

▶ Market Overview 1Q 2017

Be Prepared

I. MARKET REVIEW

Global Equity Markets

Global equities extended the year-end Trump rally with fresh support coming from hints of improving European economic conditions, apparent stability in China and a general sense the global economy has shrugged off the deflation threat that spooked markets last year. Analysts also viewed March's Dutch election result as a rejection of populism and potential sign of European political stability. Nevertheless, upcoming elections in France and Germany and a restless Italy struggling with an impaired banking system, sub-1% economic growth and unfocused populist sentiment all have potential to deliver political earthquakes to the eurozone project this year.

In local currencies, the MSCI EAFE developed market index rose 4.8%, the S&P 500 advanced 6.1% and European equities gained about 6.3%. Japan was a relative laggard, returning 0.0% in yen. Emerging markets had a strong quarter as the MSCI Emerging Markets Index jumped about 7.8% in local currencies; both China and India gained over 12%, reversing Q4's weakness, while Brazil rose 7.7%. The MSCI All Country World ex-U.S. Index (ACWI ex-U.S.), a global index containing developed and emerging markets, gained 5.3% in local currencies.

The U.S. dollar, which has risen about 25% over the past five years, gave back some of its post-election surge and weakened slightly during the quarter; this enhanced international returns for U.S. dollar-based investors. The MSCI ACWI ex-U.S. returned 8.0% in U.S. dollars, emerging markets gained 11.5% and the developed-market MSCI EAFE gained 7.4%. Italy, Germany and France each gained 6% to 8% while Spain returned almost 15%. Euro-based global investors with U.S. equity exposure saw returns eroded slightly by the dollar's downward drift; the MSCI All-Country World All-Cap Index gained 5.5% in euros.

In the U.S., the Trump rally continued in January and February but faded in March as the Republican's failure to repeal Obamacare raised doubts about President Trump's ability to implement his plans for aggressive infrastructure spending, tax cuts and



Summary

- Global equities extended 2016's rally in Q1 2017 posting mid single-digit gains. Global economic growth appeared to firm slightly. Investors remained optimistic that the recent corporate profits recession has ended and expect strong earnings growth in 2017.
- The U.S. Federal Reserve in mid-March raised the federal funds target 25 basis points to a range of 0.75% to 1%, its second hike since December 2015. Global government bond yields drifted sideways in Q1 after jumping higher in late 2016. Credit spreads in the U.S. were little changed while spreads in Europe were marginally tighter, preserving in both regions a year-long narrowing trend.
- Markets seem elevated and overdue for a correction, central banks are examining ways to taper and exit from multi-year QE programs, the Fed is trying to raise rates and populist politics still have potential to shake markets. We can't predict if a downturn is imminent, but we believe disciplined rebalancing is the best way to prepare for whatever the markets deliver.

deregulation. Europe, however, extended its late-2016 rally through March on improving economic sentiment; a March survey of European purchasing managers showed the strongest readings in six years and analysts are boosting 2017 earnings estimates for European companies.

In the U.S., information technology led S&P 500 sector returns with a 12.5% gain. All seven constituent industries showed strength but sector heavyweight Apple (which alone accounts for 16% of the sector by weight) gained 25%. Healthcare, consumer staples, consumer discretionary and utilities all returned 6% to 8%. Energy lagged all sectors with a 7% decline; oil prices drifted sideways before closing the quarter at \$50/barrel down from \$54 as the year began. Financials gained only 2.5% as hopes for higher interest rates, which would generally support sector profitability, faded and yields drifted sideways during the quarter. Telecom (-4.0%) and real estate (+3.6%) also lagged. Information technology led developed market sector returns as well, gaining about 12% (in U.S. dollars) in the MSCI EAFE Index, followed by 8% to 9% gains from industrials, healthcare and consumer staples. Energy (-1.8%) was the only EAFE sector that declined. The Russell 1000 Growth Index (+8.9%) outgained the Russell 1000 Value Index (+3.3%) on the strength of information technology and consumer discretionary exposure and avoidance of nearly all the value benchmark's 12% energy sector weight; energy declined 7% in the value index.

