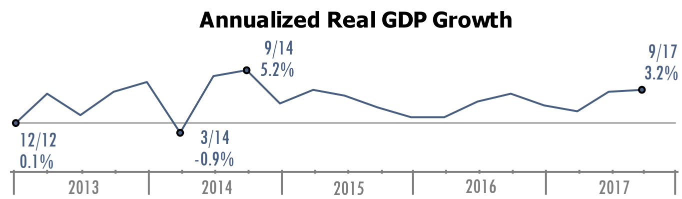
Bellwether CONSULTING

Your Quarterly Update on the Financial Markets
December 31, 2017

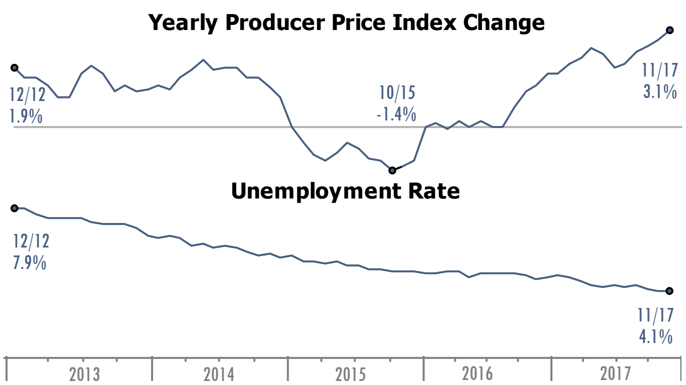
MARKET Recap

The US Economy: "Steady On"



The economy accelerated slightly in the third quarter on growth in personal consumption expenditures, private inventories, nonresidential fixed investment, government spending, and net exports. Representing a 2-quarter trend, the only significant negative contributor was residential fixed investment. It is unknown to what extent hurricanes Irma and Harvey impacted residential investment activity for the quarter. Incremental data from Q4 shows new houses sold surging to 733,000 in November, a post-crisis peak level. The median sales price also peaked in September before holding steady around $320,000.

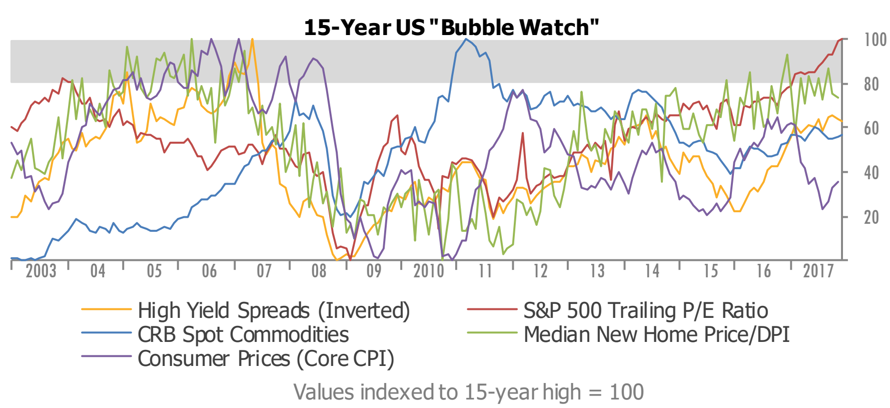
Similarly, buoyant indicators may be found for the manufacturing and service sectors. The PMI and NMI hit post-crisis peaks in September and October, respectively; refer to recent past issues for more information on these widely-followed indicators of economic activity. Unemployment fell to 4.1%, the lowest level since July of 2000. The Conference Board's Index of Leading Economic Indicators surged 1.2% in October following a more tepid September reading, possibly impacted by storm activity, and remained positive for November. In fact, the index grew for each month of 2017. Overall it was a solid year for the economy by most measures.



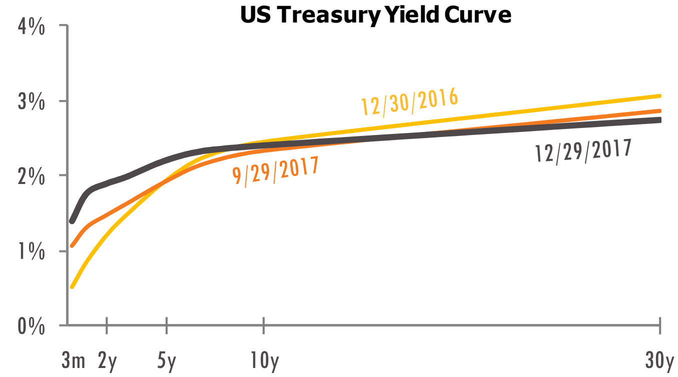
Headline inflation ticked up to 2.2% in November, driven in part by firming commodity prices, while the Producer Price Index continued its upward climb for the second half of 2017. The PPI is impacted more directly by commodity prices than is its consumer price counterpart; to some extent, it functions as a leading indicator of consumer price inflation in that businesses will eventually try to pass along rising input prices. During her press conference following the December 12-13 Federal Open Market Committee Meeting, outgoing Chairman Yellen remarked that "We continue to believe that this year's surprising softness in inflation primarily reflects transitory developments that are largely unrelated to broader economic conditions." Historically she has tended to use the term "transitory" to describe the decline in commodity prices, which have generally firmed in 2017, but have yet to have a meaningful impact on core consumer prices. She also expressed mild surprise at the strength of the labor market, which modestly exceeded expectations in terms of overall employment levels and the breadth and quality of employment.

