Outlook 2018

MARKET GPS

Janus Henderson
—KNOWLEDGE. SHARED—

Our views on five key themes in 2018

EIGHT YEARS AND COUNTING

Can the Bull Market Continue?

An aging bull market and a 10-year economic expansion have us, like many investors, wondering: How much longer can this rally continue? But signals from our Adaptive Multi-Asset Solutions team's proprietary options pricing model suggest a correction is not imminent.

> "The options market does not believe that the equity market has to self-correct just because we're a decade into the expansion, while the average business cycle lasts six years. We're in the camp that this expansion can continue."
>
> **Ashwin Alankar, Ph.D.,**
> Head of Global Asset Allocation & Risk Management

Global stocks have enjoyed a good run, roughly tripling since the financial crisis. Options prices, which indicate the market's assessment of short-term risk, signal limited upside, but do not forecast a looming downturn. On the contrary, the equity market appears fairly priced given a number of positive factors that could propel the current business cycle, including potential U.S. tax reform, continued quantitative easing in Europe and Japan, and an upward trajectory in global growth. Inflation also remains subdued, thanks to new technologies that improve efficiencies and keep prices in check.

In other words, barring unforeseen economic or political shocks, the global economic barometer is set to fair. We argue that some of this benign outlook is due to the options market's expectation of an orderly unwinding of the ultra-accommodative monetary policies in the U.S. and Europe in the next few years.

The Federal Reserve is expected to continue raising interest rates gradually in 2018 and beyond, while slowly reducing its $4.5 trillion balance sheet. The European Central Bank, which has yet to begin tightening, is focusing on tapering asset purchases first and will likely raise rates at a later date. This staggered approach could help global markets avoid a sudden liquidity crunch that would curtail growth, create a headwind for equities and cause global bond yields to spike – more reason to believe the current expansion can persist. ■

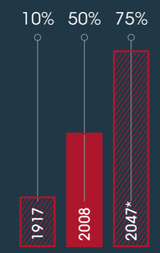
Investment may be Increasingly Powered by Four Connected Themes

Nobel Laureate Myron Scholes, Ph.D., Chief Investment Strategist, believes that four powerful and interconnected forces could increasingly shape investment decisions: technology, demographics, scarcity and governance. Innovators capable of developing solutions that adopt or, in some cases, slow these trends will be poised to succeed as these forces evolve.

Technology
Repatriation of Manufacturing Jobs

Society is moving toward the era of big data, powered by connected devices, artificial intelligence and cloud-computing platforms. These efficiency-boosting innovations create opportunities for nimble firms that understand customers and deliver bespoke products and services. "Additionally, machines work 24/7, diminishing labor arbitrage," explains Dr. Scholes. "This will incentivize companies to bring production back to the U.S."

Demographics
Expanding Urban Populations

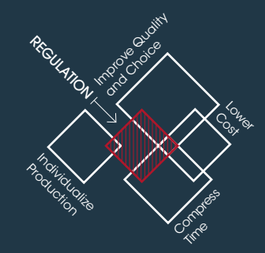


Demographic trends are also reshaping society. According to the United Nations (UN), half the global population lived in cities in 2008. By 2047, the UN projects that number will increase to 75%. "This creates the problem of how to build cities with clean air and water, as well as sufficient food, power and transportation systems," says Dr. Scholes. Aging populations also increase the burden on technology and health providers to devise solutions for age-onset conditions.

Scarcity
Resource Substitution and Creation

Although rising populations strain natural resources, technologies can intermediate supply through substitution or creation. "Local micro-grids will distribute power more efficiently, and desalination will make potable water more abundant," says Dr. Scholes. We're already seeing efficiency gains in agriculture: Drones are scanning crops for signs of drought, then autonomously telling smart irrigation systems where to water.

Governance
Fostering, not Impeding, Innovation



Onerous regulations could cause innovators to stumble, creating risks for investors. Governments should help innovators by creating a regulatory framework that protects consumers while fostering innovation and growth. "Technology and innovation help growth by compressing time, individualizing production, and improving quality and choice at a lower cost," Dr. Alankar says.

Source: Janus Henderson Investors, United Nations
*Estimated

Key Takeaway

Investors should be cognizant of the disruptive potential of technology and the impact that demographic shifts will have on our ability to economize increasingly scarce resources. To truly realize the economic benefit of these trends, governments need to create regulatory environments that embrace and nurture innovation, rather than impede it.

THE END OF AN ERA

Central Banks' Slow Path to Normalization

With the global economy on sound footing, 2018 stands to see further unwinding of highly accommodative monetary policies. We have long noted the distortive effects of quantitative easing (QE) and how it would likely produce unintended consequences. As some central banks tiptoe away from these extraordinary measures, we are assessing how the process may unfold and its potential impact on financial markets.

The Delicate Dance of Policy Normalization

Monetary policy normalization is already under way, with the Federal Reserve (Fed) gradually raising interest rates and beginning to reduce its balance sheet. Chris Diaz, CFA, Head of Global Aggregate, says many investors don't believe the process will be disruptive given the Fed's proposed pace of balance sheet reduction, which he describes as "glacial." Yet, Mr. Diaz views the market's prevailing mood with trepidation. "The market is pretty complacent, but an exit of this nature is uncharted territory," he cautions.

We believe that the Fed will first focus on balance sheet reduction before revisiting the cadence of interest rate hikes. Nick Maroutsos, Portfolio Manager of the Absolute Return Income strategy, says, "The Fed would be risking policy error if it surprised markets with more aggressive than expected hikes at the same time it's trimming its balance sheet." Darrell Watters, Head of U.S. Fundamental Fixed Income, believes that, at most, the Fed will raise interest rates three times by the end of 2018. Citing recent history, Mr. Maroutsos adds: "In 2015, the Fed forecast four rate hikes; we got one. The same happened in 2016. Even with 2017's hikes, the Fed has consistently erred on the side of dovishness."

This measured approach could help keep a lid on bond yields. Bill Gross, Portfolio Manager of the Global Unconstrained Bond strategy, sees longer-term rates likely rising in 2018, but at a measured pace. Mr. Watters concurs that a slight upward move in bond yields, especially in intermediate-dated maturities, should be expected, but adds it would not be disruptive to riskier segments of the fixed income market.

The Conundrum of Financial Conditions

Less clear is whether financial conditions merit a hike. By most measures, they remain easy. As Mr. Diaz notes, "Despite incrementally raising rates, Treasury yields have stayed contained, credit spreads have narrowed, the dollar has weakened and stocks have gone up. In fact, financial conditions are almost as loose as they have been at any time since the financial crisis."