The first quarter capped what turned out to be a surprisingly strong trailing 12 months for stocks. Worries about China's slowing economy, plunging world oil prices and fears of a global economic downturn and deflation caused a 10% market sell-off through February of 2016; markets were then rescued by an outpouring of coordinated support from global central banks. The S&P 500 gained 17.2% for the period, the Russell 1000 Value Index gained 19.2% and the Russell 1000 Growth Index

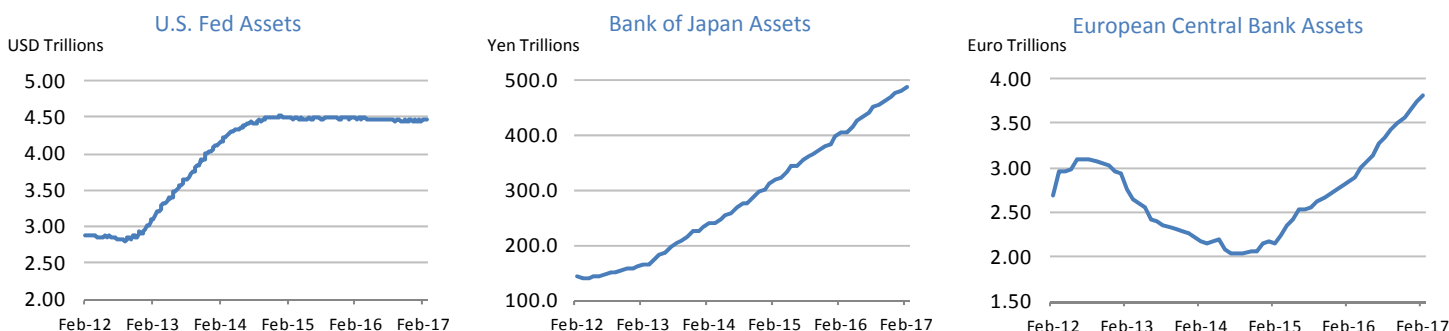
jumped 15.8%. Global developed markets (MSCI EAFE) gained 19.5% in euros (12.2% in U.S. dollars) while emerging markets gained about 25% in euros (18% in U.S. dollars). In U.S. dollars, Brazil (+43.2%) and Russia (+28.5%) rebounded after multi-year declines while India (+18.4%) and China (19.9%) were also strong.

Global Fixed Income Markets

Global government bond yields drifted sideways in Q1 after jumping higher in late 2016. The 10-year U.S. Treasury yield held around 2.4% during the quarter; the German 10-year held around 0.3% to 0.4%; France firmed from 0.7% to 1.0%; the U.K. 10-year sovereign yield climbed to 1.5% before closing the quarter at 1.1%, about where it started; and Italy edged up from 1.8% to just over 2.0%. European government yields are up sharply from lows reached last summer when the German 10-year touched -0.2%, Italy 1.1%, France 0.1% and the U.K. 0.5%. Japan held above zero in Q1, rising as high as 0.10% before ending March at about 0.06%.

The U.S. Federal Reserve in mid-March raised the federal funds target 25 basis points to a range of 0.75% to 1%, its second hike since December 2015 and only the third in the past decade. In its published comments, the Fed noted that inflation continues to run below its 2% target, longer-term inflation expectations remain muted, and subsequent rate hikes will be gradual and dependent on favorable employment and inflation data and on financial and international developments. The Fed said it will continue reinvesting principal payments from mortgage-related holdings into agency mortgage-backed securities and rolling over maturing Treasuries until fed funds rate normalization is well under way. The outlook for several rate hikes this year seemed to fade slightly in Q1 as hints of a weak Q1 GDP reading emerged and global yields slid sideways.

I. THE TIDE IS HIGH: ECB and BOJ Continue Aggressive Liquidity Injections



Source: Board of Governors of the Federal Reserve System (US), European Central Bank, Bank of Japan, retrieved from FRED, Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org>

In Europe, on the other hand, the European Central Bank (ECB) at its early March meeting left its main refinancing and lending rates unchanged and confirmed its quantitative easing program will continue from March 2017 through the end of the year, but at a slightly reduced monthly purchase rate of 60 billion euros (down from 80 billion euros). Like the Fed, it will continue to reinvest principal payments from maturing securities. It also noted that key ECB interest rates are likely to remain at current or lower levels for an extended period of time and well after the end of its QE program.