With so many economic indicators reaching post-crisis peaks, low levels of inflation remain puzzling to some. Since 2007, capital has flowed to things we own, as opposed to things we consume. Relative to pre-crisis levels, it is equities – such as houses and stocks – that have risen most substantially in price. Stocks are priced at a 15-year peak relative to trailing earnings, and home prices are approaching peak values relative to disposable personal income. Credit, commodities, and consumer goods & services remain well below their peak price levels.

Since equities are where the value is, that is where the risk lies. Elevated equity prices need support from nominal earnings growth for businesses and households or, ultimately, they will decline. Deficit-financed tax reform may help both measures in the near-term (by increasing median post-tax earnings and DPI). Real growth and inflation would be more sustainable sources of price support.



The US Bond Market

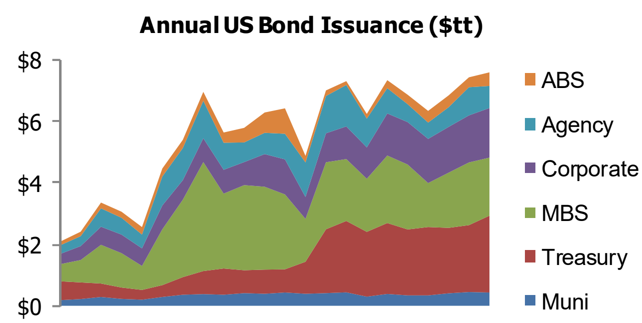


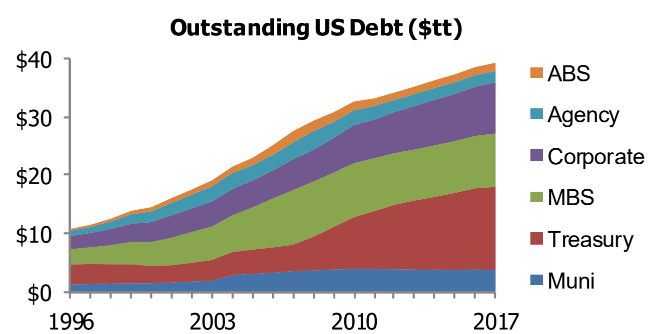
Overnight rates ticked up one quarter percent in response to the Fed's December rate hike. The Fed now targets an overnight lending rate in the range of 1.25% - 1.50%. More interesting, to some, may be the changes in shape exhibited by the yield curve beyond the 1-year key rate. Since last year, the curve is visibly flatter, particularly between maturities of 1 to 5 years. During this period, the curve has pivoted about the 10-year mark. In contrast, during the first three quarters of 2017 rates had pivoted around the 5-year tenor. The yield on 1-year Treasuries increased the most quarter-over-quarter, moving 45 basis points to settle at 1.76%. The 10-year rate was more stable, rangebound within 2.25% to 2.50%, as it had been throughout most of 2017. The 10-year rate ended the year at 2.40%, up 7 basis points in the fourth quarter. Meanwhile, the spread between the 10-year and long bond tightened by 20 bps, closing the year at a mere 34 bps. Similar to the US Treasury nominal yield curve, the US TIPS real yield curve also flattened around the 10-year key rate.

US Bond Indices - Total Returns		
Blmbg Barclays	**4Q17**	**2017**
Aggregate	0.39%	3.54%
Short Gov't	0.05%	0.66%
Interm. Gov't	-0.40%	1.14%
Long Gov't	2.34%	8.53%
TIPS	1.26%	3.01%
Municipal	0.75%	5.45%
Interm. Credit	0.11%	3.67%
Long Credit	3.18%	12.21%
High Yield	0.47%	7.50%
MBS	0.15%	2.47%

Aside from this past September, the Fed has hiked overnight rates 25 basis points toward the end of each of the past 5 quarters. The fed funds futures market expects less action in the coming 12 months, pricing in just 2 hikes for 2018. Rising short-term rates serve as an obvious headwind for fixed income securities, but a challenge that is far from insurmountable, as evidenced by the 2017 returns for US bond benchmark indices. Starting the new year at higher yields and with expectations for a more gradual rise in rates throughout 2018, short- to intermediate-term bonds may be poised to outperform 2017's modest returns.

Investment grade US corporate debt continued to outperform US Treasuries. Spreads narrowed a further 9 basis points to close out the quarter under 1% for the first time in more than 10 years [BAML US Corp. Master OAS]. Yet, it was not a smooth ride. The fourth quarter brought increased volatility for credit spreads, which widened from the end of October to mid-November, mostly affecting lower credit quality issues. The telecom sector was particularly hurt by weak quarterly financial results and news of Sprint and T-Mobile abandoning merger talks. High yield lagged investment grade, ending the quarter at a spread of 3.55%, about where it had begun [BAML US HY OAS].





