

## There Will be Growth in the Spring, by Chance

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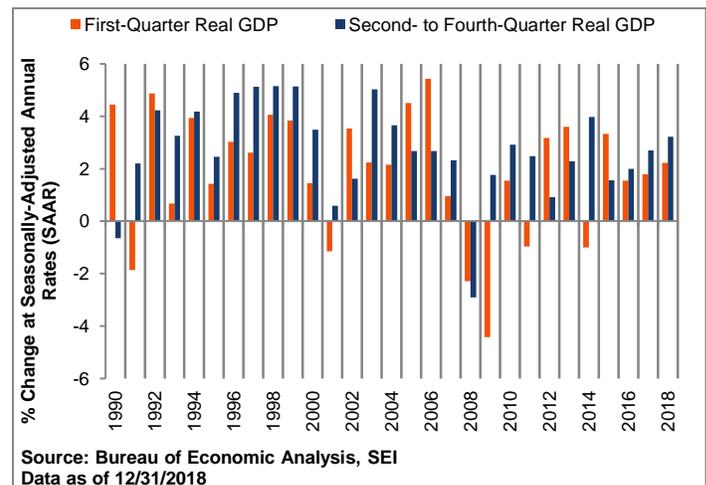
- A sluggish first quarter and Treasury yield-curve inversion have raised concerns regarding the bull market's health.
- Yet, the economic and financial fundamentals that have underpinned the global bull market in risk assets over the past two years remain strong.
- Until we see a more significant deterioration in the outlook, our default investment stance is to stay the course.

In the 1979 movie "Being There," which is based on Jerzy Kosinski's book of the same name, Peter Sellers stars as a simple-minded gardener named Chance. Following the death of his employer and guardian, Chance is kicked out of the Washington, DC, townhouse he has called home for his entire life and forced to aimlessly wander the streets. He can neither read nor write. His only education and contact with the outside world has been through television. He is eventually befriended by a wealthy industrialist and political insider who thinks Chance is a highly educated businessman merely down on his luck. Chance the gardener (now mistakenly known as Chauncey Gardiner) becomes an instant sensation on the Georgetown cocktail circuit. His remarks are simplistic and literal, and mostly refer to gardening. Yet everyone over-interprets his simple sayings, imbuing them with deep allegorical meaning.

In one scene, Chauncey gets to meet the president of the United States. The president asks him if the economy can be stimulated through temporary incentives. Chauncey replies, "As long as the roots are not severed, all is well. And all will be well in the garden." And, yes, "There will be growth in the spring."

Sometimes simple wisdom works the best. Even though most macroeconomic data are adjusted for seasonal influences, the U.S. economy has shown a persistent tendency to be surprisingly weak in the first quarter compared to the rest of the year. Exhibit 1 takes a look at this phenomenon. Since 1990, inflation-adjusted gross domestic product (GDP) during the first quarter has been weaker than the average change over the remaining quarters nearly 70% of the time—with growth averaging 1.9% at a seasonally-adjusted annual rate in the first three months of the year versus 2.7% over the following nine months. The same pattern has held over the past three years. And we think it's likely that 2019 will make it four years in a row.

Exhibit 1: 'Tis the Seasonal



It's not clear why the U.S. economy so often stumbles out of the gate. Weather can certainly be one reason—it's hard to seasonally adjust economic data for paralyzing snowstorms, for example. Still, the frequency of these stumbles is greater than the number of unusually severe winters. We also wonder if the growing importance of China and the temporary disruption to trade and production each year caused by the Lunar New Year is having an impact, even if the latter seems to be something of a stretch. Note that the U.S. economy experienced a relatively weak first quarter for nine consecutive years between 1993 and 2001, long before China became a force that could influence the global economy.

