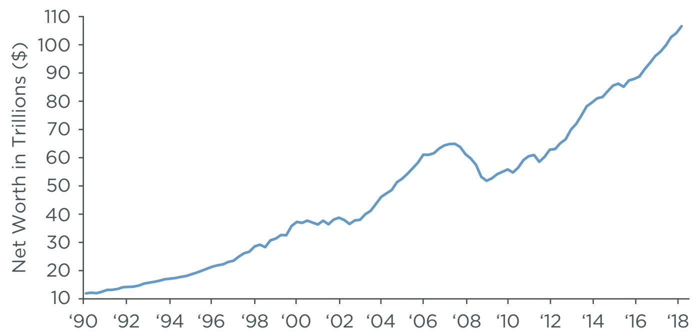
Notable Observations

In recent months there has been much consternation over the status of the housing market and consumers' propensity, willingness, and ability to take on more debt. As the top two charts show, consumers fiscal situation, on average, remains cyclically high and other indicators such as new job creation, the quit rate, and consumer confidence (among others) also flash positive for the ability to spend. Issues with slowing turnover, we suspect, relate more to limited supply pushing home prices higher (see middle chart on the left below) and potentially psychological impediments represented by mortgage rates having increased relative to recent history. However, as the middle chart on the right shows, even the current level of mortgage rates are much lower that we have experienced for most of history. We suspect as consumers anchor their expectations to more recent levels, housing should remain a healthy component of U.S. economic activity.

Household Debt Service Ratio Near All-Time Lows

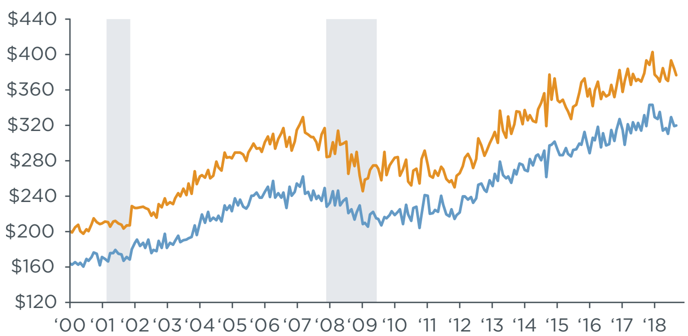


Household Net Worth At All-Time Highs



Average and Median New Home Sale Price

In Thousands of USD

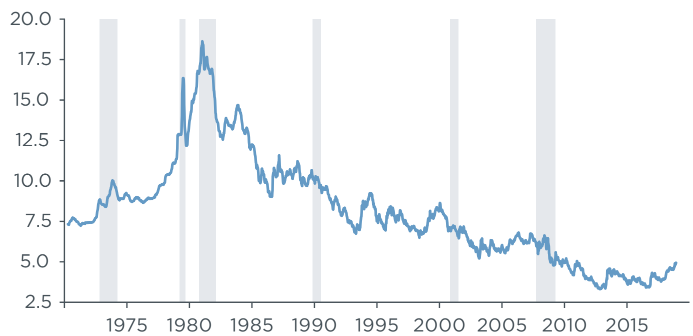


Average Sales Price: Sep @ $377K

Median New Sales Price: Sep @ $320K

30-Year Fixed Rate Mortgage Average in the U.S.

Percent, Weekly, Not Seasonally Adjusted

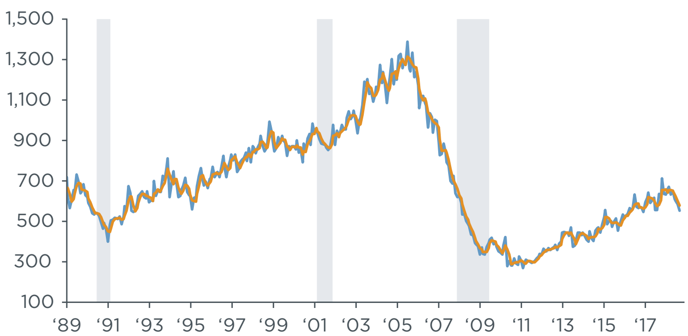


Shaded areas indicate U.S. recessions.

Source: Freddie Mac

New Home Sales

Seasonally Adjusted Annual Rate, In Thousands

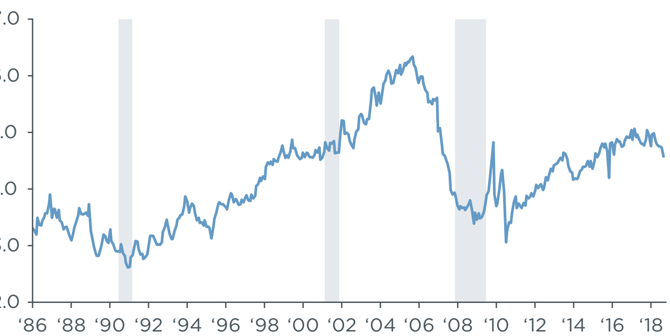


New Home Sales: Sep @ 553K

3-Month Moving Average: Sep @ 580K

Existing Single-Family Home Resales

Seasonally Adjusted Annual Rate, In Millions



Existing Single-Family Home Sales: Sep @ 4.6M

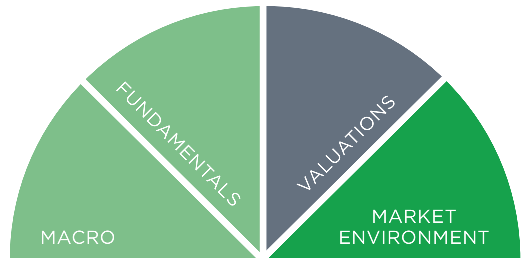
Dynamic Allocation Summary

Global Equities Outlook Overview

U.S. Large Cap Equities

Outlook: Mixed Positive

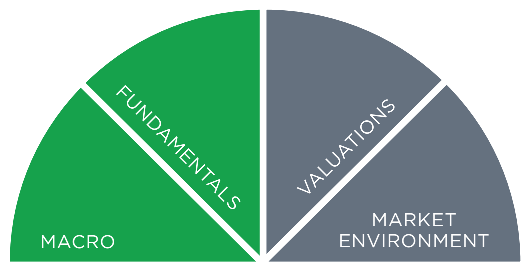
Macro and fundamental inputs continue to favor U.S. large-cap equities. The new tax bill shows potentially more economic stimulus and equity-market support than forecasted at the beginning of the year. We are also aware of elevated valuations, and in instances where clients are in need of capital we would consider taking profits in this asset class, if the client is above target weights. At the same time, if U.S. large-cap stocks were to experience additional volatility, we would consider this a potential opportunity to invest at more attractive prices.