Bond issuance continues unabated in this still-accommodative interest rate environment. Compared to historical capacities for issuance and outstanding debt, the numbers from 2017 are impressively large and show no signs of slowing down. We are not alone. US-dollar-denominated Asian bond issuance growth is on an even steeper trajectory – nearly doubling in the past two years and tripling over the past six. Competition to bring new issues to market among a growing field of underwriters has remarkably brought fees down as low as $1 [Wall Street Journal].

Amid growing supplies of debt in nearly all sectors of the bond market, demand has shifted away from foreign investors and banks. Over the past 8 years, the share of US Treasuries purchased by domestic investment funds has nearly tripled and may soon constitute a majority. Brokers and dealers have cut down on proprietary trading and on holding massive inventories. Averaging roughly 25% of the takedown in the years directly following the 2008 financial crisis, and marked as high as 43%, foreign demand for US Treasuries has declined to around 15% on recent auctions. Banks - once representing the lion's share - have cut purchases more sharply, by nearly 50% in this period [WSJ]. Other signals of an increasingly fragile bond market are evident; secondary market trading volumes are down, drastically in some sectors. As a percent of outstanding debt, Treasury volumes are down almost 75% from 2005 levels.

The US Stock Market

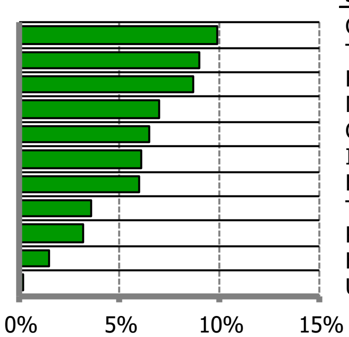
US Stock Indices - Total Returns					
Large-cap Stocks	**4Q17**	**YTD**	**Mid-cap Stocks**	**4Q17**	**YTD**
S&P 500	6.64%	21.83%	S&P Midcap 400	6.25%	16.24%
Russell 1000	6.59%	21.69%	Russell Midcap	6.07%	18.52%
Growth	7.86%	30.21%	Growth	6.81%	25.27%
Value	5.33%	13.66%	Value	5.50%	13.34%
Broad Markets			**Small-cap Stocks**		
S&P 1500	6.53%	21.13%	S&P Smallcap 600	3.96%	13.23%
Russell 3000	6.34%	21.13%	Russell 2000	3.34%	14.65%
Growth	7.61%	29.59%	Growth	4.59%	22.17%
Value	5.08%	13.19%	Value	2.05%	7.84%

US stocks recorded a ninth consecutive quarter of gains, closing the year near record territory. The Dow Jones Industrial Average, the S&P 500, and the Nasdaq all posted their best years since 2013, with the Nasdaq rising for a sixth straight year, its longest streak since 1975 – 1980. Not to be outdone, the DJIA recorded an annual best of 71 closing records over the course of 2017 as December marked a 9th straight month of rises, its longest streak since 1959. The current bull market, which started in March of 2009, added its 105th month with December. Positive drivers from Q3 continued, namely in the form of economic growth, low unemployment, strong corporate earnings, subdued market volatility, and progress on tax reform. Third quarter earnings grew 8.5% year-over-year, fueled by a recovery in the energy sector off a dismal 2016. At year-end, 2017 was on track to post the highest corporate earnings growth since 2011, with the estimate for companies in the S&P 500 at 9.6%, or 6.9% if energy sector firms are excluded [FactSet].

In a reversal from Q3, small-cap stocks lagged their large- and mid-sized counterparts over the quarter as expensive valuations, the potential for increased volatility, and tighter credit conditions outweighed the anticipated benefit of lower tax rates. For 2017, large-caps solidly outperformed mid-caps and, to a greater extent, small-caps. Performance in large-caps was particularly concentrated in Q4 and over the year, with a small number of stocks – in particular, Facebook, Apple, Amazon, Microsoft, and Google's parent company, Alphabet, driving a significant portion of the gains. Collectively, these 5 names constituted 12% - 13% of the S&P 500 Index over the course of 2017, and their full-year returns each exceeded an already strong S&P 500 return by 11% - 34%. S&P Dow Jones Indices data points to a broader list of 21 names including financial services firms JP Morgan Chase, Bank of America, Visa, and Mastercard, healthcare firms Johnson & Johnson and UnitedHealth Group, and consumer cyclical firms Home Depot and McDonald's, as responsible for more than half of the S&P 500 Index's return for the year through mid-November.