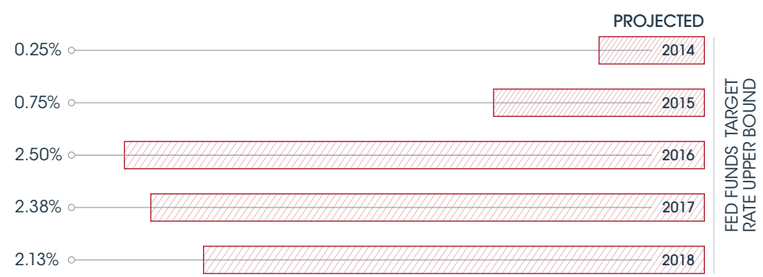
Too Much – or Too Little – Inflation

With the U.S. unemployment rate under 5%, a rate hike would seem justified. The wild card, however, is inflation. Core inflation is well below the Fed's 2% target, but little certainty exists about where prices are headed. Mr. Diaz frames one side of the argument: "Two-thirds of U.S. nonfarm business costs are wages; as the pool of available labor shrinks, companies typically must bid up the price of labor to entice new hires. That has yet to happen." The Fed has explained away recent weak wage growth and inflation to a series of one-off developments. That rationale implies that wage-driven inflation may be on the horizon.

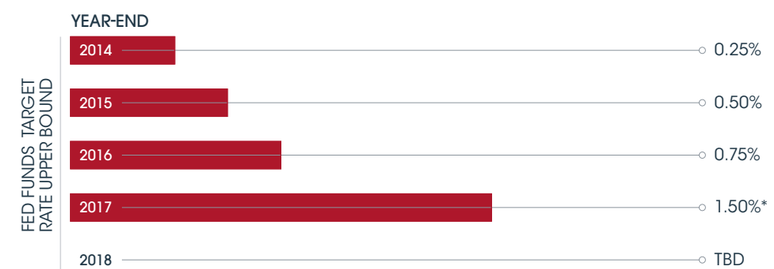
On the other hand, Mitul Patel, CFA, Head of Interest Rates, notes that

Federal Reserve Target Rate Projections and Actual Rate Path

Fed officials have consistently undershot their anticipated path for interest rate hikes.



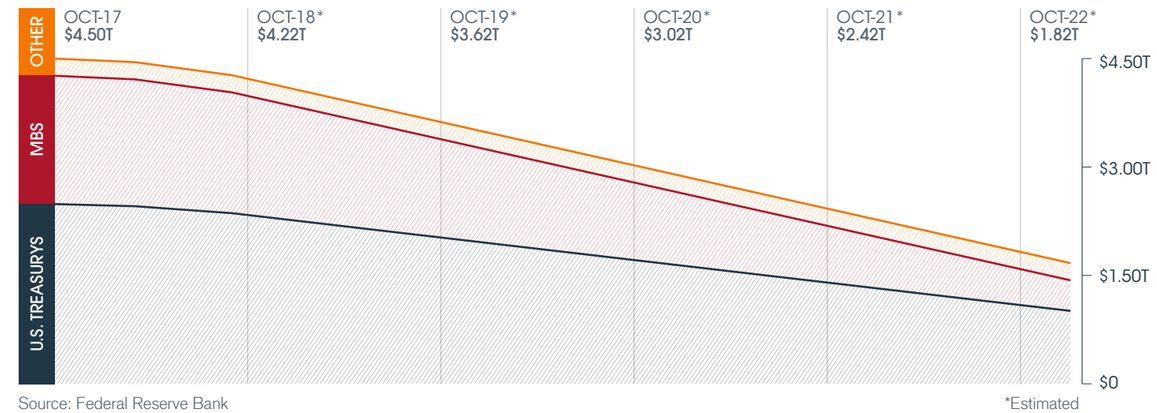
Source: Bloomberg
Note: Projected target rates were estimated as of December two years prior to date listed.
*Estimated



> "The U.S. used to be 60% of the global economy; now it's roughly 26% and falling, meaning the dollar becomes ever so slightly less relevant every day."
>
> **Darrell Watters,**
> Head of U.S. Fundamental Fixed Income

A Glacial Balance Sheet Reduction

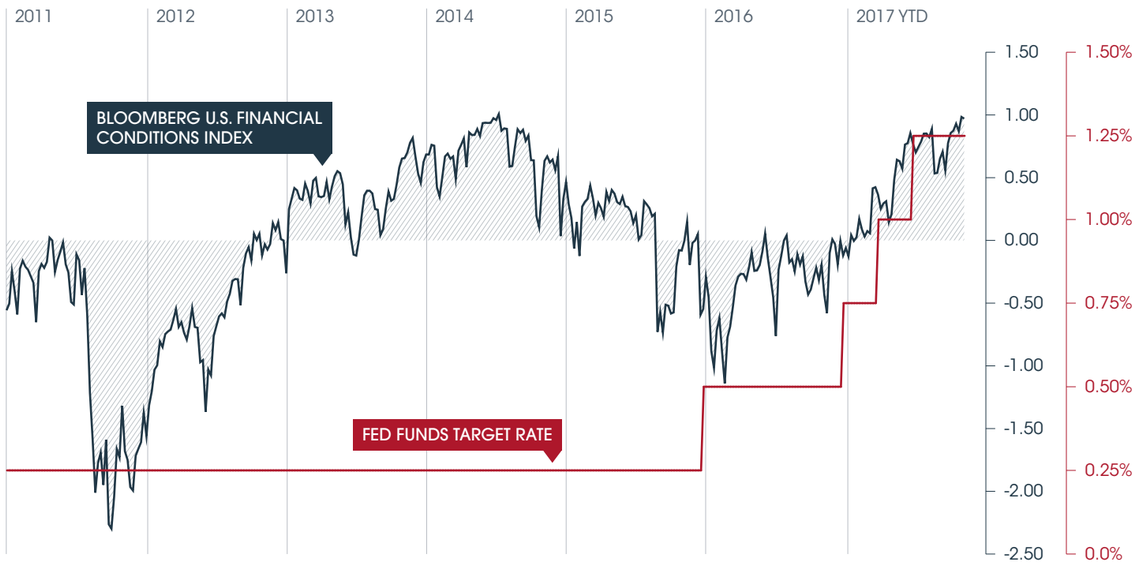
The Fed's plan indicates an extremely gradual pace with a yet-to-be defined long-term level of assets maintained on its balance sheet.



Source: Federal Reserve Bank
Note: MBS denotes mortgage-backed securities
*Estimated

Financial Conditions and Fed Rate Hikes

Financial markets and lending have become more welcoming since the Fed began tightening in December 2015.



Source: Bloomberg. Data as of 10/31/2017

Note: The Bloomberg U.S. Financial Conditions Index tracks the overall stress in U.S. money, fixed income and stock markets. A positive figure indicates accommodative financial conditions when compared to pre-crisis norms.

inflation targets look unachievable in many countries. Highlighting the puzzle of wage pressure, he says, "Although central banks continue to expect tighter labor markets to lead to higher inflation, recent evidence does not give much support to that theory." Drilling into the root causes, Mr. Maroutsos adds, "Much of what's happening in the economy is deflationary, whether it's technological advances making workers more efficient, globalization or the disruptive forces occurring within the consumer space."