U.S. Small Cap Equities

Outlook: Neutral

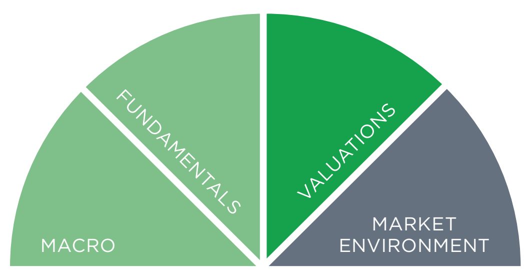
We have a neutral weighting on domestic small cap equities. Valuations are deemed expensive relative to larger companies, but the new tax plan should benefit small-cap stocks by comparatively more than the large-cap indices; smaller domestic companies tend to pay higher tax rates than large, multinational companies, and generally have lower profit margins. Active management is favored to generate alpha in this space.



Developed Market Equities

Outlook: Mixed Positive

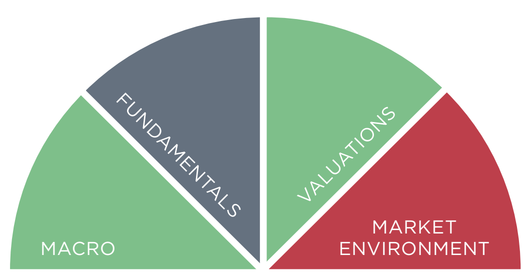
Although economic growth in developing countries outside the U.S. stalled during the first half of the year, recent data suggest stronger growth in the second half of 2018. Accelerating profits, and reasonable valuations favor developed market equities in our opinion. In cases where clients have immediate funds to invest, developed equities would be one of our top considerations.



Emerging Market Equities

Outlook: Neutral

The strengthening U.S. dollar and escalating trade tensions have pressured emerging market equities—and made valuations more attractive. Stronger balance sheets of developing countries (lower external debt) and expectations of a more stable greenback have made us more optimistic on this asset class going forward.



Outlook Ratings POSITIVE | MIXED POSITIVE | NEUTRAL | NEGATIVE

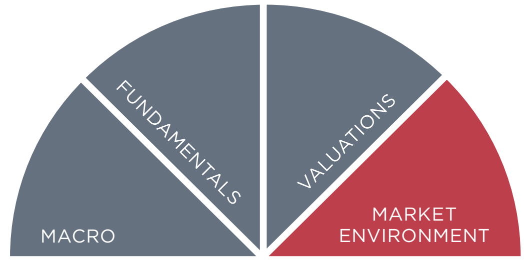
The color-coded rating system applies to specific inputs only (Macro, Fundamentals, Valuations, and Market Environment) and represents the current and shorter-term (three to six months) outlook for the specific inputs based on qualitative data and recommendations from the Abbot Downing Asset Allocation Committee. It is intended to provide guidance to the Abbot Downing Portfolio Construction Team. The content does not represent a buy, hold, or sell recommendation for specific asset classes.

Dynamic Allocation Summary (Continued)

U.S. Investment Grade Fixed Income

Outlook: Neutral

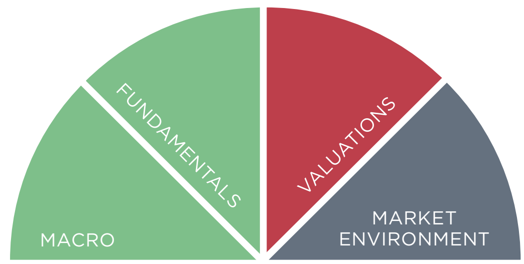
We feel that yields of investment-grade bonds (treasuries, municipals, and corporates) have moved into fair value range, and are supported by expectations that the Fed will continue to raise rates at a gradual pace. Markets currently appear to anticipate one additional rate hike in 2018.



Non-Investment Grade Fixed Income

Outlook: Neutral

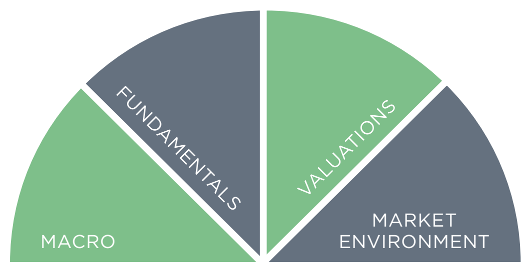
We remain constructive on preferred stock securities based on healthy yield premiums versus investment-grade bonds. We feel that valuations have become expensive in the high-yield asset class.



International Fixed Income

Outlook: Negative

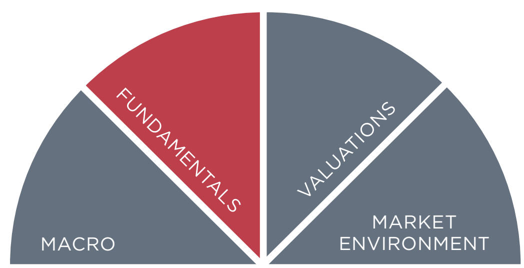
We believe near zero yields on many developed country sovereign debt issues warrant caution for this sector. Emerging market bond spreads are now above their long-term historical averages.