While some have compared the narrow market to the "Nifty Fifty" of the late 1960's or the 1990's tech bubble and view it as a precursor to a correction, others see it as a retreat from the high correlations that have characterized the recovery from the 2008 financial crisis along with a focus on fundamentals and outlooks. A narrow market presents a dilemma for active managers: take on the risk of a concentrated portfolio merely to match benchmark returns or underweight the holdings and watch relative performance suffer. However, lower correlations would present an opportunity for active strategies to outperform. As previously mentioned, the market was quiet in 2017, with the CBOE Volatility Index (i.e., the VIX) trading near record lows. Dropping correlations would also support a continuation of this trend as, absent a shock, sectors and stocks should move more independently with winners offsetting losers.

S&P 500 Economic Group Components - Total Returns



Sector	4Q17	YTD
Consumer Discr.	9.87%	22.98%
Technology	9.01%	38.83%
Financials	8.63%	22.18%
Materials	6.93%	23.84%
Consumer Staples	6.49%	13.49%
Industrials	6.05%	21.03%
Energy	6.02%	-1.01%
Telecom	3.61%	-1.25%
Real Estate	3.22%	10.85%
Health Care	1.47%	22.08%
Utilities	0.21%	12.11%

Source: Morningstar

Style trends from Q3 persisted. Value continued to lag growth with investors focused on sustained strong earnings. On a full-year basis, the trend was amplified with growth outperforming by 2x – 3x. The demand for tech stocks, especially those mentioned above, remained a driver. For both the quarter and year, momentum was the best factor performer. In a repeat from Q3, low volatility and value factors underperformed in Q4.

At the sector level, consumer discretionary and tech benefitted from holiday sales while home builders advanced on hurricane recovery efforts. As consumer spending increased over the quarter, by $87.1 billion in November alone, retailers saw a rise in holiday spending of 6.6% year-over-year and overall spending ex-gasoline was up 9.2% [First Data]. In a growth-focused market, defensive sectors lagged for the quarter and the year. Health care has been plagued by continued uncertainty over US policy, and utilities saw little investor interest as the Fed raised rates on the short end of the yield curve. Over the full year, the energy sector faced the persistent challenges of excessive crude supply and increased adoption of other fuel sources while the telecom sector faced headwinds from rising interest rates and increased competition.

Overseas Markets

Global markets ended the year on a high note. Volatility moderated as visible improvements in European markets, the re-engagement around Brexit talks, and continued progress in the peripherals drove investment in developed markets. Emerging markets were the top performers for the year on the back of renewed infrastructure investment in China and recovery from recession in major commodity-exporting economies.

Foreign Stock & Bond Indices - Total Returns					
MSCI Broad Indices	**4Q17**	**YTD**	**Barcap Global Indices***	**4Q17**	**YTD**
World Index	5.51%	22.40%	Global Aggregate	1.08%	7.39%
EAFE (Developed)	4.23%	25.03%	Pan-Euro	2.22%	14.07%
Emerging Markets	7.44%	37.28%	Asian-Pacific	0.84%	5.20%
			Eurodollar	0.18%	3.63%
MSCI Regions			Euro-Yen	0.21%	4.72%
Europe	2.21%	25.51%	Other Currencies	-5.40%	10.18%
Japan	8.49%	23.99%	** Unhedged*		
Pacific ex-Japan	7.01%	25.88%			
Latin America	-2.34%	23.74%			

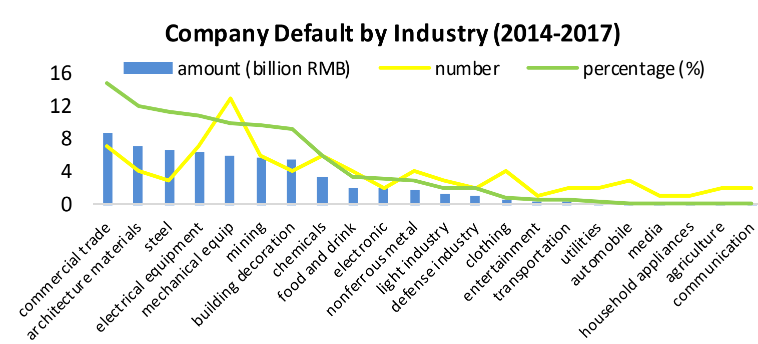
Europe

Euro area markets performed well, buoyed by the strengthening global economy and continued optimism. As expected, the ECB announced the decision to continue its QE program through September 2018. The central bank took a further step in reducing the size of its monthly bond purchases, to €30 billion from the current pace of €60 billion, beginning in January. This marks the third time that the bond-buying program has been extended. The ECB originally intended to end the QE program in December 2017. However, with the extension the bank also announced that it could continue the program past September at its discretion. It also reserved the right to increase the size of the program, if necessary.

ECB President Draghi's announcement referenced a "recalibration" of the bond-buying program rather than a tapering. The ECB has been mindful of the "taper tantrum" in the US caused by then-Chairman Bernanke's 2013 announcement that the Fed was preparing to wind down its own QE program. Draghi's goal has been to slow monetary stimulus without creating a bond sell-off or a euro rally that could negatively impact financial conditions in the zone, making it harder to regain the ECB's 2% inflation target. To this point, the move appears to have worked as the euro remained weakened and the yield on German government bonds did not spike.