A Question for Policy Makers

Another hurdle for central bankers is economic growth. "To the extent that nominal growth around the world is reaching 4% to 5%, higher interest rates are not a problem," Mr. Gross says. The problem is the real interest rate, which should equal real GDP growth. Mr. Gross continues, "No one knows what the correct short-term, real interest rate should be. It used to be 2%, but now -1% is needed to stimulate the economy." Consequently, Mr. Gross believes that central banks will cautiously disengage from QE as their models – meant to determine the rate that catalyzes economic growth without spurring inflation or unemployment – have largely proven ineffective.

Mr. Diaz adds another reason why central banks should approach rate hikes with caution: "They have to be very careful not to kill the global recovery, as they often do." Concerning Mr. Diaz most is the specter of deflation. Outlining the spiral of a deflationary trap, he adds, "If you have already hit the zero-bound in interest rates, it is very difficult to incentivize consumption if prices continue to fall."

Mr. Watters notes that investors must also be aware of the nexus between crude oil, interest rates and the dollar. He believes that much depends upon oil producers maintaining access to financing. Should the high-yield segment of the market shut down, marginal drillers would likely be unable to maintain production, weighing on U.S. output. This could drive crude prices upward and nudge headline inflation higher. Conversely, if financing remains available, production could continue to rise and keep crude prices contained. Mr. Watters states, "This matters a lot. If the U.S. can produce more of its incremental demand, fewer dollars would flow offshore, likely keeping inflation under 2% and interest rates range-bound."

Status Quo at the Fed?

Concerns about a policy shift at the Fed were recently quelled with the nomination of Jerome Powell as chairman. Mr Diaz states, "Mr. Powell will likely follow the path charted by Janet Yellen, as low inflation will allow the Fed to raise rates in a gradual manner." President Trump often criticized the Fed during his campaign, but Mr. Maroutsos believes that the president now realizes he needs rates and the dollar to stay low. "Filling out the remaining vacancies at the Fed will allow the president to further his pro-growth agenda," Mr. Maroutsos says. Legislative achievements also could impact monetary policy. Mr. Maroutsos notes, "If tax reform passes, resulting in higher growth, the Fed can be more aggressive in normalizing interest rates." He remains cautious, however, citing other stalled policy initiatives.

Next in the Normalization Queue

Recent actions by the European Central Bank (ECB) and the Bank of England (BOE) signal a divergence in policy. Should central banks continue to move sequentially rather than in lockstep, the environment would likely remain supportive of global growth.

Mr. Maroutsos worries that the global economy could face unintentionally concurrent unwinding as several banks may be forced to tighten for their own, unique reasons.

In the UK, Brexit looms large. Jenna Barnard, CFA, Co-Head of Strategic Fixed Income, states, "The Bank of England has recently changed its stance on Brexit, viewing it as damaging to the country's long-term growth rate." But an uptick in inflation due to a weaker sterling has forced the BOE to raise interest rates for the first time in a decade. This move backtracks from the rate cut it implemented in the wake of the Brexit vote.

The ECB has reiterated a more dovish tone. "The ECB recently decreased the level of monthly asset purchases, but it extended the program's duration. The extension is partly due to weak inflation, but the smaller quantities may be due to a limited number of securities available for purchase rather than any underlying optimism," says Mr. Diaz. The program's extension likely signals that the ECB doesn't have sufficient confidence in the currency bloc's recovery to raise interest rates in 2018.

The Bank of Japan (BOJ) will likely be the last major central bank to step away from accommodation. Persistently weak growth and an ongoing battle with deflationary forces suggest the economy will need significant monetary support for some time.

Stepping into the Void

Financial markets are sure to be impacted by less-accommodative policy. "During the era of QE, the market operated under the assumption that the so-called Fed put [the central bank supporting financial asset prices] was in place. That is going away," Mr. Maroutsos says. An unanswered question is whether a new marginal buyer will emerge.

Mr. Diaz highlights the issues facing Europe, where much debt still generates negative yields. "The only reason someone would buy a bond with a negative yield is that he or she believes it will become more negative," he says. While the ECB has an explicit policy objective when making such purchases, traditional bond buyers may be less likely to step into the void.

Mr. Watters highlights the risk in Japan, where the BOJ owns roughly 30% of the country's equities. "What are you going to do when you hear that the BOJ is starting to sell? You're going to get out," he says. ■

Key Takeaways

1. In our view, conditions argue for shorter maturity profiles and improved quality within fixed income portfolios to help lower exposure to adverse outcomes.

2. Do not chase returns. Taking on excessive risk when rates are low and spreads tight would diminish bonds' defensive characteristic of capital preservation.

3. With valuations rich, we believe that passive exposure may be inappropriate. Investors should have the latitude to be more defensive than the benchmark in terms of both credit and interest rate risk.

GONE TODAY, HERE TOMORROW?

Making Sense of Market Volatility

Years from now, history may define 2017 as the period when volatility disappeared from the markets. The CBOE Volatility Index (VIX) – which measures the options market's expectations of equity market volatility – hit a record low and spent the majority of its days below 12, compared with a long-term average of 19. Factors that have historically triggered elevated volatility, including geopolitical events and natural disasters, were nonevents for the market. To some investors, this may appear to be a paradigm shift, but we do not believe the recent trend represents a "new normal" for volatility in financial markets.

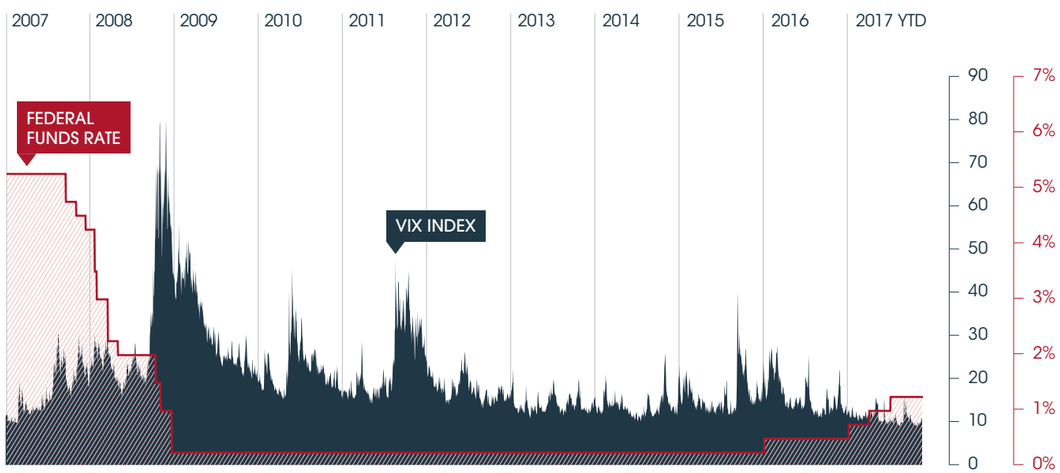
Instead, today's persistently low volatility can be attributed to a single factor: stubbornly low interest rates due to easy global monetary policy. Ashwin Alankar, Ph.D., Head of Global Asset Allocation and Risk Management, notes that natural sources of investment income are now insufficient. Thus, a greater number of investors are selling volatility to earn yield.