Real Estate Investment Trusts (REITs)

Outlook: Neutral

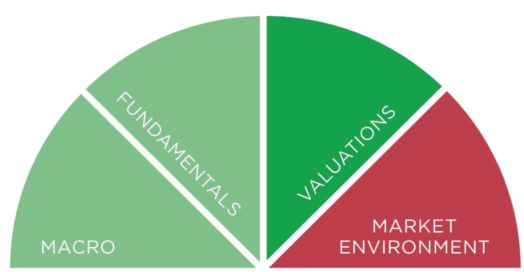
We have downgraded REITs to underweight, as they have become more sensitive to interest rate moves. REIT fundamentals remain stable despite facing late cycle headwinds and exhibit attractive valuations. REITs currently sell at a 5.0% discount to underlying real estate holdings, but exhibit average spreads compared to other income-oriented asset classes.



Master Limited Partnerships (MLPs)

Outlook: Mixed Positive

Although MLPs came under pressure earlier in the year as investors adjusted to lower distribution growth rates and tax-loss selling, performance has rebounded strongly based on stronger fundamentals. Current MLP yields of near 9% are also attractive on both an absolute and relative basis. Finally, active management is favored in this space due to the recent FERC ruling and risk of C-corp conversion.



Outlook Ratings POSITIVE | MIXED POSITIVE | NEUTRAL | NEGATIVE

Disclosures

Risk Considerations

Past performance does not indicate future results. The value or income associated with a security or an investment may fluctuate. There is always the potential for loss as well as gain. Investments discussed in this report may be unsuitable for some investors depending on their specific investment objectives and financial position.

Equity securities are subject to market risk which means their value may fluctuate in response to general economic and market conditions and the perception of individual issuers. Investments in equity securities are generally more volatile than other types of securities.

There is no guarantee that dividend-paying stocks will return more than the overall stock market. Dividends are not guaranteed and are subject to change or elimination. There are no guarantees that growth or value stocks will increase in value or that their intrinsic values will eventually be recognized by the overall market. The return and principal value of stocks fluctuate with changes in market conditions. The growth and value type of investing tends to shift in and out of favor.

Asset allocation and diversification do not assure or guarantee better performance and cannot eliminate the risk of investment losses. Your individual allocation may be different than the strategic long-term allocation above due to your unique individual circumstances but is targeted to be in the allocation ranges detailed. The asset allocation reflected above may fluctuate based on asset values, portfolio decisions, and account needs.

Investing in **commodities** is not suitable for all investors. Exposure to the commodities markets may subject an investment to greater share price volatility than an investment in traditional equity or debt securities. Investments in commodities may be affected by changes in overall market movements, commodity index volatility, changes in interest rates or factors affecting a particular industry or commodity. Products that invest in commodities may employ more complex strategies which may expose investors to additional risks.

Convertible securities are subject to the same interest rate, price and credit risks as regular debt securities. Prices tend to be inversely affected by changes in interest rates. In addition, a convertible security is also subject to the risks associated with common stocks. The return and principal value of stocks fluctuate with changes in market conditions.

Alternative investments, such as hedge funds, carry specific investor qualifications which can include high income and net-worth requirements as well as relatively high investment minimums. They are complex investment vehicles which generally have high costs and substantial risks. The high expenses often associated with these investments must be offset by trading profits and other income. They tend to be more volatile than other types of investments and present an increased risk of investment loss. There may also be a lack of transparency as to the underlying assets. Alternative investments are subject to fewer regulatory requirements than mutual funds and other registered investment company products and thus may offer investors fewer legal protections than they would have with more traditional investments. Additionally, there may be no secondary market for alternative investment interests and transferability may be limited or even prohibited. Other risks may apply as well, depending on the specific investment product. Please carefully review the prospectus, private placement memorandum or other offering documents for complete information regarding terms, including all applicable fees, as well as risks and other factors you should consider before investing.

Investments in **fixed-income securities** are subject to interest rate and credit risks. Bond prices fluctuate inversely to changes in interest rates. Therefore, a general rise in interest rates can result in the decline in the bond's price. Credit risk is the risk that an issuer will default on payments of interest and principal. High yield fixed income securities are considered speculative, involve greater risk of default, and tend to be more volatile than investment grade fixed income securities. Municipal bonds offer interest payments exempt from federal taxes, and potentially state and local income taxes. They are subject to credit risk and potentially the Alternative Minimum Tax (AMT). Quality varies widely depending on the specific issuer. All fixed income investments may be worth less than their original cost upon redemption or maturity.

Mortgage-related and asset-backed securities are subject to prepayment risks. Changes in prepayments may significantly affect yield, average life and expected maturity.

Currency hedging is a technique used to seek to reduce the risk arising from the change in price of one currency against another. The use of hedging to manage currency exchange rate movements may not be successful and could produce disproportionate gains or losses in a portfolio and may increase volatility and costs.

Investing in **foreign securities** presents certain risks that may not be present in domestic securities. For example, investments in foreign, emerging and frontier markets present special risks, including currency fluctuation, the potential for diplomatic and potential instability, regulatory and liquidity risks, foreign taxation and differences in auditing and other financial standards.

Master Limited Partnerships (MLPs) involves certain risks which differ from an investment in the securities of a corporation. MLPs may be sensitive to price changes in oil, natural gas, etc., regulatory risk, and rising interest rates. A change in the current tax law regarding MLPs could result in the MLP being treated as a corporation for federal income tax purposes which would reduce the amount of cash flows distributed by the MLP. Other risks include the volatility associated with the use of leverage; volatility of the commodities markets; market risks; supply and demand; natural and man-made catastrophes; competition; liquidity; market price discount from Net Asset Value and other material risks.