The Bank of Japan in March also opted to maintain its aggressive QE program and its policy rate at -0.1% , citing the risk to the global economic outlook posed by Fed rate hikes. The Fed's commitment to roll-over maturing debt and maintain the size of its balance sheet is hardly a form of hard money. And combined ECB and BOJ asset purchases have pumped nearly \$150 billion of monthly liquidity into global markets. How markets will respond when central bank balance sheets shrink remains a wild card.

U.S. short-term government yields rose slightly with the Fed rate hike but Treasury bond yields and yield curve as a whole were little changed otherwise. Government bond yields drifting down five to 10 basis points, closing the quarter at 1.9%, 2.4% and 3.0% for the five-, 10-year and 30-year maturities, respectively. Credit spreads in the U.S. were little changed in Q1 while spreads in Europe were marginally narrower, preserving in both regions a year-long narrowing trend. U.S. high-yield spreads in particular remained well below their range in January and February of 2016, when global growth fears and sharply falling oil prices rattled markets.

The Bloomberg Barclays U.S. Aggregate returned 0.8% for the quarter while mortgage-backed (MBS) and asset-backed (ABS) indices each returned about 0.5%. U.S. high-yield continued to lead bond index returns with a 2.7% gain. Investment-grade corporates returned 1.2% and mortgages returned 0.9%. On a duration-adjusted basis in the U.S. high-yield notably outperformed other sectors, followed by Agencies and corporates, while the mortgage-backed (MBS) and commercial mortgage-backed (CMBS) indices lagged. The Bloomberg Barclays Global Aggregate in euros returned 0.4%; governments returned 0.7% while corporate credit returned 0.2%.

Despite the rate jump in 2016's final quarter, bond returns remained positive for the trailing year. The Bloomberg Barclays U.S. Aggregate Index returned 0.4%, investment-grade corpo-

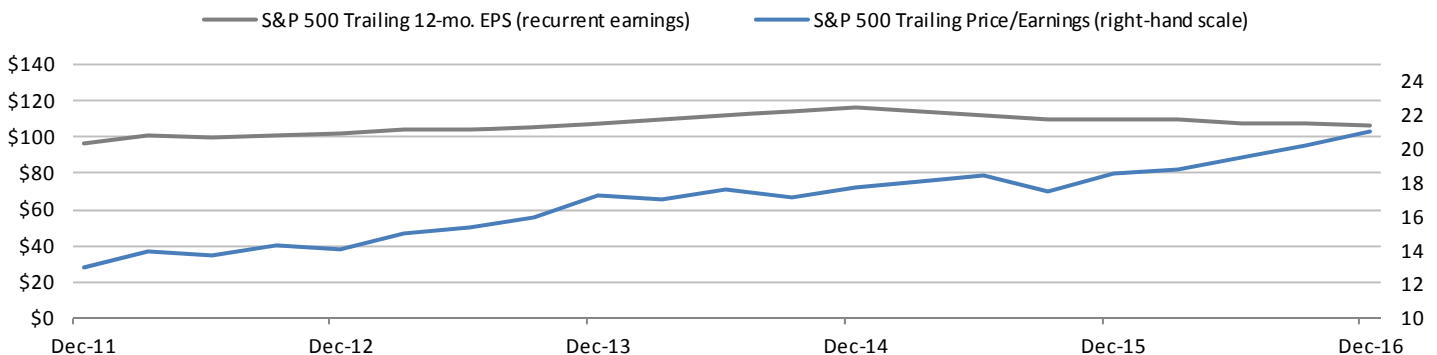
rates gained 3.3% and U.S. high-yield returned 16% (energy high-yield gained 36% for the year). The ABS Index returned 1.2% while MBS lagged, with a 0.2% return. The Global Aggregate (in euros) returned 4.5% for the trailing year; its Treasury Index component returned 3.0% while corporates returned nearly 8.0%. High-yield notably led duration-adjusted excess returns in the U.S. for the year, followed by corporates. The Agency, ABS and CMBS indices performed comparably while MBS lagged.

Global Economic Review

Optimism surrounding President Trump's economic agenda will have to contend over the near-term with continued tepid data; late February's second estimate of Q4 2016 real U.S. GDP was 1.9%, a slowdown from Q3's 3.5%. Economists' estimates for Q1 2017 real GDP averaged just below 2% as Q1 ended. While inflation measured by the consumer price index ex-food and energy has held slightly above 2% since early 2016, the Fed's preferred inflation measure, the personal consumption expenditure (PCE), remains below the Fed's 2% target rate. The many uncertainties surrounding the Trump administration's ability to pass its economic agenda make forecasts even more tenuous than usual, yet market ebullience since the election has not yet changed the consensus outlook for U.S. real GDP growth at only 2.3% in 2017 and 2.4% in 2018.