John Fujiwara, Portfolio Manager of the Liquid Alternatives strategy, explains that this trade is like selling an insurance policy on the market: If volatility stays within a certain range, the seller simply collects the carry (a premium). Since realized volatility has been range-bound, this trade has appeared to be a low-risk way to generate income, enticing more investors and creating a situation in which lower volatility begets even lower volatility.

Low Interest Rates Weigh on Market Volatility

Will volatility catch up with rate hikes?

Source: Bloomberg. Data as of 10/31/2017



Volatility Triggers

Even though volatility has been unusually subdued, we do not expect this pattern to endure. A number of factors could serve as a catalyst for volatility to return to more normal levels, or even surprise to the upside.

▶ **The Great Unwind** As we discuss in "The End of an Era" (p. 4), we are closely watching the Federal Reserve (Fed), the European Central Bank (ECB) and the Bank of England (BOE) as they embark on paths toward monetary normalization. We anticipate that higher interest rates could act as a disincentive for volatility sellers since investors should once again be able to get reasonable returns from traditional sources of carry.

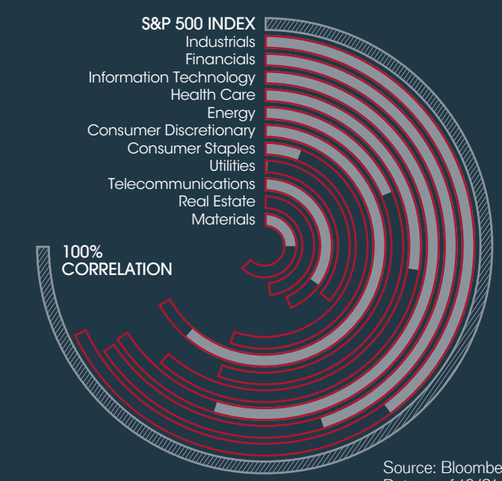
While this move should help normalize volatility levels, there is potential for policy error to ignite an unexpected surge in volatility. Perkins Chief Investment Officer Gregory Kolb, CFA, notes that, "It's fairly obvious they're pursuing unprecedented monetary policies, and with that comes the risk of unintended consequences." Fewer-than-expected asset purchases by central banks or aggressive interest rate hikes could disrupt markets, prompting a fierce snapback in volatility levels.

For bond yields to normalize, Mayur Saigal, Head of Fundamental Fixed Income Risk, explains that central banks must tighten to the right level at the right pace. "Central banks are focused on tapering without the tantrum. If they move too aggressively, markets may start pricing in a policy error and bring longer term yields lower."

Dr. Alankar also notes that central banks historically are late to tighten, which could result in policy error if they have to play catch-up. "If the Fed is behind the curve and they suddenly see inflation shooting up, they would have to tighten quickly. That would suck air out of the system and put a damper on growth," he explains.

Falling Correlations within the S&P 500® Index

All sectors within the S&P 500 Index are exhibiting below-average correlations to the index as a whole.



Source: Bloomberg. Data as of 10/31/2017

Beyond the VIX

George Maris, CFA, Portfolio Manager of the Global Alpha Equity strategy, believes the VIX is not the only measure of volatility or investor sentiment. In his view, many investors are more fearful than what the VIX, an average of investor sentiment, suggests. "This may be the most loathed and nerve-wracking bull market that's ever existed," he says. In fact, Mr. Maris continues to see considerable volatility in individual stocks. In looking at the options market, he notes that the implied volatilities on individual stocks haven't significantly changed, even as the VIX has been subdued.

So what explains the low VIX? Mr. Maris points to cross-correlating hedges across the market. For example, when technology outperforms one day, financials may lag, and vice versa. "You still have a lot of volatility in the individual securities, even without a lot of volatility for the market as a whole," he explains. As shown above, we're witnessing lower-than-average correlations between S&P 500 Index sectors and the index itself.

Forecasting Recessions: Easier Said Than Done

The International Monetary Fund (IMF) publishes semi-annual economic forecasts for both the current and following years.

Percentage of countries included in IMF forecasts that span developed, emerging and frontier markets.

220

Instances, between 1999 and 2014, where a nation's economy grew one year, but contracted the next.

> "In its April forecasts, the IMF never once foresaw the contraction looming in the next year. It also failed to predict the Great Recession."
>
> **Gregory Kolb, CFA**
> Chief Investment Officer, Perkins Investment Management

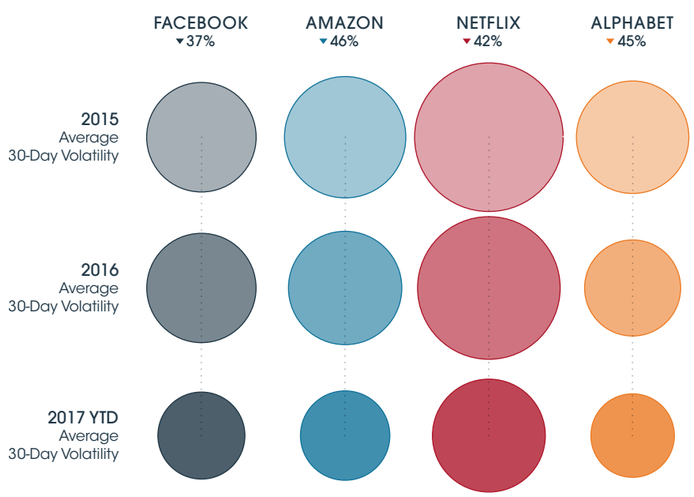
▶ **Economic Surprises** Interest rate normalization is not the only potential trigger for volatility. Mr. Kolb is also concerned that investors are ignoring potential economic surprises, including a slowdown in the Chinese economy. Even though talk of a "hard landing" has quieted, the economy's current pace of growth is likely unsustainable. "The country's model for economic policy is historically unprecedented," he notes. Any disappointment in growth could trigger volatility.

▶ **Unnatural Risk Profiles** Marc Pinto, CFA, Portfolio Manager of the Large Cap Growth strategy, says the rising correlation between large-cap growth stocks and interest rates could also spark volatility. While lower interest rates have historically favored growth stocks, many investors are now buying growth stocks in search of stable returns. This runs counter to the typically higher-growth, higher-risk nature of these companies' business models.