There are special risks associated with investing in **preferred securities**. Preferred securities are subject to interest rate and credit risks and are generally subordinated to bonds or other debt instruments in an issuer's capital structure, subjecting them to a greater risk of non-payment than more senior securities. In addition, the issue may be callable which may negatively impact the return of the security. Preferred dividends are not guaranteed and are subject to deferral or elimination.

Private debt has speculative characteristics that include potential default, limited liquidity and the infrequent availability of independent credit ratings for private companies.

There are risks associated with investments in **private companies**. Such companies are not subject to SEC reporting requirements and are not required to maintain effective internal controls over financial reporting. These companies may have limited financial resources; shorter operating histories; more asset concentration risk; narrower product lines and smaller market shares that larger companies. In addition, securities issued by private companies are typically illiquid and there may be no readily available trading market for such securities.

Investing in **real estate** involves special risks, including the possible illiquidity of the underlying property, credit risk, interest rate fluctuations and the impact of varied economic conditions.

The prices of **small cap and mid cap company stocks** are generally more volatile than large cap company stocks. They often involve higher risks because smaller companies may lack the management expertise, financial resources, product diversification and competitive strengths to endure adverse economic conditions.

Technology and internet-related stocks, especially of smaller, less-seasoned companies, tend to be more volatile than the overall market.

Treasury Inflation-Protected Securities (TIPS) are subject to interest rate risk, especially when real interest rates rise. This may cause the underlying value of the bond to fluctuate more than other fixed income securities. TIPS have special tax consequences, generating phantom income on the "inflation compensation" component of the principal. A holder of TIPS may be required to report this income annually although no income related to "inflation compensation" is received until maturity.

There is no assurance that any of the target prices or other forward-looking statements mentioned will be attained.

Index and Other Definitions

An index is unmanaged and not available for direct investment

Inflation is the change in the **Consumer Price Index (CPI)**. The CPI measures the price of a fixed basket of goods and services purchased by an average consumer.

Core inflation is the change in the core **Consumer Price Index (CPI)**. The core CPI measures the price of a fixed basket of goods and services—excluding the volatile food and energy components—purchased by an average consumer.

Alpha is a coefficient measuring the risk-adjusted performance, considering the risk due to the specific security, rather than the overall market. A large alpha indicates that the stock or mutual fund has performed better than would be predicted given its beta (volatility).

Beta measures a security's or group of securities' (portfolio's) volatility relative to a benchmark. A result greater than 1.0 implies that the security or portfolio is more volatile than the benchmark; a result less than 1.0 suggests that the security or portfolio is less volatile than the benchmark. Betas may change over time.

Conference Board's Leading Economic Index (LEI) is a composite economic index designed to signal peaks and troughs in the business cycle. The leading economic index is essentially a composite average of several individual leading indicators. They are constructed to summarize and reveal common turning point patterns in economic data in a clearer and more convincing manner than any individual component—primarily because they smooth out some of the volatility of individual components.

Consumer Confidence Index® (CCI) is a barometer of the health of the U.S. economy from the perspective of the consumer. The index is based on consumers' perceptions of current business and employment conditions, as well as their expectations for six months hence regarding business conditions, employment, and income.

Markit Manufacturing Purchasing Managers Index (PMI) tracks manufacturing and service sector activity in the Eurozone. An Index value over 50 indicates expansion; below 50 indicates contraction. The values for the index can be between 0 and 100.

PMI Surveys, such as the **Eurozone Manufacturing PMI**, track sentiment among purchasing managers at manufacturing, construction and/or services firms. An overall sentiment index is generally calculated from the results of queries on production, orders, inventories, employment, prices, etc.

The Producer Price Index (PPI) program measures the average change over time in the selling prices received by domestic producers for their output.

The Market Volatility Index (VIX) is an index designed to track market volatility as an independent entity. The index is calculated based on option activity and is used as an indicator of investor sentiment, with high values implying pessimism and low values implying optimism.

Disclosures (Continued)

The Institute of Supply Management (ISM) **Manufacturing Index®** is a composite index based on the diffusion indexes of five of the indexes with equal weights: New Orders (seasonally adjusted), Production (seasonally adjusted), Employment (seasonally adjusted), Supplier Deliveries (seasonally adjusted), and Inventories. An Index values over 50 indicate expansion; below 50 indicates contraction. The values for the index can be between 0 and 100.

The U.S. Dollar Index (USDX, DXY) is an index (or measure) of the value of the United States dollar relative to a basket of foreign currencies, often referred to as a basket of U.S. trade partners' currencies.

Real economic growth is the change in the gross domestic product (GDP) adjusted for inflation—that is, the volume of services and goods produced in the United States.

West Texas Intermediate Crude Oil is a light, sweet (i.e., low sulfur) crude oil which is the main type of U.S. crude oil traded in U.S. futures markets.

Brent Crude Oil is a light, sweet crude oil extracted from the North Sea. It serves as a major benchmark price for purchases of oil worldwide.

Bond credit rating. A grade given to bonds that indicates their credit quality. Private independent rating services such as Standard & Poor's, Moody's and Fitch provide these evaluations of a bond issuer's financial strength, or its the ability to pay a bond's principal and interest in a timely fashion. The general meaning of these credit rating opinions are as follows:

AAA—Extremely strong capacity to meet financial commitments. Highest Rating.

AA—Very strong capacity to meet financial commitments.

A—Strong capacity to meet financial commitments, but somewhat susceptible to adverse economic conditions and changes in circumstances.

BBB—Adequate capacity to meet financial commitments, but more subject to adverse economic conditions.