Whatever the reason, the first quarter is again shaping up to be a sluggish one. The National Association of Business Economics reports that economists are projecting a gain in U.S. GDP of just 1.6% in the first quarter and 2.4% for the 12 months ending December 31, 2019. This compares with last year's full-year rise of 2.9%. Exhibit 2 suggests that first-quarter economic growth was just as

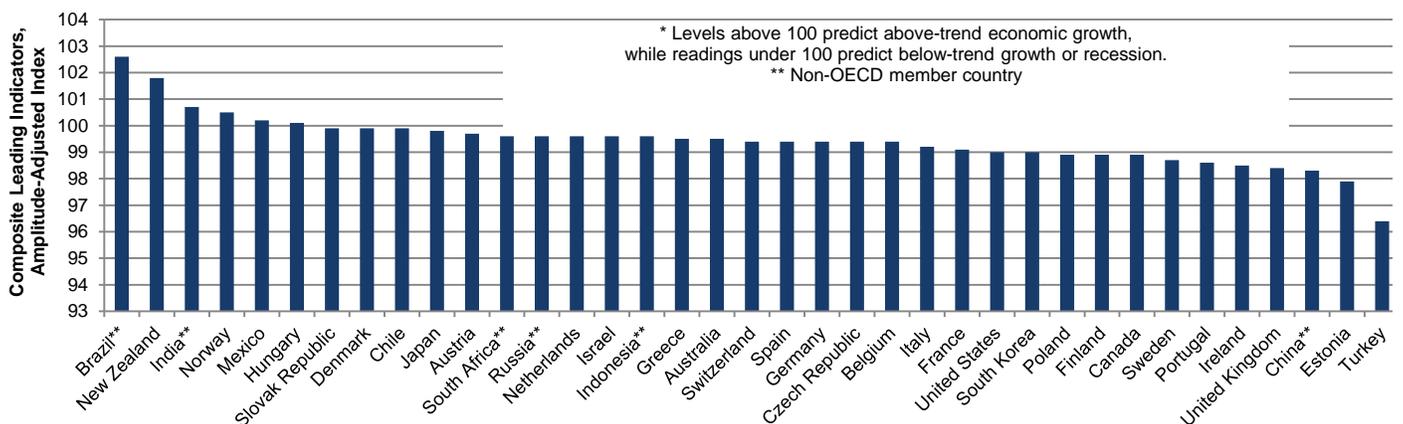
disappointing outside the U.S., with data surprises coming in on the negative side. The swing from positive to negative data has been particularly sharp in the U.S., however, according to Citigroup's widely followed Economic Surprise Index (which reflects the weighted historical standard deviation of data surprises, comparing actual releases to the Bloomberg survey median). Negative surprises in the U.S. now are on par with the negative outcomes registered by other developed economies.

**Exhibit 2: Surprise, Surprise**



According to the Organisation for Economic Co-operation and Development (OECD) only six countries out of the 37 member and non-member (emerging) economies that it tracks are expected to grow above trend in the months immediately ahead, as measured by the countries' respective composite leading indicators (CLIs). Exhibit 3 provides the country-by-country details.

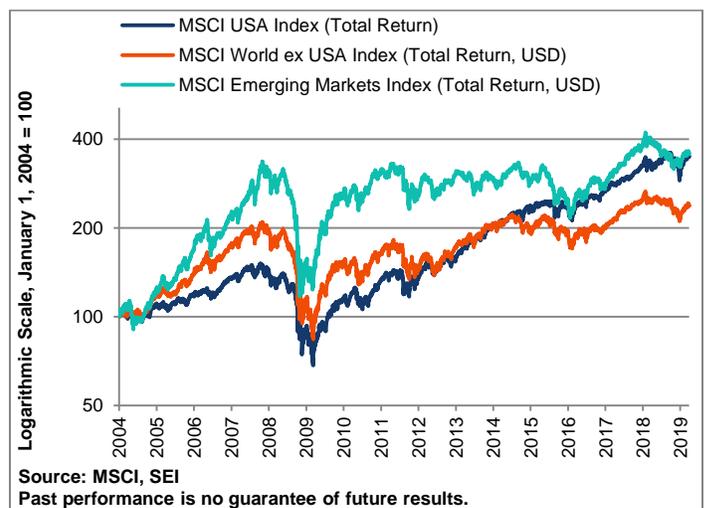
**Exhibit 3: I Don't Like Your Amplitude**



There's no denying that a synchronized global growth slowdown is underway. However, it does not mean that the world economy is in recession or that it will soon fall into one. China and the U.K., for example, are the third and fourth worst performers among the countries listed in Exhibit 3. Yet China continues to post GDP growth in the vicinity of 6%, while the U.K. recorded an increase of 1.3% last year (both in inflation-adjusted terms).