The most striking examples are the so-called FANG stocks. Although well-established, "They have disrupted a lot of other businesses," Mr. Pinto says. "Who's to say they can't be disrupted?" Still, these stocks continue to be strong performers. They have also become less volatile, gaining them entry to low-volatility benchmarks and, as a result, positions in passive investment vehicles that track such indices. Mr. Pinto is concerned about the possibility of these companies stumbling, prompting fundamental investors to sell and the stocks' volatility to rise. This could trigger an expulsion from passive strategies if these holdings no longer meet the index criteria, a scenario "low-volatility" investors may not consider.

New "Low Volatility" Stocks

FANG stocks are becoming less volatile.



Source: Bloomberg. Data as of 10/31/2017

Note: Stock volatility is measured by the 30-day average of annualized daily price moves. Percent change is from 2015 to October 31, 2017. Alphabet is the parent company of Google.

▶ **Novice Traders** Mr. Fujiwara and Dr. Alankar are also concerned about the potential ramifications of inexperienced volatility traders. Investors' reach for yield created unnatural participants in the volatility trade. Mr. Fujiwara explains that some investors may inadvertently participate by taking on more leverage, creating a fragile environment. If realized volatility increases, investors could rush for the exit, and the elevated leverage in the system would magnify losses.

How to Cope

We cannot predict what will trigger elevated and sustained volatility, or that volatility will meaningfully return, but we intend to be prepared if it does. While we are concerned with the downside risk posed by more volatile markets, we also believe active managers stand a better chance of successfully navigating such an environment.

Mr. Saigal explains that the Fundamental Fixed Income team is especially mindful of balance sheet strength, as the same reach for yield that has suppressed volatility has helped some companies survive with more leverage on their balance sheets than would be typical. Therefore, the team's focus on security avoidance remains of the utmost importance.

Carmel Wellso, Director of Research (Equities), says she is focused on finding secular growth companies that can compound growth, rather than trying to make a macro call on where we are in the economic cycle. She believes that stocks continue to be attractive, saying it remains the cheapest asset class. She also explains that equity is still one of the best places to hedge against inflation, and any incipient signs of inflation can help boost the appeal of stocks.

Mr. Pinto notes that when volatility returns, it will certainly impact the market in the short term, but active investors will likely fare better in the long term. A spike in volatility could create risks for investors who don't know what they're invested in, but it can create opportunistic entry or exit points for the active fundamental investor.

Adrian Banner, Ph.D., CEO and CIO of Intech, cautions that not all active strategies are created equal. Active management that relies on merely capturing cyclical market premia or transient anomalies may be at higher risk of underperforming in the event of elevated volatility. Similarly, passive management as a whole may present unpleasant surprises as it digests the suppressed volatility that eventually becomes realized. ■

Key Takeaways

1. The reversal of accommodative monetary policy in the developed world is likely to help normalize volatility levels.
2. Given the numerous catalysts on the horizon that could trigger a spike in volatility, investors should not be complacent.
3. While we are concerned with the downside risk posed by more volatile markets, we also believe that, as active managers, such an environment presents us with opportunities to generate excess returns.

INNOVATION & DISRUPTION

in the Digital Economy

The digitization of the economy is changing business models everywhere. Such disruption has been made possible by the confluence of four significant technological innovations: artificial intelligence (AI), the Internet of Things, cloud computing and mobile connectivity. What's more, "These technologies are just getting started in terms of what they will accomplish," says Brad Slingerlend, CFA, Portfolio Manager of the U.S.-based Global Technology strategy.

The Digital Divide

In fact, our experts would argue that companies today can be organized along the so-called digital divide, which at its broadest level separates the firms with the potential to thrive in the online age from those that may have less upside. Taking a closer look, companies can be arranged into five categories:

▶ **The Right Side** These firms are driving today's digital disruption. They often are large tech platforms, such as Alibaba (the Chinese e-commerce titan), Facebook, and Alphabet (the parent company of Google). They have built sustainable business models by gathering vast sums of consumer data and employing that data to roll out new digital tools and improve user experiences. This creates a virtuous circle that becomes increasingly difficult to compete against, especially when innovation is occurring rapidly, says Denny Fish, Portfolio Manager of the U.S.-based Global Technology strategy.

▶ **The Wrong Side** These companies have structural impediments to transitioning to the digital economy. Legacy retailers are a prime example. They are saddled with costly brick-and-mortar stores, while also losing market share to online sales. Firms in this category face significant challenges to growth and could potentially turn into value traps, which should be avoided.

▶ **The Middle** Businesses in this group are endeavoring to transition to the digital economy. "There's a valley these firms have to cross that can be long and painful, but they are working to reach the other side," says Doug Rao, Portfolio Manager of the Concentrated Growth strategy. He points to Nike. For years, the athletic shoe and apparel maker relied on retailers to distribute its products, but now Nike increasingly is focused on direct-to-consumer sales.

▶ **The Support** This group helps businesses make the digital transition and therefore is experiencing rising demand for its services. Salesforce, for example, offers a cloud-based customer relationship management platform that companies use to analyze client data and enhance customer experiences. As more firms have come to rely on such tools, Salesforce's revenues have risen at a double-digit rate.

▶ **The Outside** These businesses do not translate well to the web, making them less susceptible to digital disruption. Buying appliances or paint, for example, remains a largely offline experience since consumers often prefer to browse such items in person, benefiting firms such as paint maker Sherwin-Williams.

Tech Innovations Defined

Artificial Intelligence
The ability of machines to simulate human intelligence processes, such as learning and reasoning.

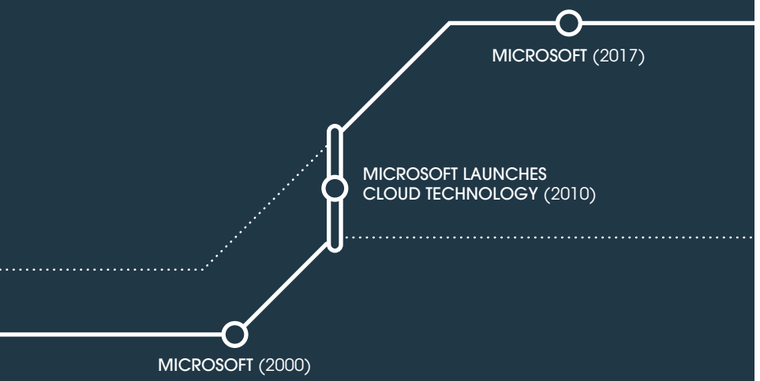
Internet of Things
A network of physical devices connected to the Internet and able to interact with you, applications and other devices.

Cloud Computing
The storing and accessing of data over the Internet instead of a computer's hard drive or on-site servers.

Mobile Connectivity
The widespread adoption of advanced mobile devices, particularly smartphones.

Five Categories of The Digital Divide

For illustrative purposes only.