Brexit negotiations had seemed to stall after some acrimony during the second half of the year. However, in early December, British Prime Minister Theresa May reached a preliminary agreement allowing the talks to progress to where future trade ties will be negotiated, including a transition period after Britain exits the EU in March 2019. The main sticking point, which had halted negotiations previously, was the need to guarantee to Ireland there would be no hard border between Northern Ireland and Ireland. The agreement was ambiguous, but it seemed to imply that the UK would stay in the single market union if that was what was needed to avoid a hard border. David Davis, Britain's Brexit Secretary, caused a controversary with comments surrounding the legal enforceability of the border. He added fuel to the fire by telling the BBC that the financial offer from the UK of $47 to $52 billion for exiting was contingent upon a "trade outcome," and that absent a deal, Britain would not pay for its divorce. May pledged that Britain "honors our commitments," but sideshows like this demonstrate the competing interests within her own government.

Asia



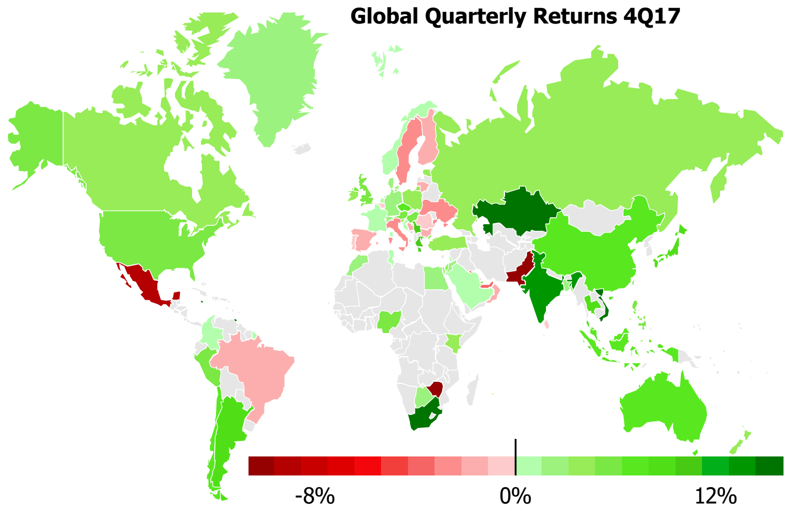
Fresh into a new term in office, President Xi Jinping backed away from artificial growth targets that have driven China's economic policies for decades. He announced that the government would focus on the quality of growth and efficiencies that benefit the economy in the long run. Changes included trimming industrial overcapacity and controlling the supply of money. The President did not mention surging corporate debt, despite downgrades by two international credit rating firms. Instead, he called for controlling borrowing by local governments. Since November 2017, a series of policies such as regulations on asset management, liquidity of commercial banks, and banking and trust business, accelerated the reduction of leverage within the financial system. The impact was quickly transmitted to the bond market. In 2017, bond defaults have decreased to $2.5 billion from $4.8 billion in 2016.

Xi Jinping welcomed Donald Trump to China in November with a series of business deals valued at $9 billion. The skew toward export contracts in the deals reflected the Trump administration's difficult progress on fundamental China trade issues, such as barriers to entry for US companies to key Chinese sectors. Economists said the deals signed in Beijing won't noticeably reduce the trade gap between the two countries. While China's trade surplus with the US narrowed somewhat in October, to $26.6 billion from $28.1 billion in September, it was the fifth straight monthly surplus over $25 billion. In addition, the government also said that it would relax or remove a broad range of limits on foreign ownership of banks and securities firms. The move could inject banking acumen into a vast financial system that helped fuel China's economic rise but in recent years has become burdened with debt and inefficiencies. China still keeps tight limits on industries it considers vital, including energy, transportation, and the media.

In December, Beijing held the 9th UK-China Economic and Financial Dialogue (EFD) which further strengthened the two countries' strategic partnership. The UK Chancellor, Philip Hammond, and China's Vice Premier, Ma Kai, reached agreements on areas of trade and investment, deepening the financial services relationship, new partnerships on industrial strategy, and further ways in which the UK can partner on infrastructure initiatives.

Near quarter-end, the Bank of Japan opted to keep its easy monetary policy unchanged, claiming rising private consumption, exports and business investment were signs that a nascent recovery is afoot. The BOJ's policy statement said it remains committed to its 2% inflation target but sees inflation expectations in a "weakening phase." It forecast gradually rising inflation due to tightening capacity. The central bank kept its key policy rate at -0.1%.

BOJ Governor Haruhiko Kuroda launched his stimulus plan in early 2013, seeking to push prices higher and encourage wages and investment to rise. Since then, massive central bank purchases of Japanese government bonds and other assets have been pushing hundreds of billions of dollars into the economy. The goal was to get businesses and consumers to increase spending sooner, creating more purchasing power from their money. However, wages have not risen as much as expected, and corporations have opted to hoard record profits, building up cash piles or making investments in overseas markets that are growing faster.