The concern among investors is whether the ongoing sluggishness will derail the past quarter's price resurgence of equities and other risk assets. Exhibit 4 places the current equity rally in both a global and historical context, showing the performance of U.S. stocks against the rest of the developed world and the emerging markets since 2004.

**Exhibit 4: Hoping to Avoid a Killer Frost**



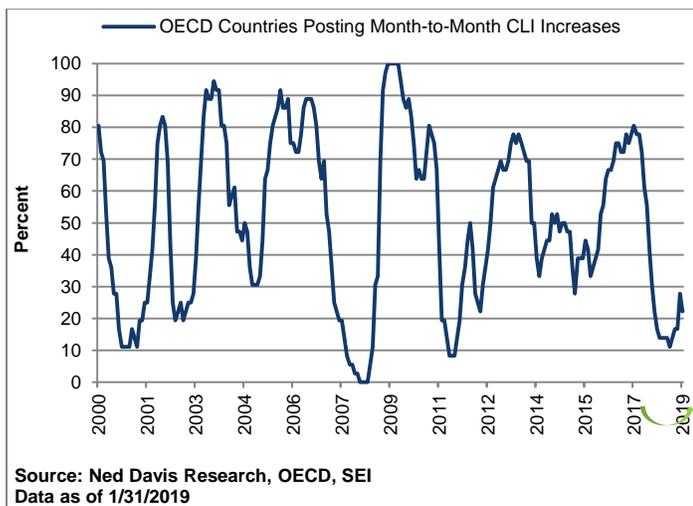
One may have forgotten that the U.S. stock market was a relative laggard in the years prior to the global financial crisis.

As the U.S. stock market started to pull away from the rest of the pack during the 2010-to-2012 timeframe, the MSCI World ex-USA Index (Total Return) struggled amid Europe's debt crisis and Japan's demographic and deflation woes. Meanwhile, the boom in emerging market equities concluded as China ceased its borrowing and spending spree and Brazil descended into recession; a prolonged period of range-bound trading in emerging markets ensued following the peak in April 2011. Exhibit 4 shows that using the beginning of 2004 as a starting point, the MSCI USA Index (Total Return) surpassed the MSCI World ex-USA Index (Total Return) on a cumulative basis in mid-2014 and caught up to the MSCI Emerging Markets Index (Total Return) performance in 2015 and again in 2018.

In late December 2018, the U.S. equity market again led the rest of the world away from recent lows. At this point, we think it is highly unlikely that those lows will be revisited anytime soon. Several things suggest that equities will likely grind their way higher in the months ahead—including hints of economic revival in China; the likelihood of a trade agreement between the U.S. and China; a dovish turn in the monetary policies of the U.S. Federal Reserve (Fed) and the European Central Bank; and a reset in valuations that are considerably lower versus year-ago levels.

Exhibit 5 takes a different look at the OECD's CLIs: Rather than illustrating the countries' varying levels (as in Exhibit 3), it tracks the percentage of countries logging month-to-month increases. This approach provides an earlier warning of changes in the trend of global growth. The series peaked in June 2017, when more than 80% of countries were reporting increases in their CLIs; it then began to sharply decline in August 2017, a few months before global purchasing manager indexes (a timely indicator of current economic conditions) began to deteriorate.