Navigating the Digital Fallout: Value Traps

The digital economy has caused many stocks to fall out of favor, pushing down valuations. Gregory Kolb, CFA, Chief Investment Officer of Perkins Investment Management, and Alex Crooke, Head of Global Equity Income and Specialist Equities, say these equities – which could appeal to value investors – tend to be on the receiving end of digital disruption. "We have to be careful that we're not buying the classic 'value trap,' where the competitive position has permanently changed for the worse." Mr. Kolb says.

Today's disruption is real and permanent in a number of industries, Mr. Kolb says. But exceptions exist, including Microsoft, which has rebooted growth with Azure, its cloud-computing business, and fended off competitive threats to its popular Office software. Something similar may occur in the auto industry. Mr. Crooke says that while electric vehicles are disruptive, traditional automakers will likely be a part of the electrified world in order to meet global demand for cars. "It's worth looking at established players to see whether they have good electric or hybrid-vehicle technology and how we can benefit from share prices that may appreciate," he says.

Digital Disruption

Several factors are helping deepen the digital divide, including demographics, says Alison Porter, Portfolio Manager on the UK-based Global Technology team. "Today's children are digital natives," she says. As they age, technology will play a pivotal role in their lives. Technology also benefits from the network effect: the more people consume it, the faster it is adopted. Costs have fallen, too. Had the iPhone 7 existed 40 years ago, notes Ms. Porter, the device's memory alone would have cost $160 million.

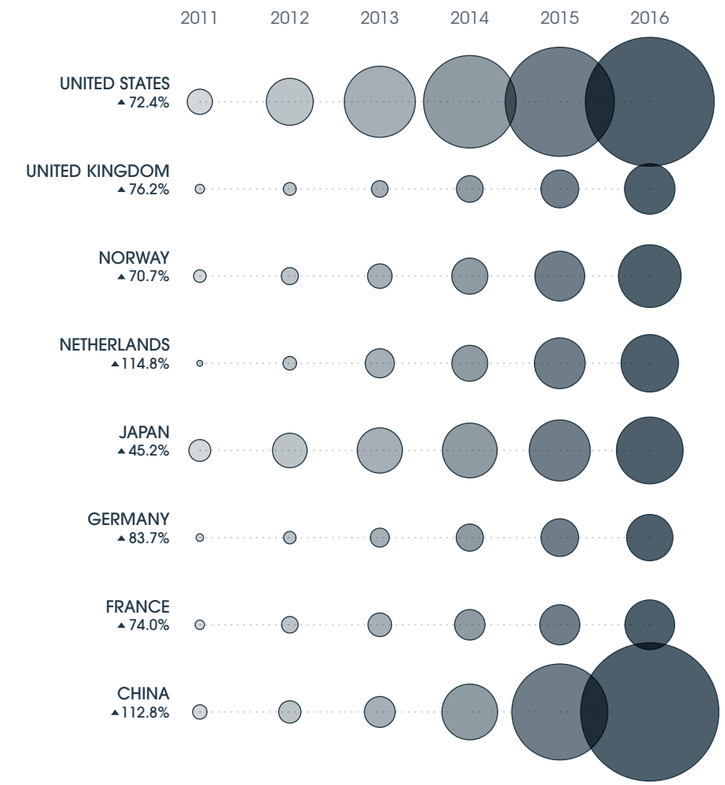
As a result, tech firms that didn't exist two decades ago are now among the most valuable public companies. New takes on old industries have emerged, as have fresh ways of monetizing services. Technology is also causing disintermediation and forcing profit margins lower. Understanding this disruption is critical. "Today, we think of everything through that lens," Mr. Rao says.

Disruption In ...

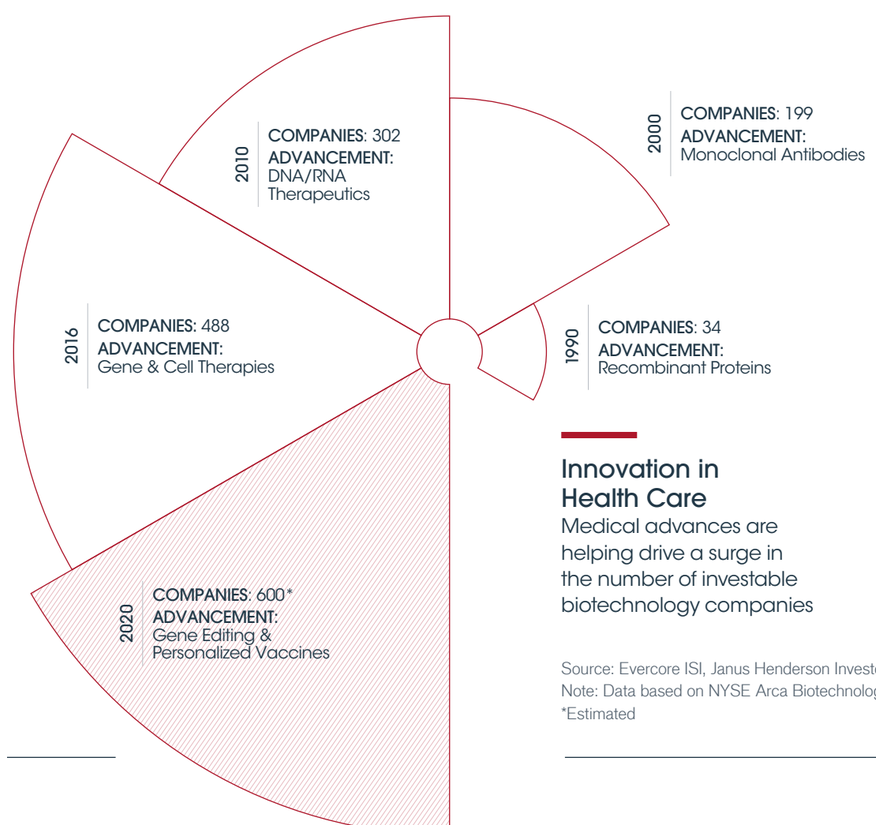
▶ **Autos** Electric vehicles (EVs) make up only 0.2% of the total number of passenger, light-duty vehicles in the world, but the proportion is expected to rise dramatically as manufacturing costs drop and driving ranges improve. Their adoption, along with advances in self-driving and safety features, could lead to a multitude of changes. "EVs are an example where the mega digital themes are converging and promise to be very disruptive," Mr. Fish says.

Already, the semiconductor companies that make the chips and sensors that help power EVs are experiencing a renaissance. By one estimate, hybrid EVs contain about $900 in semiconductor content and standard EVs have more than $1,000. A conventional vehicle, meanwhile, has a mere $330 worth. With the number of EVs on the road expected to rise, semiconductor sales could climb sharply, Mr. Slingerlend says.

Electric Car Stock, by Country



Source: "Global EV Outlook 2017," International Energy Agency
Note: Percent change is the compound annual growth rate from 2011-2016.