Global Fixed Income Representative Indices

Global Multiverse Fixed Income: Bloomberg Barclays Multiverse Index provides a broad-based measure of the global fixed-income bond market. The index represents the union of the Global Aggregate Index and the Global High-Yield Index and captures investment grade and high yield securities in all eligible currencies. Standalone indices such as the Euro Floating-Rate ABS Index and the Chinese Aggregate Index are excluded. The Multiverse Index family includes a wide range of standard and customized sub-indices by sector, quality, maturity, and country. JP Morgan Global Ex United States Bond Index is a total return, market capitalization weighted index, rebalanced monthly consisting of the following countries: Australia, Germany, Spain, Belgium, Italy, Sweden, Canada, Japan, United Kingdom, Denmark, Netherlands, and France.

U.S. Inv Grade Taxable Fixed Income: Bloomberg Barclays U.S. Aggregate Bond Index is composed of the Bloomberg Barclays Capital U.S. Government/Credit Index and the Bloomberg Barclays Capital U.S. Mortgage-Backed Securities Index, and includes Treasury issues, agency issues, corporate bond issues, and mortgage-backed securities.

U.S. Treasury Bills Fixed Income: Bloomberg Barclays U.S. Treasury Bills includes all publicly issued zero-coupon U.S. Treasury Bills that have a remaining maturity of less than three months and more than one month, are rated investment grade, and have $250 million or more of outstanding face value. In addition, the securities must be denominated in U.S. dollars and must be fixed rate and non-convertible.

Short, Intermediate and Long Term Fixed Income: Bloomberg Barclays U.S. Aggregate Bond Index is made up of the Bloomberg Barclays U.S. Government/Corporate Bond Index, Mortgage-Backed Securities Index, and Asset-Backed Securities Index, including securities that are of investment grade quality or better, have at least one year to maturity, and have an outstanding par value of at least $100 million.

U.S. Treasury Fixed Income: Bloomberg Barclays U.S. Treasury Index includes public obligations of the U.S. Treasury with a remaining maturity of one year or more.

U.S. Corporate Fixed Income: Bloomberg Barclays U.S. Corporate Bond Index includes publicly issued U.S. corporate and Yankee debentures and secured notes that meet specified maturity, liquidity, and quality requirements.

U.S. Municipal Fixed Income: Bloomberg Barclays U.S. Municipal Bond Index represents municipal bonds with a minimum credit rating of at least Baa, an outstanding par value of at least $3 million, and a remaining maturity of at least one year. The Index excludes taxable municipal bonds, bonds with floating rates, derivatives, and certificates of participation.

U.S. TIPS Fixed Income: Bloomberg Barclays Treasury Inflation Protected Securities (TIPS) Index includes all publicly issued, investment-grade U.S. TIPS with an outstanding face value of more than $250 million and that have at least one year to maturity.

U.S. High Yield Fixed Income: Bloomberg Barclays U.S. High Yield Bond Index is an unmanaged index that tracks the performance of below investment grade U.S.-dollar-denominated corporate bonds publicly issued in the U.S. domestic market.

Developed ex. U.S. Fixed Income: JPMorgan GBI Global ex-U.S. (Unhedged) in USD is an unmanaged index market representative of the total return performance in U.S. dollars on an unhedged basis of major non-U.S. bond markets.

Emerging Market Spread: Bloomberg Barclays EM USD Aggregate Index is a flagship hard currency Emerging Markets debt benchmark that includes USD denominated debt from sovereign, quasi-sovereign, and corporate EM issuers. The index is broad-based in its coverage by sector and by country, and reflects the evolution of EM benchmarking from traditional sovereign bond indices to Aggregate-style benchmarks that are more representative of the EM investment choice set. Country eligibility and classification as an Emerging Market is rules-based and reviewed on an annual basis using World Bank income group and International Monetary Fund (IMF) country classifications. This index was previously called the Bloomberg Barclays U.S. EM Index and history is available back to 1993.

Emerging Market Bond (U.S. Dollar): JP Morgan Emerging Markets Bond Index (EMBI Global) currently covers 27 emerging market countries. Included in the EMBI Global are U.S.-dollar-denominated Brady bonds, Eurobonds, traded loans, and local market debt instruments issued by sovereign and quasi-sovereign entities.

Preferred Stock: S&P Preferred Stock is an unmanaged index consisting of U.S.-listed preferred stocks.

U.S. Dollar Index (USDX) measures the value of the U.S. dollar relative to majority of its most significant trading partners. This index is similar to other trade-weighted indexes, which also use the exchange rates from the same major currencies.

Global Equity Representative Indices

Global Market Equity: MSCI AC World Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets. The Index consists of 46 country indices comprising 23 developed and 23 emerging market country indices. The developed market country indices included are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, United Kingdom, and the United States. The emerging market country indices included are: Argentina, Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Israel, Korea, Malaysia, Mexico, Morocco, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Thailand, and Turkey.

Dow Jones Industrial Average is a price-weighted index of 30 “blue-chip” industrial U.S. stocks.

NASDAQ Composite Index measures the market value of all domestic and foreign common stocks, representing a wide array of more than 5,000 companies, listed on the NASDAQ Stock Market.

Large Cap Equity: S&P 500 Index is a capitalization-weighted index calculated on a total return basis with dividends reinvested. The index includes 500 widely held U.S. market industrial, utility, transportation, and financial companies.

Large Cap Equity (Growth): Russell 1000® Growth Index measures the performance of those Russell 1000® companies with higher price-to-book ratios and higher forecasted growth values.

Large Cap Equity (Value): Russell 1000® Value Index measures the performance of those Russell 1000® companies with lower price-to-book ratios and lower forecasted growth values.

Mid Cap Equity: Russell Midcap® Index measures the performance of the 800 smallest companies in the Russell 1000® Index, which represent approximately 25% of the total market capitalization of the Russell 1000® Index.

Small Cap Equity: Russell 2000® Index measures the performance of the 2,000 smallest companies in the Russell 3000® Index, which represents approximately 8% of the total market capitalization of the Russell 3000® Index.

Developed Market ex. U.S. Equity: MSCI EAFE Index (Europe, Australasia, Far East) is a free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the U.S. and Canada. The Index consists of the following 21 developed market country indexes: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, and the United Kingdom.