Europe's economic lethargy caused the ECB's December 2016 move to extend QE through year-end 2017, with a promise to raise monthly purchases if need be. Whether the ECB's dramatic balance sheet expansion since late 2014 is responsible is hard to say, but eurozone economic sentiment improved slightly during Q1 and the median real GDP estimate edged up to 1.6% for both 2017 and 2018 from 1.5% as 2016 ended. Pessimism about the U.K. economy after the Brexit vote also receded and the outlook for real growth in 2017 climbed to 1.6% in late March from 1.1% at year-end, although only 1.3% growth is expected in 2018. Japan's glacially slow pace of growth edged higher, reaching an estimated 1.0% in 2016 up from a 0.8% projection at year-end, with expectations shifting slightly up to 0.8% in 2017 and 2018 from 0.7% last quarter. Asia (ex Japan) remains the strongest global region, despite China's slowdown and potential property bubble (which has dogged its outlook for years, so far without much effect). While China's expected 6% growth over the next several years represents its slowest pace in decades, it's one of the world's strongest outlooks. India (despite

II. GREAT EXPECTATIONS: S&P 500 PE Expansion versus Actual Earnings Growth



Source: Factset

disruption from its move to restrict cash use) and the Philippines show consensus outlooks for 6%+ expansion and several other south Asian nations appear set for 3% to 4% expansion — yet these economies aren't large enough to pull the rest of the world along.

As we've noted in recent quarterly letters, the gap between weak earnings growth and strong stock prices seems unlikely to persist forever. As shown in Chart II, aggregate S&P 500 trailing 12-month earnings have been largely flat for five years; the recent energy industry recession is only a partial reason. Market gains have come from PE expansion driven by a combination of central bank QE, declining global yields and a seemingly indefatigable earnings optimism that has yet to buckle in the face of actual data. These trends may all be tested in 2017 if there's any hint that economic growth will disappoint and earnings expectations won't be met. Earnings optimism persists. S&P 500 earnings are set to rise 10% to 12% in both 2017 and 2018, according to analysts estimates at quarter-end. Corporate earnings in Europe are pegged to be up 18% in 2017 and 10% in 2018.

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II. BE PREPARED

Have you ever invested during a bear market? If you became an investment professional or fiduciary after 2008 your answer might be "no." That's a bit odd in the context of market history. For previous generations of investors, bull and bear market cycles were as regular as the seasons (although far more unpredictable, to be sure). It's been nearly a decade since the last bear market (defined as a market decline of 20%), whose proximate cause was the worst financial crisis since the 1930s. In that respect it was hardly a run-of-the-mill bear; it was decidedly

unique. As shown in Table III, you have to go back to 2002 to find another bear market; this one caused by the bursting 1990s tech bubble, which was another somewhat unusual event in the scope of market history. Markets fell about 20% in 1998 due to an emerging markets debt crisis and Federal Reserve bailout of global hedge fund Long-Term Capital Management (founded and run by Nobel prize-winning economists). The year 1990 and the crash of 1987 each produced near-20% declines, but like the 1998 downturn these lasted only months. In fact, only five bear markets have occurred in the 35 years since what many would call the birth of an epic secular bull market in August 1982. Even investors now late in their careers haven't seen very many bears. But the 20-year period from 1962 to 1982 produced six and the 15-year stretch from 1932 to 1957 produced eight. The propensity of central banks since the 1990s to bail out falling markets with rate cuts and asset purchases has made bear markets fewer and farther between. But it is unlikely central banks can abolish them forever.

A Near-Record Bull Run

As 2017's first quarter ended, the bull run since the March 2009 bottom had reached a near-record 97 months (based on Dow Jones Industrial Average Index data back to 1900), more than the 95-month 1990s bull run and only a month shy of the record 98 months achieved during the roaring 1920s and post-World War II 1950s economic expansions. If history is any guide, investors should be wary of betting on further enduring market gains from here and batten down their hatches for a messy downturn. Yet history may not be a very good guide to anything other than the difficulty of making market predictions.