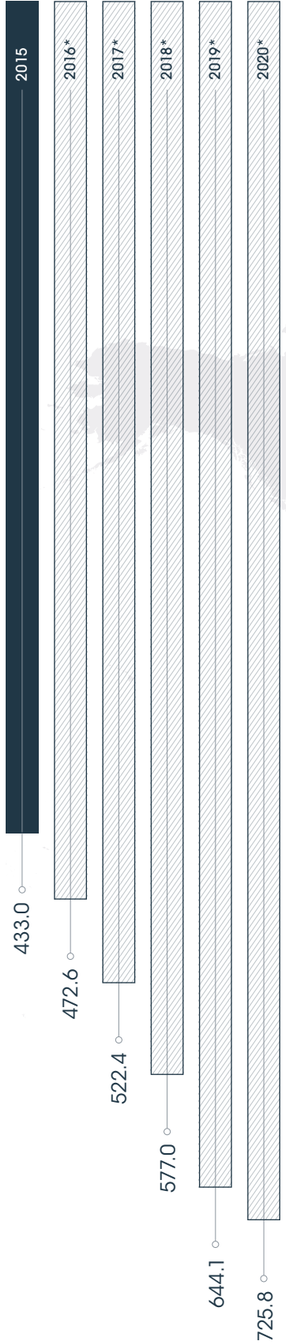


Innovation in Health Care

Medical advances are helping drive a surge in the number of investable biotechnology companies

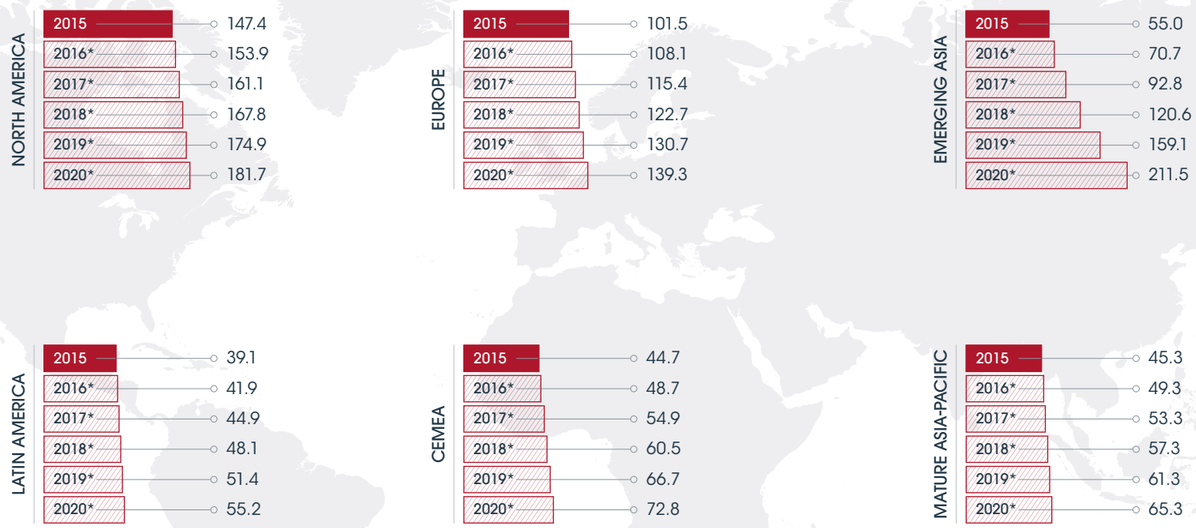
Source: Evercore ISI, Janus Henderson Investors
Note: Data based on NYSE Arca Biotechnology Index.
*Estimated

▶ **Health Care** When the human genome was first sequenced in 2000, the project took 13 years and cost $3 billion. Now, sequencing can be done in one day for $1,000. This dramatic improvement is made possible, in part, by big data and machine learning (a subarea of AI). "It also creates a lot of value among the biotech firms focused on this type of innovation," says Andy Acker, CFA, Portfolio Manager of the Global Life Sciences strategy. Mr. Acker says one of the most exciting advances is gene therapy. By substituting for missing or defective DNA, gene therapy has the potential to cure a number of serious conditions (such as hemophilia), sometimes with a single infusion. Mr. Acker expects the Food and Drug Administration to approve the first gene therapy in the U.S. in 2018, with other advancements, such as personalized cancer vaccines and liquid (or blood-based) biopsies, possible in the next decade.



Global Number of Non-Cash Financial Transactions (Billions)

Regional Number of Non-Cash Financial Transactions (Billions)



Source: "World Payments Report 2017," Capgemini and BNP Paribas
Note: CEMEA is Central Europe, Middle East and Africa; Emerging Asia includes China, India and Thailand, among other developing Asian countries; Mature-Asia Pacific includes Japan, Australia, Singapore and South Korea; North America includes the U.S. and Canada.
*Estimated

▶ **Payments** The digital divide is also showing up in consumer wallets. Worldwide, digital transactions are on the rise, recently jumping by just over 11% in one year, the fastest rate in the past decade, according to one industry report. The increasing usage of mobile phones, as well as data collection and analysis, is helping drive that adoption, says Graeme Clark, Portfolio Manager on the UK-based Global Technology team. Emerging markets are also having influence. In China, digital transactions could climb by an average of 36% annually from 2016 to 2020, thanks to the rapid growth of smartphones, new mobile payment platforms and the delayed adoption of credit cards. As a result, China is leapfrogging from cash to digital payments – and quickly. "Companies like Alibaba and Tencent [which own China's major mobile payment platforms] are leading the way by leveraging the data and infrastructure they have," Mr. Clark says.

Digital Risks

While the digital divide is creating new winners and losers in the economy, it's also introducing new risks. Ms. Porter cautions that investors need to assess the long-term sustainability of today's growth. Mr. Rao adds that investors should ask key questions, including: How complicated is the problem that a product or service tries to solve? Is there a network effect? How defensible is the business model?

Large tech platforms have built wide competitive moats by amassing ever greater amounts of consumer data. But their impressive scale raises concerns about market competition and data privacy. In the European Union, regulation slated to take effect in 2018 aims to strengthen protections for consumer data.

More regulation could be coming as governments consider antitrust measures and data breaches. When it comes to the latter, Richard Clode, CFA, Portfolio Manager on the UK-based Global Technology team, says consumers need to trust that their data will be secure in order for the digital economy to flourish. Here again, big tech platforms could have the upper hand. "Security is always a risk, and that can be particularly true of 'old economy' companies that have invested less in securing their data," Mr. Clode says.

The Digital Future

Governments can also influence the direction and pace of innovation in positive ways. Countries such as Norway, India and the UK have unveiled plans to phase out the production of diesel and gasoline cars, as early as 2025. China, the world's largest car market, has also signaled it wants to ban the internal combustion engine. The move would be part of a larger program outlined by Beijing to build up the country's technological prowess, including the development of a domestic AI industry worth roughly $150 billion by 2030, and the expansion of China's semiconductor industry.