Emerging Markets: MSCI Emerging Markets Index is a free float-adjusted market capitalization index that is designed to measure equity market performance of emerging markets. The MSCI Emerging Markets Index consists of the following 23 emerging market country indexes: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkey, and United Arab Emirates.

Frontier Market Equity: MSCI Frontier Markets Index is a free float-adjusted market capitalization index that is designed to measure equity market performance of frontier markets. The MSCI Frontier Markets Index consists of the following 24 frontier market country indexes: Argentina, Bahrain, Bangladesh, Bulgaria, Croatia, Estonia, Jordan, Kenya, Kuwait, Lebanon, Lithuania, Morocco, Kazakhstan, Mauritius, Nigeria, Oman, Pakistan, Romania, Serbia, Slovenia, Sri Lanka, Tunisia, Ukraine, and Vietnam. The MSCI Saudi Arabia Index is currently not included in the MSCI Frontier Markets Index but is part of the MSCI Gulf Cooperation Council (GCC) Countries Index. The MSCI Bosnia Herzegovina Index, the MSCI Botswana Index, the MSCI Ghana Index, the MSCI Jamaica Index, the MSCI Palestine IMI, the MSCI Trinidad & Tobago Index, and the MSCI Zimbabwe Index are currently stand-alone country indexes and are not included in the MSCI Frontier Markets Index. The addition of these country indexes to the MSCI Frontier Markets Index is under consideration.

Disclosures (Continued)

Global Real Assets Representative Indices

Global REITs: FTSE EPRA/NAREIT Developed Index is designed to track the performance of listed real-estate companies and REITs in developed countries worldwide.

Domestic REITs: FTSE NAREIT U.S. All Equity REITs Index is designed to track the performance of REITs representing equity interests in (as opposed to mortgages on) properties. It represents all tax-qualified REITs with more than 50% of total assets in qualifying real estate assets, other than mortgages secured by real property that also meet minimum size and liquidity criteria.

International REITs: FTSE EPRA/NAREIT Developed ex-U.S. Index is designed to track the performance of listed real estate companies in developed countries worldwide other than the United States.

MLPs: Alerian MLP Index is a composite of the 50 most prominent energy Master Limited Partnerships (MLPs) that provides investors with an unbiased, comprehensive benchmark for this emerging asset class. The index, which is calculated using a float-adjusted, capitalization-weighted methodology, is disseminated real-time on a price-return basis and on a total-return basis.

Commodities (S&P GSCI): S&P Goldman Sachs Commodity Index is a trade-weighted index of commodity sector returns representing unleveraged, long-only investment in commodity futures that is broadly diversified across the spectrum of commodities. The index includes futures contracts on 24 physical commodities, of which Energy represents nearly 70%.

Commodities (BCOM): Bloomberg Commodity Index represents futures contracts on 19 physical commodities. No related group of commodities (e.g., energy, precious metals, livestock and grains) may constitute more than 33% of the index as of the annual reweighing of the components. No single commodity may constitute less than 2% of the index.

Commodities (RICI): The Rogers International Commodity Index is a U.S. dollar based index representing the value of a basket of commodities consumed in the global economy. Representing futures contracts on 37 physical commodities, it is designed to track prices of raw materials not just in the U.S. but around the world.

Global Alternative Investments Representative Indices

Global Hedge Funds: HFRI Fund Weighted Composite Index. A global, equal-weighted index of over 2,000 single-manager funds that report to HFR Database. Constituent funds report monthly net-of-all-fees performance in U.S. Dollars and have a minimum of $50 million under management or a 12-month track record of active performance. The HFRI Fund Weighted Composite Index does not include Funds of Hedge Funds.

Relative Value Arbitrage: HFRI Relative Value (Total) Index. Strategy is predicated on realization of a valuation discrepancy in the relationship between multiple securities. Managers employ a variety of fundamental and quantitative techniques to establish investment theses, and security types range broadly across equity, fixed income, derivative, or other security types. Fixed income strategies are typically quantitatively driven to measure the existing relationship between instruments and, in some cases, identify attractive positions in which the risk adjusted spread between these instruments represents an attractive opportunity for the investment manager. RV position may be involved in corporate transactions also, but as opposed to ED exposures, the investment thesis is predicated on realization of a pricing discrepancy between related securities, as opposed to the outcome of the corporate transaction.

Arbitrage: HFRI RV: Fixed Income Sovereign Index. Includes strategies predicated on realization of a spread between related instruments in which one or multiple components of the spread is a sovereign fixed income instrument. Strategies employ an investment process designed to isolate attractive opportunities between a variety of fixed income instruments, typically realizing an attractive spread between multiple sovereign bonds or between a corporate and risk-free government bond. Fixed Income Sovereign typically employ multiple investment processes including both quantitative and fundamental discretionary approaches and relative to other Relative Value Arbitrage sub-strategies, these have the most significant top-down macro influences, relative to the more idiosyncratic fundamental approaches employed.

Long/Short Credit: HFRI RV: Fixed Income—Corporate Index. Includes strategies predicated on realization of a spread between related instruments in which one or multiple components of the spread is a corporate fixed-income instrument. Strategies are designed to isolate attractive opportunities between a variety of fixed income instruments, typically realizing an attractive spread between multiple corporate bonds or between a corporate and risk-free government bond. They typically involve arbitrage positions with little or no net credit market exposure, but are predicated on specific, anticipated idiosyncratic developments.