A recovery of demand in China and other major markets for Japanese goods is helping push exports higher, boosting the economy as unemployment has dropped to its lowest level in decades. Some analysts have forecast that the BOJ might follow the lead of the US Federal Reserve and the European Central Bank in beginning to phase out its asset purchases and possibly begin raising interest rates. Thus far, Kuroda has defied expectations, with weak price pressures outweighing concerns about the sustainability of the stimulus program. Analysts expect the Bank to leave policy settings unchanged at least until late 2019.

Latin America

In Mexico, weakness in manufacturing and construction offset a recovery in oil and gas output in October. Seasonally adjusted industrial production slipped 0.1% from September and was 1.1% lower than October 2016. Oil and gas production rose 8.5% from September when state oil company Petróleos Mexicanos had increased production following disruptions caused by Hurricane Harvey and a major earthquake in Mexico. Construction activity and manufacturing each fell 0.6%, and utilities were down 4%. Despite the drop, manufacturing remained the main engine of industrial performance, rising 2.7% from October 2016. Factory output has been spearheaded by the auto industry, which saw production up 11% in October and was a driving force for Mexico's unexpected trade surplus of $399.2 million in November. Exports reached a new record high, increasing by 9.2% year-over-year.

November also registered annual inflation rate at 6.6%, more than double the Bank of Mexico's 3% target. The bank raised interest rates by a quarter percentage point in December after a six-month pause. The overnight interest rate is now at 7.25% - the highest since February 2009. The Bank of Mexico said the peso has been pressured since the third quarter by expectations of Fed rate increases and uncertainty over the renegotiation of the North American Free Trade Agreement. Inflation was below the central bank's target until late last year. The uptick this year is mainly explained by the average 20% increase in gasoline prices, ordered by the government at the beginning of the year to liberalize energy markets, and peso depreciation that has made imports more expensive.

The Central Bank of Brazil lowered its benchmark interest rate in December by 50 basis points to 7%, in line with FactSet consensus estimates. The bank cited economic indicators showing the gradual recovery of the economy as a reason. In the third quarter of 2017, Gross Domestic Product (GDP) recorded the third consecutive quarter-on-quarter increase of 0.1%. On the supply side, industrial output and services sectors experienced positive economic activity, expanding by 0.8% and 0.6% from the second quarter. On the demand side, the recovery in private consumption, which grew 1.2% for a second straight quarter, continued to benefit from real income gains, gradual recovery of consumer confidence, and better labor market conditions. Also, Gross Fixed Capital Formation (GFCF) – a key measure of investment – expanded 1.6% in the third quarter from the second after 15 consecutive quarters of decline.

Focus On: The In's and (mostly) Out's of Style-Pure Funds

Perhaps the most significant development in equity fund management of the 1980's and 90's, single-factor style-based strategies (e.g., "growth" and "value") are at an important crossroads. Once considered essential building blocks of a diversified investment strategy, today the style-based approach has at least as many detractors as proponents. That's for good reasons – it's hard to find evidence that investors are managing style exposures to outperform the broad market. Rather, it has led to a proliferation of US equity fund products, cobbled together into multi-fund portfolios that are difficult for many investors to understand, yielding smaller investments in more actively-managed funds at higher fee levels.

Today's fiduciaries are reconsidering the style box en masse, and the fund management industry is following suit. The style counter-revolution takes several forms, including increased use of indexing and more refined multi-factor strategies. Why is style so out of style? Was the idea of growth- and value-oriented investing flawed from the start? Is there nothing of it that can be salvaged today?

Valuing Growth

The fundamental basis for style investing has its roots in models used by analysts to determine the "fair" or "intrinsic" value of equities. Who is to say that $169.23 is a high or low price to pay for a share of Apple? At press time, a share of General Motors costs a mere $40.99 – is GM a better deal than Apple, or not?

Imagine you were buying breakfast cereal instead; given a choice between a $3 box of cereal and a $6 box, which is the better deal? We don't know, because we haven't said anything about the size of the box, or the quality of the cereal. With cereal and stocks, price alone tells us nothing. One trick known to every shopper is to create a "unit price" to facilitate comparison. For cereal, the most fundamental measure of value is weight. So for our boxes of cereal, how much does it cost per ounce or gram of cereal? If the $3 box has 12 ounces of cereal, and the $6 box contains 25 ounces, then the $6 box if a better deal, at least if it's the same brand of cereal.

Analysts employ the same trick for shares of stock. What is the most fundamental measure of value for equities? When you purchase a share of stock, you are buying the right to own a share of the company's future earnings. It is future earnings, then, that is the fundamental unit of value for stocks. One simple model is to assume that a company is stable and will earn the same amount of money this year and in every future year as it earned last year. Dividing the price per share of a stock by its annual earnings per share, gives us the Price-to-Earnings Ratio (P/E), a measure of value.