III. BULL AND BEAR MARKETS SINCE 1900 (based on Dow Jones Industrial Average Index Daily Closing Prices)

<u>Bear Markets</u>				<u>Bull Markets</u>			
Date of Low	Low	Decline to Low	Bear Run (months)	Date of High	High	Gain to High	Bull Run (months)
				6/17/1901	57.33		
10/14/1903	31.08	-46%	28	1/19/1906	75.45	143%	28
11/15/1907	38.83	-49%	22	11/19/1909	73.64	90%	25
7/30/1914	52.32	-29%	57	11/21/1916	110.15	111%	28
12/19/1917	65.95	-40%	13	11/3/1919	119.62	81%	23
8/24/1921	63.90	-47%	22	9/3/1929	381.17	497%	98
7/8/1932	41.22	-89%	35	9/7/1932	79.93	94%	2
2/27/1933	50.16	-37%	6	7/18/1933	108.67	117%	5
10/21/1933	83.64	-23%	3	2/5/1934	110.74	32%	4
7/26/1934	85.51	-23%	6	3/6/1937	194.15	127%	32
3/31/1938	98.95	-49%	13	11/9/1938	158.08	60%	7
4/28/1942	92.92	-41%	42	5/29/1946	212.50	129%	50
6/13/1949	161.60	-24%	37	7/12/1957	520.77	222%	98
10/22/1957	419.79	-19%	3	11/15/1961	734.34	75%	50
6/26/1962	535.76	-27%	7	2/9/1966	995.15	86%	44
10/7/1966	744.32	-25%	8	12/3/1968	985.21	32%	26
5/26/1970	631.16	-36%	18	1/11/1973	1,051.70	67%	32
12/6/1974	577.60	-45%	23	9/21/1976	1,014.79	76%	22
2/28/1978	742.12	-27%	18	4/27/1981	1,024.05	38%	38
8/12/1982	776.92	-24%	16	8/25/1987	2,722.42	250%	61
10/19/1987	1,738.74	-36%	2	7/16/1990	2,999.75	73%	33
10/11/1990	2,365.10	-21%	3	7/17/1998	9,337.97	295%	95
8/31/1998	7,539.07	-19%	2	1/14/2000	11,722.98	55%	17
10/9/2002	7,286.27	-38%	33	10/9/2007	14,164.53	94%	61
3/9/2009	6,547.05	-54%	17	3/15/2017	20,902.58	219%	97
Average		-36%	18	Average		128%	41

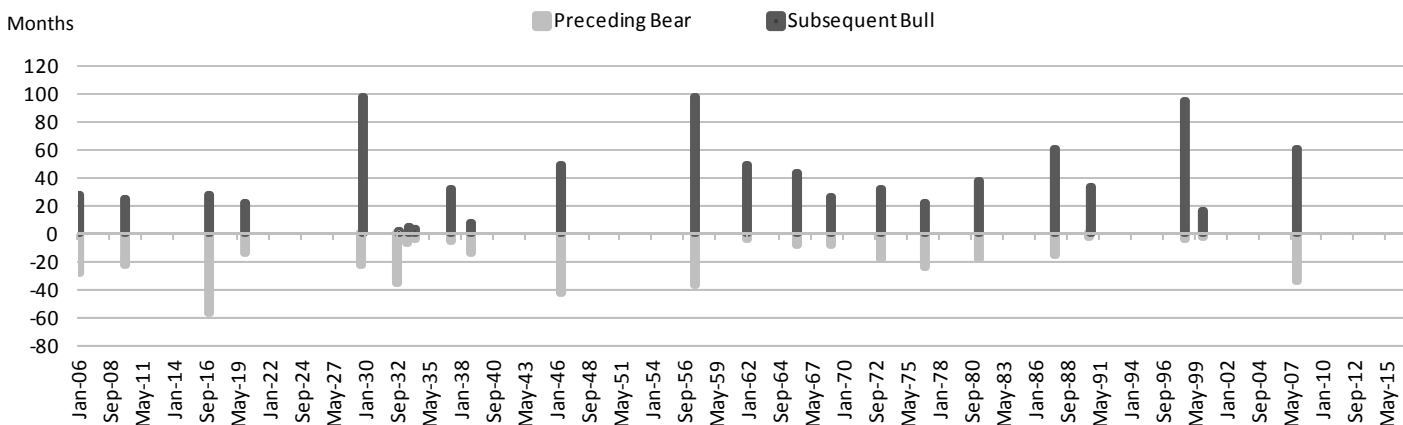
Source: MacroTrends / Note: There was a 25% decline and subsequent 29% gain associated with the 9/11/2001 terrorist attacks, but this was due to the shock of and recovery from the event. The pre-existing market downtrend resumed following the attack-related volatility.