Disclosures (Continued)

Structured Credit/Asset Backed: HFRI RV: Fixed Income—Asset Backed Index. Includes strategies predicated on realization of a spread between related instruments in which one or multiple components of the spread is a fixed-income instrument backed by physical collateral or other financial obligations (loans, credit cards) other than those of a specific corporation. Strategies are designed to isolate attractive opportunities between a variety of fixed income instruments specifically securitized by collateral commitments, which frequently include loans, pools and portfolios of loans, receivables, real estate, machinery, or other tangible financial commitments. Investment thesis may be predicated on an attractive spread given the nature and quality of the collateral, the liquidity characteristics of the underlying instruments and on issuance and trends in collateralized fixed-income instruments, broadly speaking. In many cases, investment managers hedge, limit, or offset interest-rate exposure in the interest of isolating the risk of the position to strictly the disparity between the yield of the instrument and that of the lower-risk instruments.

Macro: HFRI Macro (Total) Index. Encompass a broad range of strategies predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard-currency, and commodity markets. Managers employ a variety of techniques, both discretionary and systematic analysis, combinations of top-down and bottom-up theses, quantitative and fundamental approaches and long- and short-term holding periods. Although some strategies employ RV techniques, Macro strategies are distinct from RV strategies in that the primary investment thesis is predicated on predicted or future movements in the underlying instruments rather than on realization of a valuation discrepancy between securities. In a similar way, while both Macro and equity hedge managers may hold equity securities, the overriding investment thesis is predicated on the impact movements in underlying macroeconomic variables may have on security prices, as opposed to EH, in which the fundamental characteristics on the company are the most significant are integral to investment thesis.

Systematic Macro: HFRI Macro: Systematic Diversified Index. Diversified strategies employing mathematical, algorithmic and technical models, with little or no influence of individuals over the portfolio positioning. Strategies are designed to identify opportunities in markets exhibiting trending or momentum characteristics across individual instruments or asset classes. Strategies typically employ quantitative processes which focus on statistically robust or technical patterns in the return series of the asset, and they typically focus on highly liquid instruments and maintain shorter holding periods than either discretionary or mean-reverting strategies. Although some strategies seek to employ counter-trend models, strategies benefit most from an environment characterized by persistent, discernible trending behavior. Typically have no greater than 35% of portfolio in either dedicated currency or commodity exposures over a given market cycle.

Discretionary Macro: HFRI Macro: Discretionary Thematic Index. Strategies primarily rely on the evaluation of market data, relationships and influences, as interpreted by individuals who make decisions on portfolio positions; strategies employ an investment process most heavily influenced by top-down analysis of macroeconomic variables. Investment Managers may trade actively in developed and emerging markets, focusing on both absolute and relative levels on equity markets, interest rates/fixed income markets, currency and commodity markets; they frequently employ spread trades to isolate a differential between instrument identified by the Investment Manager as being inconsistent with expected value. Portfolio positions typically are predicated on the evolution of investment themes the Manager expects to develop over a relevant time frame, which in many cases contain contrarian or volatility-focused components.

Event Driven: HFRI Event Driven (Total) Index. Maintains positions in companies currently or prospectively involved in corporate transactions of a wide variety including mergers, restructurings, financial distress, tender offers, shareholder buybacks, debt exchanges, security issuance or other capital structure adjustments. Security types can range from most senior in the capital structure to most junior or subordinated and frequently involve additional derivative securities. Exposure includes a combination of sensitivities to equity markets, credit markets and idiosyncratic, company-specific developments. Investment theses are typically predicated on fundamental (as opposed to quantitative) characteristics, with the realization of the thesis predicated on a specific development exogenous to the existing capital structure.

Activist: HFRI ED: Activist Index. Strategies may obtain or attempt to obtain representation on the company's board of directors in an effort to impact the firm's policies or strategic direction and in some cases, may advocate activities such as division or asset sales, partial or complete corporate divestiture, dividends or share buybacks, and changes in management. Strategies employ an investment process primarily focused on opportunities in equity and equity-related instruments of companies that are currently or prospectively engaged in a corporate transaction, security issuance/repurchase, asset sales, division spin-off, or another catalyst-oriented situation. These involve both announced transactions and situations in which no formal announcement is expected to occur. Activist strategies would expect to have greater than 50% of the portfolio in activist positions, as described.

Disclosures (Continued)

Distressed Credit: HFRI ED: Distressed/Restructuring Index. Strategies focus on corporate fixed-income instruments, primarily corporate credit instruments of companies trading at significant discounts to their value at issuance or obliged (par value) at maturity as a result of either formal bankruptcy proceedings or financial-market perception of near-term proceedings. Managers are typically actively involved with the management of these companies; they are frequently involved on creditors' committees in negotiating the exchange of securities for alternative obligations, either swaps of debt, equity or hybrid securities. Managers employ fundamental credit processes focused on valuation and asset coverage of securities of distressed firms; in most cases portfolio exposures are concentrated in instruments that are publicly traded, in some cases actively and in others under reduced liquidity but in general for which a reasonable public market exists. Strategies employ primarily debt (greater than 60%) but also may maintain related equity exposure.

Merger Arbitrage: HFRI ED: Merger Arbitrage Index. Strategies primarily focus on opportunities in equity and equity-related instruments of companies that are currently engaged in a corporate transaction. Merger Arbitrage involves primarily announced transactions, typically with limited or no exposure to situations in which no formal announcement is expected to occur. Opportunities are frequently presented in cross-border, collared, and international transactions that incorporate multiple geographic regulatory institutions, typically with minimal exposure to corporate credits. Strategies typically have over 75% of positions in announced transactions over a given market cycle.

Equity Hedge: HFRI Equity Hedge (Total) Index. Equity Hedge Investment Managers who maintain positions both long and short in primarily equity and equity derivative securities. A wide variety of investment processes can be employed to arrive at an investment decision, including both quantitative and fundamental techniques; strategies can be broadly diversified or narrowly focused on specific sectors and can range broadly in terms of levels of net exposure, leverage employed, holding period, concentrations of market capitalizations and valuation ranges of typical portfolios. EH managers would typically maintain at least 50% exposure to, and may in some cases be entirely invested in, equities, both long and short.