	Earnings per Share (EPS)	Price per Share	P/E Ratio	Earnings Yield (E/P)
APPL	$9.21	$169.23	18.37	5.44%
GM	$2.04	$40.99	20.09	4.98%
AMZN	$3.93	$1,169.47	297.58	0.34%
S&P 500 Index			23.30	4.29%

According to Morningstar, for the trailing twelve months Apple earned $9.21 per share, while GM earned $2.04 per share. Doing the math, that gives us a P/E of 18.37 for Apple – in other words, one unit of the annual earnings for Apple will cost you $18.37. In contrast, one unit of GM earnings will cost $20.09. It seems they are priced closely, but Apple is a little cheaper using this model. Said differently, if we flip the fraction, at current prices an investment in Apple will yield 5.44% while an investment in GM will yield 4.98% per year. Why would anyone buy GM? All things being equal, if the market is efficient, the answer is no one – everyone will buy Apple and sell GM. That, in turn, will drive up Apple's price and drive down GM's price until their P/E ratios are equal.

That's true only if current earnings predict future earnings. However, we expect earnings to grow from current levels for a variety of reasons. A particular stock might have a higher P/E ratio than another because the market expects future earnings to grow faster. For example, a company may have better prospects for innovation, leading to new product development. Another is increased efficiency through automation and good management leading to better margins. A third is the growth of the economy and the particular market in which a company is engaged. Another is the turnaround effect, where current earnings are depressed because of a problem the market believes the company has or soon will solve. Finally, there is inflation, which increases earnings to the extent companies are able to pass through price increases to their customers as fast as their suppliers are raising their prices.

That dichotomy between current valuation and growth is the simplest definition of investment "style." Growth investors seek out companies with high expected earnings growth (higher P/E ratios, lower earnings yields), betting on success. Value investors seek out stocks that are priced cheaply (lower P/E ratios, higher earnings yields), betting on stability. Said differently, they are not relying on the "factor" of earnings growth.

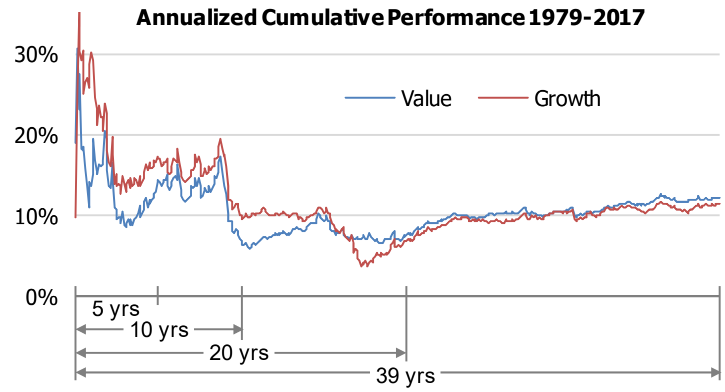
There are flaws in this simple model. It does not account for risk, it assumes that earnings are accurately calculated, and it is not useful for early-stage companies that have not generated earnings yet. Many have built lucrative careers trying to divine more accurate variations of this model. But the data is easily obtained and somewhat informative, particularly for established companies. And it can lead to surprises. Did you think that Apple is a growth stock? The market today is not pricing it that way.

Consider instead Amazon, which at current earnings and prices gives us a P/E ratio of nearly 300 and an earnings yield that makes T-bills cheap. Amazon is much more expensive than Apple and GM today, and more expensive than the S&P 500 Index (with a trailing P/E of 23.3 according to S&P). Last year's earnings for Amazon understate the market's expectation of its future earnings by a much wider margin than for GM or Apple. So the market assigns a "growth premium" to Amazon's price – a whopping one, at least at the moment.

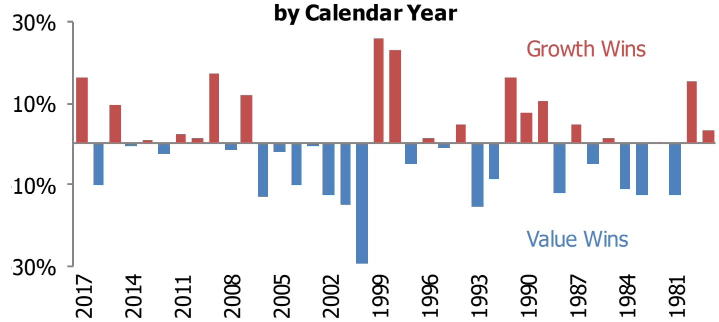
Style-Based Investing

It is immensely tempting to think that style-based investing is as simple as buying stocks with low or high valuation ratios, leading to a value or growth portfolio accordingly. However, that alone should not lead to better risk-adjusted performance than the entire market as a whole. We expect Amazon's earnings to grow faster than Apple's, but that faster growth rate is already factored into Amazon's current stock price. As long as the market is efficient, and as long as the expected earnings actually materialize, an investment in either stock should produce similar performance. It is not the presence or absence of earnings growth that creates opportunities for investment managers, it is changes in the market price of growth (the growth premium) that creates opportunities for outperformance.