**Exhibit 5: A Green Shoot**

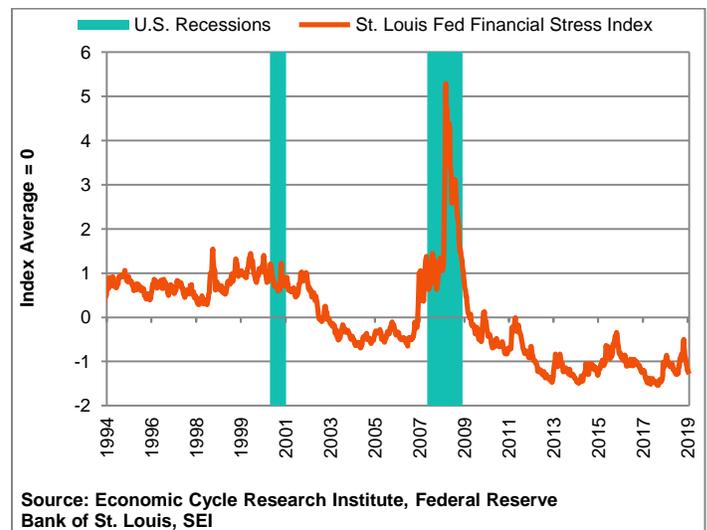


The share of countries reporting monthly increases in CLIs continued to fall sharply through the remainder of 2017 and into 2018, hitting bottom near 10% in April and bouncing along that trough for the next six months or so. This was a notable low, as the only time it was materially deeper was during the global financial crisis. But the share popped up to 27% by December last year, with the latest reading (this January) easing to 22%. If this continues in the months immediately ahead, investors should grow more confident that the global recovery is on a firmer foundation than may seem to be the case today.

At SEI, we expect that U.S. equities will remain well-bid—although we believe international markets are long overdue for a period of improved relative performance versus the U.S. stock market. However, the U.S. economy still looks quite solid, especially against other economies in the developed world. The consensus view that U.S. economic growth will be slower in 2019 versus 2018 appears reasonable, but we suspect that the Fed's latest forecast projecting a sharp slowdown to 2.1% is on the pessimistic side.

One reason for our relative optimism: The signs of stress that built up in the fourth quarter have quickly unwound. Exhibit 6 shows that the St. Louis Financial Stress Index has backtracked toward the middle of its most recent five-year range. Even in the fourth quarter, financial stress was lower than during most other periods over the past 25 years. This statistic has 18 different components, including the absolute levels of short- and long-term interest rates (both government and corporates); various interest-rate spreads; a measure of the yield curve; stock- and bond-market volatility; and the equity performance of financial stocks. The average value of the Index is designed to be zero. It's therefore hard for us to worry about recession until this statistic at least gets above the zero line.

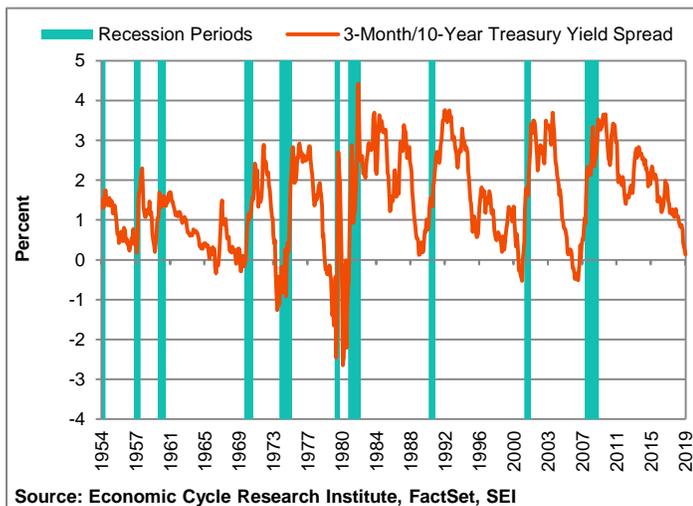
**Exhibit 6: Stress Reduction**



Other observers are not as sure, however. Markets around the globe experienced a sharp risk-off move in late March. Concerns about European economic growth (see below) were one cause of the setback. However, the inversion of the U.S. yield curve (which occurs when the three-month Treasury bill rate rises above the yield on the 10-year Treasury bond) is getting a great deal of attention—and with good reason. Whenever we discuss the early warning signs of recession, we highlight the yield curve since it has been one of the more accurate leading indicators of an impending recession.

Exhibit 7 shows that the spread between 3-month and 10-year Treasuries has been narrowing throughout much of the expansion from an exceptionally wide starting point in 2009. By the time the yield curve either narrows to 25 basis points or inverts, a recession could begin within the next 12 to 18 months. The only time a recession did not develop after the yield curve inverted was in the 1966-to-1967 period—although U.S. economic growth did slow dramatically.