The Challenge of Estimation

In fact, there have been only 24 complete market cycles since 1900; that's hardly a large enough number to permit rigorous statistical analysis. A further impediment to confident estimation is depicted in Chart IV; these cycles, and their bull and bear components, have varied dramatically in terms of length. Bull markets have generally lasted longer than bears, which in part has produced the stock market's approximate 7% compound average return over the period. But bull and bear market

lengths, measured in months, have varied wildly. And these erratic market moves have occurred across vastly different political-macroeconomic backdrops. The nation's dominant economic structures and growth industries have shifted radically over the course of these 117 years, from agriculture to manufacturing to services and to information technology. Monetary policy has evolved too. The U.S. Federal Reserve wasn't created until 1913 and its policy responses to economic weakness and financial market turmoil changed by the decade, first struggling

IV. BULL AND BEAR MARKET LENGTHS SINCE 1900



with the chaos of the 1929 crash and depression, and then evolving through a combination of politics, pragmatism, prevailing academic orthodoxy filtered through the personalities and temperaments of the institution’s leaders. Central banking has evolved, particularly since 2009, almost beyond recognition from the range of approaches common from the 1950s to the early 1990s. In terms of geopolitics, the 117-year period was marked by two world wars, by the Cold War from 1945 to the late 1980s, by the Vietnam War and its related inflation, and now by repeated wars in the Middle East, a global network of military bases and a permanently militarized war on terror. In the energy area, the 20th century was (until the 1970s) fueled by cheap oil. Then OPEC’s formation sponsored an inflationary oil price shock in the 1970s, its subsequent dissolution caused a corresponding rout in the 1980s. Oil has been range bound since, in inflation-adjusted terms, with periodic price booms and busts.

Each of the 24 market cycles since 1900, in fact, can be construed to have taken place against a unique set of historical circumstances, human actions, political decisions and events. “This time is different” is said to be one of the most dangerous phrases in market analysis, yet there’s a truth in it nevertheless. Each market cycle is different in many ways, but what never changes is human nature, the influence of greed and fear on stock prices, and the challenge of predicting when one will usurp the other as the dominant market sentiment.

It’s certainly hard to make accurate predictions based simply on history, yet the predictions we make based on forward-looking analysis of facts as we know them today also rarely have the accuracy we would wish. Human actions yet to be deter-

mined and decisions yet to be made shape the future, just as they did the past, and often in ways that are not only surprising but inherently unforeseeable.

Nevertheless, we shouldn’t give up on cultivating an informed analysis and awareness of the forces influencing global economics, global politics, central banking and markets. We need informed opinions and points of view on risks and opportunities; these help shape sober expectations. We shouldn’t be too surprised by market moves, remaining humble enough to know we can’t predict their timing with the consistency needed to assure long-term investment success.

Establishing a Rebalancing Policy

Developing a disciplined rebalancing policy and implementing it in a prudent manner is the best way to contend with a world of uncertainty. CBIS’ view here is a result of our broader investment philosophy. We believe in strategic asset allocation, not tactical asset allocation (TAA). TAA assumes the ability to time markets, consistently identifying turning points in investor sentiment and market trends as they influence the valuation of asset classes and investment styles within asset classes. We believe any success in such a venture as a product of luck rather than skill, inevitably temporary, and at its worst able to persuade a naive investor they possess special insight into market moves. That is the worst possible perspective to have when making investment decisions. Even when CBIS anticipates a market correction, we do not recommend that participants deviate from well-considered long-run asset allocation targets.

Participants should instead respond to market moves through disciplined rebalancing. Implementing a rebalancing

policy involves setting and systematically reviewing your portfolio structure, setting asset class and style target weights and making adjustments as necessary to bring drifting asset allocations back in line with long-term targets. The policy should include a periodic review of target weights to ensure that risk and return expectations remain aligned with your institution's investment objectives and short-term and long-term funding needs.