Russell 1000 Growth and Value Indices
Annualized Cumulative Performance 1979-2017



Russell 1000 Growth-Value Differential
by Calendar Year



While we expect the long-term performance of growth and value stocks to be similar, historically there have been periods of time where one style outperforms the other, occasionally by wide margins. 2017 was one such period, where the Russell 1000 Growth Index outperformed its value counterpart by over 16%. Growth has largely been the dominant style since the credit crisis, but value outperformed growth considerably from 2000 to 2006. However, history shows that growth-led and value-led markets rotate; they do not tend to persist.

Richard Bernstein explored the interrelationship between value and growth styles in his 1995 book Style Investing, which remains a remarkably good read today. Now running his own investment firm, at the time Bernstein was head of Quantitative Analysis at Merrill Lynch. He notes that the prospects for superior earnings growth wax and wane over economic cycles, giving us periods where earnings growth is widespread and plentiful, and other periods where growth is concentrated and scarce.

The outperformance of growth strategies in recent years makes sense. Ironically, it is when earnings growth is perceived to become scarce and expensive that growth outperforms. As Bernstein notes, growth investing is an expression of a relatively pessimistic outlook. Although economic growth has been generally positive and stable following the credit crisis, inflation has been extremely low (depressing nominal earnings growth). Further, disruptive technology has increasingly concentrated high-growth prospects into a smaller number of larger companies. For every Amazon that gobbles up market share there are multiple retailers that lose share and earnings. Finally, throughout the recovery, a skeptical view of economic growth and earnings prospects has prevailed. Notwithstanding that earnings growth has been sound, it is the perception of economic weakness that drives the growth premium.

The scarcity of earnings growth is cyclical. Holding an investment that is focused on growth or value exclusively – a so-called "style pure" fund, should not generate long-term returns superior to the broad market. Style-based investing is an active, contrarian approach whereby you seek to buy growth stocks when growth is plentiful and cheap, and sell growth (buy value) when growth is scarce and expensive. It requires continuous adjustment of industry exposures and specific stock exposures within industries. Executed well, the earnings growth factor can contribute significant value in excess of broad market performance.

Industry Development and Misapplications

Style-based investing is inherently contrarian. Trouble is, most investors are return-chasers, not contrarians. The growth-dominated market of the late 1980's led many investment managers to increasingly specialize in growth as assets flowed into growth-oriented funds. It only takes a few years of underperformance for funds that are on the wrong side of the growth premium to have a significant negative impact on assets and revenues. Of course, as leadership rotated, firms moved quickly to launch value products so as to always have a fund that compares favorably to the broad market.

Fund Count by Style

	Value	Blend	Growth
Large	333	364	376
Mid	110	118	180
Small	114	230	211

In 1992 Morningstar accelerated the style craze by introducing the "style box" which classifies funds by force into a particular style, whether or not the investment manager claims to use style as a strategy. It became relatively easy for investors, brokers, and consultants to detect "style drift" and react accordingly. Of the 2,036 diversified, actively-managed US equity funds today, 65% of them are classified by Morningstar as following a specific style: 38% growth, 27% value. The style craze was certainly good for the industry. For asset managers, it created specialty "niches" which supported more US equity funds. With the number of US equity managers numbering in the thousands, specialization is essential to spread out the competitive set. It has also been fantastic for recordkeepers, who for years derived higher revenue-sharing payments in bundled relationships by increasing the fund count. They, in turn, have largely outsourced fund fact sheet production to Morningstar and a narrow set of competitors, who emphasize style in their communications materials.

But if style-based investing requires active and contrarian shifts in allocation, who makes that decision? For most 401(k) plans, it is left to the participant. Perhaps a subset of a typical participant base is qualified to hold a view on the scarcity of growth and act accordingly, but we believe most are not. Nor are they well-advised for the most part. Recordkeepers generally encourage participants to rebalance through investment education materials and automatic processes to keep the style exposures equal. Even professional advisors fall prey to "buy and rebalance" because it is easy and common. Of course, doing so defeats the premise of style investing.

Perhaps the most surprising misapplication of style investing is the multi-style "white label" fund, where funds are drawn from the blocks of the style box and mixed together to form a single fund, often custom-built for a particular plan. Here the responsibility for executing an appropriate style tilt moves from the participant to an investment manager or consultant, who is presumably more qualified and provisioned to make such decisions. Yet time and time again we find these funds are static and neutral in their style exposure.

Getting Out of Style

For most plans, we believe investment style is a tool best used by investment managers, not directly by participants. Plan fiduciaries are increasingly dissatisfied with the style box paradigm, but not all are eager to chuck their style-specific funds, particularly those with good performance. However, an investment lineup can be "de-styled" incrementally, rather than dramatically. Here are a few tips:

- Offer indexed core choices as alternatives wherever practical.
- Merge style-specific choices into core funds as opportunities arise.
- Consider core managers that use style and other factors to improve performance, rather than hiring style specialists.
- Review any white-label funds and investment advice programs for lazy, style-based "buy and rebalance" behavior.
- Scour your plan's brochures, website, and fact sheets to make sure they do not inappropriately emphasize style.

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