Directional Equity: HFRX EH: Multi-Strategy Index. Managers maintain positions both long and short in primarily equity and equity-derivative securities. A wide variety of investment processes can be employed to arrive at an investment decision, including both quantitative and fundamental techniques; strategies can be broadly diversified or narrowly focused on specific sectors and can range broadly in terms of levels of net exposure, leverage, holding period, concentrations of market capitalizations, and valuation ranges of typical portfolios. Managers typically do not maintain more than 50% exposure to any one Equity Hedge sub-strategy.

Equity Market Neutral: HFRI EH: Equity Market Neutral Index. Strategies employ sophisticated quantitative techniques to analyze price data to ascertain information about future price movement and relationships between securities. These can include both Factor-based and Statistical Arbitrage/Trading strategies. Factor-based investment strategies include strategies predicated on the systematic analysis of common relationships between securities. In many cases, portfolios are constructed to be neutral to one or multiple variables, such as broader equity markets in dollar or beta terms, and leverage is frequently employed to enhance the return profile of the positions identified. Statistical Arbitrage/Trading strategies consist of strategies predicated on exploiting pricing anomalies which may occur as a function of expected mean reversion inherent in security prices; high-frequency techniques may be employed; trading strategies may also be based on technical analysis or designed opportunistically to exploit new information that the investment manager believes has not been fully, completely, or accurately discounted into current security prices. Strategies typically maintain characteristic net equity market exposure no greater than 10% long or short.

Cambridge Associates LLC U.S. Private Equity Index® is an end-to-end calculation based on data compiled from 1,152 U.S. private equity funds (buyout, growth equity, private equity energy and mezzanine funds), including fully liquidated partnerships, formed between 1986 and 2014. Pooled end-to-end return, net of fees, expenses, and carried interest. The latest published returns data are as of September 30, 2014.

Note: While the HFRI Indices are frequently used, they have limitations (some of which are typical of other widely used indices). These limitations include survivorship bias (the returns of the indices may not be representative of all the hedge funds in the universe because of the tendency of lower performing funds to leave the index); heterogeneity (not all hedge funds are alike or comparable to one another, and the index may not accurately reflect the performance of a described style); and limited data (many hedge funds do not report to indices, and, therefore, the index may omit funds, the inclusion of which might significantly affect the performance shown. The HFRI Indices are based on information hedge fund managers decide on their own, at any time, whether or not they want to provide, or continue to provide, information to HFR Asset Management, L.L.C. Results for funds that go out of business are included in the index until the date that they cease operations. Therefore, these indices may not be complete or accurate representations of the hedge fund universe, and may be biased in several ways. Returns of the underlying hedge funds are net of fees and are denominated in USD.

Citations

[1] MSCI ACWI captures all sources of equity returns in 23 developed and 24 emerging markets. https://www.msci.com/market-cap-weighted-indexes

[2] For example, the U.S. Federal Reserve in the latest FOMC statement (November 8, 2018), used the word strong, stronger, or strengthening four times in the first paragraph alone.

[3] https://en.wikipedia.org/wiki/List_of_cognitive_biases. Accessed October 10, 2018.

[4] FRED Economic Research, Federal Reserve Bank of St. Louis. https://fred.stlouisfed.org/series/MORTGAGE30US

Disclaimers

Abbot Downing, a Wells Fargo business, provides products and services through Wells Fargo Bank, N.A. and its various affiliates and subsidiaries. Wells Fargo Bank, N.A. is a bank affiliate of Wells Fargo & Company.

Global Investment Strategy (GIS) is a division of Wells Fargo Investment Institute, Inc. (WFII). The Institute is a registered investment adviser and wholly-owned subsidiary of Wells Fargo & Company and provides investment advice to Wells Fargo Bank, N.A., Wells Fargo Advisors and other Wells Fargo affiliates. Wells Fargo Bank, N.A. is a bank affiliate of Wells Fargo & Company.

The information in this report was prepared by Abbot Downing and the Global Investment Strategy division of WFII.

Opinions represent WFII and Abbot Downing opinions as of the date of this report and are for general informational purposes only and are not intended to predict or guarantee the future performance of any individual security, market sector, or the markets generally. GIS and Abbot Downing do not undertake to advise you of any change in its opinions or the information contained in this report. Wells Fargo & Company affiliates may issue reports or have opinions that are inconsistent with, and reach different conclusions from, this report.

This report is not an offer to buy or sell or a solicitation of an offer to buy or sell any securities mentioned. Do not use this report as the sole basis for investment decisions. Do not select an asset class or investment product based on performance alone.

Consider all relevant information, including your existing portfolio, investment objectives, risk tolerance, liquidity needs, and investment time horizon. Your actual portfolio allocation may differ from the strategic and dynamic allocations reflected in this report.

Wells Fargo Advisors is registered with the U.S. Securities Exchange Commission and the Financial Industry Regulatory Authority, but is not licensed or registered with any financial services regulatory authority outside of the U.S. Non-U.S. residents who maintain U.S.-based financial services account(s) with Wells Fargo Advisors may not be afforded certain protections conferred by legislation and regulations in their country of residence in respect of any investments, investment transactions, or communications made with Wells Fargo Advisors.

Wells Fargo Wealth and Investment Management (WIM) is a division within Wells Fargo & Company. WIM provides financial products and services through various banking and brokerage affiliates of Wells Fargo & Company.

Brokerage products and services are offered through Wells Fargo Advisors. Wells Fargo Advisors is the trade name used by two separate registered broker-dealers: Wells Fargo Advisors, LLC and Wells Fargo Advisors Financial Network, LLC, Members SIPC, non-bank affiliates of Wells Fargo & Company.

Additional information is available upon request.

Abbot Downing does not provide legal advice. Please consult your legal and tax advisors to determine how this information may apply to your own situation. Whether any planned tax result is realized by you depends on the specific facts of your own situation at the time your taxes are prepared.