**Exhibit 7: An Inverted Yield Curve is Poison for the Economic Garden**

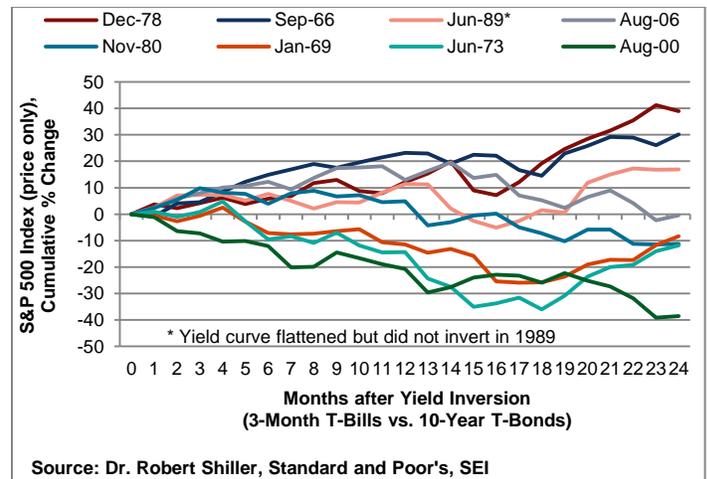


The stock market is also a leading indicator, since the start of a bear market in equities usually precedes an economic downturn and the next bull market has its genesis before the economic recession ends. But what is the relationship of a yield-curve inversion to stock-market performance? The answer can be found in Exhibit 8, which shows the price-only performance of the S&P 500 Index over the two years following a yield-curve inversion. We include the near-inversion of June 1989 because a recession followed in August 1990, when oil prices were spiking in response to the invasion of Kuwait by Iraq that kicked off the first Gulf War.

The results highlight the lack of a hard-and-fast rule concerning how stocks react when the yield curve inverts. There were only three instances of stocks slumping

immediately after the yield curve inverted (1969, 1973 and 2000). During the other periods in which the yield curve inverted, the S&P 500 Index managed to post gains ranging from 4.5% to 19.5% over the following 12 months. After these post-inversion periods, equity prices have tended to fall as an economic recession takes hold—but note that two out of the five bear markets in the chart had already hit bottom and were in a recovery phase within two years of the inversion date.

**Exhibit 8: Getting into the Weeds**



Every instance is unique. Deeper recessions usually cause sharper share-price declines (as was the case in 1973). More expensive stock markets (as seen following the 1998-to-2000 tech bubble) also are more vulnerable—market booms can lead to market busts. A final point: The time between an initial yield-curve inversion and the emergence of a bear market can be extremely long. The yield-curve inversion of August 2006, for example, was not accompanied by a big bear market within the two-year time frame we have been considering. However, we all remember how bad things got in September 2008 with the collapse of Lehman Brothers.

**A New Season for Monetary Policy**

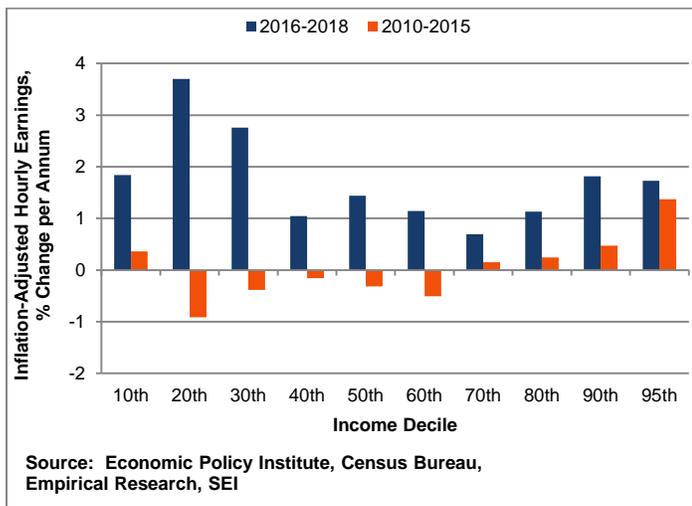
The Fed's change in rhetoric at the start of the year certainly has been a helpful catalyst sparking the rally in risk assets and the narrowing of credit spreads. By adopting language that stresses patience and data-dependence, the central bank signaled that the pace of interest-rate increases will slow considerably from that of the past two years. The Fed's decision makers certainly seem more confident that the economy can grow without generating worrisome inflationary pressures, even as most measures of labor-market activity point toward tight labor markets and accelerating wage inflation.

The Fed announced on March 20 that it made some modest downward revisions in its latest projections of economic growth and inflation, and dramatically reduced

its median forecast of the federal-funds rate. No rate increases are expected this year, and only one is projected by the Fed to occur by the end of 2020. By contrast, the December report called for two policy-rate increases in 2019 plus an additional hike in 2020.