In the short term, allowing allocation weights to drift can boost performance by capturing the momentum of the highest returning asset classes. However, when a portfolio becomes concentrated in top-performing asset classes, it becomes vulnerable to a painful loss of value when they go out of favor. Disciplined rebalancing also positions a portfolio to benefit when out-of-favor asset classes rebound. Many portfolios, for example, became significantly underweight equities when the stock market plummeted during the financial crisis in late 2008 and early 2009. As difficult as it was at the time to buy stocks (as it seemed certain the market would continue its descent), it proved to be a wise move. Warren Buffet has quipped that he's fearful when others are greedy and greedy when others are fearful — disciplined rebalancing helps incorporate a bit of that wisdom into portfolio positioning.

Approaches to Rebalancing

There are two general approaches to rebalancing, which can also be used in combination:

1. **Time Rebalancing** — takes place at specific time intervals (e.g. monthly, quarterly or yearly). With time rebalancing, a portfolio may deviate significantly from its target allocation between time intervals.
2. **Range (Threshold) Rebalancing** — occurs when a portfolio's asset class weights deviate from target weights by a specified amount (e.g. +/-1, +/-5, +/-10 percentage points). With range rebalancing, a portfolio is not rebalanced until the threshold is met; as a result, a portfolio may not be rebalanced for an extended period of time.

Considering these strategies inevitably leads to the question: which is best? Analyses of long-term asset class returns show there is no optimal approach. Several years ago, Vanguard published a study that examined the results of different rebalancing strategies — with various time intervals (monthly, quar-

terly and annually) and thresholds (1%, 5%, and 10%) — for a 60% equity/40% fixed income portfolio, using historical return data for stocks and bonds from 1926 through 2009. The study concluded that long-term return and volatility were similar regardless of the strategy or combination of strategies used. However, all rebalancing strategies produced a clear advantage in terms of risk management when compared with a portfolio that was never rebalanced. In the never-rebalanced portfolio, equity exposure eventually reached almost 100%, subjecting the portfolio to significant volatility. The study also showed that too-frequent rebalancing can substantially increase a portfolio's turnover and transaction costs, but without improving its risk/return profile.

Factoring in Cash Flows

Portfolios experience cash flows, both positive and negative. In addition to establishing a formal rebalancing policy, organizations should consider using cash flows as a way to maintain the portfolio's target allocation. Cash deposits can be made to asset classes whose weights have declined. Withdrawals can be made from asset classes whose weights have increased. Using cash flows in this manner can help maintain target allocations. The ideal rebalancing approach should strike a balance between risk control and cost minimization. For most investors with diversified stock and bond portfolios, rebalancing based on a five percentage point threshold is sufficient.

CBIS Recommendation

CBIS suggests the following portfolio rebalancing parameters: +/- 5% for asset classes and +/- 2.5% for strategies within an asset class. These can be adjusted through discussion with the investment committee. Generally speaking, CBIS recommends against rebalancing "too often" before these parameters are reached because markets often demonstrate momentum. Moreover, we seek to incorporate the appropriate risk level for each individual pool of money for each participant as asset allocation targets are established; therefore, we recommend rebalancing only when the rebalancing parameters are reached (or are very close to being reached).

Avoiding Emotional Decisions

A disciplined rebalancing policy also offers an important qualitative benefit: it helps eliminate the subjectivity and emotion in the investment decision making process. It seems almost a law

of human nature that we overemphasize the importance of recent return trends, allowing our emotions to influence our judgment. This causes investors to chase momentum, which generally results in buying at the top of the market and selling at the bottom. Moreover, volatility and uncertainty can cause investors to second guess and try to time the markets. Rebalancing helps investors avoid buying high and selling low. It eliminates market timing, helps capture gains in strong-performing asset classes before they go out of favor, and forces the purchase of down-and-out asset classes when they seem unattractive but may offer a reasonably appealing risk/reward trade-off.

Markets seem elevated and overdue for a correction, global central banks are examining ways to taper and exit from multi-year QE programs, the Fed is trying to raise rates and populist politics still have potential to shake markets. We can't predict if a downturn is imminent or when the next bear will arrive, but we do know disciplined rebalancing is the best way to respond when it does. We believe it's the best way to be prepared for whatever the markets deliver. ■

Important Information

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