It's another reason why investors may want to be selective when investing in the digital economy. Active management creates the opportunity to choose the companies benefiting from the digital divide as it evolves. Passive strategies, in contrast, often invest based on market capitalization, which may still reflect yesterday's offline leaders. Says Mr. Rao, "As active managers, we have the luxury of running portfolios made up of companies that we think are on the right side of all of this." ■

Key Takeaways

1. The digital economy is disrupting multiple industries. Investors should be aware of these changes, caused by four major technological trends: artificial intelligence, the Internet of Things, cloud computing and mobile connectivity.
2. Given the disruptive force of technology, we believe companies should be analyzed along the digital divide, which at a high level separates firms with the potential to thrive in the Internet age from those with limited growth opportunities.
3. The digital divide is already sharply seen in certain areas of the economy, including autos, health care and global payments.
4. Investors need to be selective when buying stocks amid this digital disruption, focusing on companies with large competitive advantages and the potential for sustainable growth. Active management aims to provide such scrutiny.

DIFFERENTIATED OPPORTUNITIES

EM Corporate Debt – Delving into Diversity

Emerging market (EM) economies now represent a significant share of global GDP. According to the International Monetary Fund, more than 58% of GDP derives from EM countries, based on purchasing power parity. In the past, emerging markets were associated almost exclusively with bond issuers reliant on natural resources. As countries have grown, however, other industries have strengthened and new issuers emerged. The concurrent growth in EM corporate bond markets has resulted in greater diversity across macro, country, sector, duration and credit drivers.

Strong Foundations

The increase in EM issuance does not come at the expense of credit quality. From a fundamental perspective, EM companies – both investment grade and high yield – tend to have less leverage (debt divided by earnings before interest, tax, depreciation and amortization) compared to their developed market peers. "Often, when you buy corporate bonds from emerging markets, you are buying the debt of very solid companies — they are just based in the 'wrong' postal code," says Steve Drew, Head of Emerging Market Credit. These same EM companies frequently offer more reward for the risk.

Looking ahead, the stabilization of oil prices in the high $50s will help oil-related issuers better manage their capital expenditure budgets. For other names, including Chinese homebuilders and Andean utilities, we expect the capital investments of recent years to start bearing fruit in the form of increased revenues and margins, Mr. Drew says. He also expects EM companies to continue strengthening balance sheets by extending debt maturities and refinancing bonds at lower rates.

Compelling Backdrop

Sustained inflows, driven by investors in search of yield, have underpinned the strength of the broader EM fixed income market. Generally consistent inflows of $1 billion to $2 billion per week since June 2016 imply that inflows are strategic and likely broad-based. "Newer strategic investors could be from EM countries themselves," notes Mr. Drew, "creating demand for bonds with a home-country bias." The growth of an EM middle-class is leading to increased demand for investment, insurance and pension products. With a nascent exchange traded fund market for EM credit, he thinks flows into EM-focused credit funds should remain positive in 2018.

The overall macro backdrop also looks benign. Unprecedented central bank intervention has led to low volatility, and a lack of meaningful systemic issues has extended the current bull market. In conjunction with market stability, we have also seen low rates, low inflation and low growth. Mr. Drew believes that the exuberances that typically build over an economic cycle have been muted by this measured pace of growth, potentially forestalling the subsequent downturn. A continuance of moderate growth should be positive for EM credit in the year ahead. Additionally, he expects any creep up in developed market yields, as easy monetary policy is undone, to be gradual and unlikely to harm the spread advantage offered by EM.

EM credit remains sensitive to currency factors, however, and expectations are that the U.S. dollar will strengthen as the Federal Reserve raises interest rates. Yet dollar strength tends to reflect wider global growth weakness. To the extent that synchronized global growth continues in early 2018, dollar gains could be capped. Regardless, the complex interaction of the price of oil and the U.S. currency will result in both winners and losers, depending on whether a country or company is an importer or an exporter of commodities. ■

Key Takeaways

1. EM companies tend to have less leverage than their developed market peers. We expect them to maintain strong fundamentals and further strengthen balance sheets in 2018.
2. Given the link of many EM issuers to commodities, the complex interaction of the price of oil and the U.S. dollar will create winners and losers.
3. A broadening of domestic demand in conjunction with the benign macro environment and steady global growth should sustain EM debt inflows in early 2018.
4. EM equity benchmarks typically do not accurately represent population dynamics. Analytical selectivity through active management can overcome those shortcomings.

EM Equities – The Risk of Index Investing

The long-term opportunities for investment in EM equities are significant and well documented. Supportive demographic trends in developing countries are driving demand for a broad range of products and services that the developed world takes for granted.

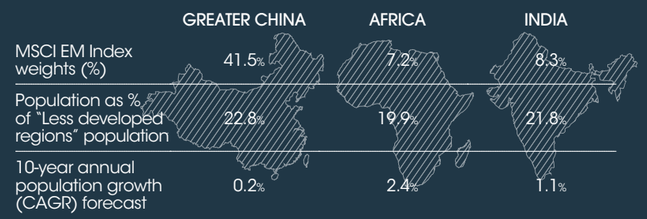
Glen Finegan, Head of Emerging Market Equities, and his team are concerned, however, about the increasing trend for investors to allocate to this essentially "risky" asset class using an index-based approach. They believe this overlooks a number of key drawbacks, as indexing fails to apply the critical and analytical selectivity of active investment.

Many indices are weighted by market capitalization, rather than conviction in a business and its long-term performance. As shown in the chart below, the MSCI EM Index, for example, does not reflect where population dynamics and other favorable demographic trends are creating the potential for future economic growth.

The EM team believes the benchmark allocation will eventually change. In the meantime, they continue to seek out long-term opportunities based on the merits of a company, the quality of its management team and how aligned this team is with its minority shareholders. Rather than taking the index as a starting point, the EM team approaches the asset class in as risk aware a manner as possible, primarily concerned with the risk of losing money in "absolute" rather than "relative" terms.

MSCI EM Index: A Poor Reflection of EM Demographics

China is overrepresented relative to its population, while Africa and India are underrepresented.



Source: Janus Henderson Investors, FactSet (2016 - 2026 forecast).
Note: MSCI EM Index data as of September 30, 2017. United Nations, Department of Economic and Social Affairs, Population Division (2015), World Population Prospects: The 2015 Revision, Total Population, both sexes, using median fertility, July 2015. Regions as defined by Janus Henderson Investors. CAGR = compound annual growth rate.

For more information, please visit **janushenderson.com.**

Janus Henderson
—KNOWLEDGE. SHARED—

FOR MORE INFORMATION CONTACT JANUS HENDERSON INVESTORS

151 Detroit Street, Denver, CO 80206 | www.janushenderson.com

C-1117-13853 12-15-18

188-15-32250 12-17