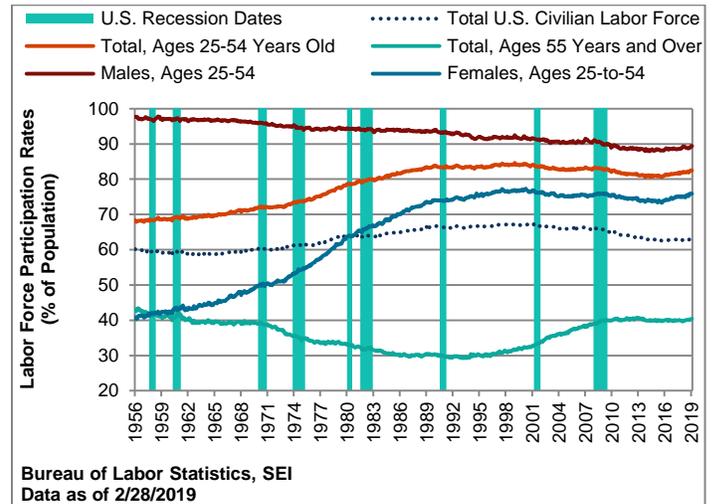
Fed Chairman Jerome Powell and other members of the Federal Open Market Committee (FOMC) approvingly noted that the benefits of the long economic expansion are finally being distributed more evenly throughout the population as the labor market tightens. As Exhibit 9 highlights, the bottom six deciles of the income distribution have recorded income growth at or above the gains enjoyed by the top four in the past three years. In comparison, the bottom 60% endured real wage declines on a yearly basis between 2010 and 2015.

### Exhibit 9: The U.S. Expansion Becomes More Fruitful



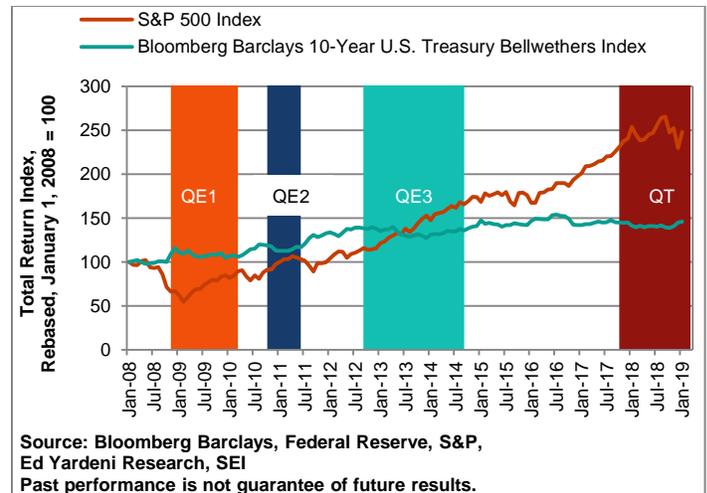
The Fed also justified its more patient approach by pointing out the increased labor-force participation rate. Exhibit 10 suggests that tight labor-market conditions and resultant wage gains are drawing more prime-aged individuals (25- to 54-year-olds) into the labor force. The most notable gains are the result of greater female participation; however, prime-aged males also recorded an improved participation rate, reversing a steady decades-long decline. If the overall participation rate appears stagnant, it's because baby boomers are retiring and the youngest cohorts (below the age of 25) are staying in school for more years.

### Exhibit 10: Participation Rates Improve



In addition to easing off the interest-rate brake, the Fed signaled that quantitative tightening will end in September 2019. This should be a positive development for equities and other risk assets. Exhibit 11 examines the performance of stocks (S&P 500 Index, Total Return) and bonds (Bloomberg Barclays U.S. Treasury 10-Year Bond Index, Total Return) since 2008—a period that saw three episodes of active quantitative easing (or QE, when the Fed was adding securities to its balance sheet) and the current monetary-policy chapter of tightening that began in October 2017.

### Exhibit 11: Will the End of Tightening Give New Life to the Equity Bull?



The three periods of QE were unambiguously positive for equities and neutral-to-negative for bonds. When the Fed ended QE1 in March 2010 and QE2 in June 2011, equity prices corrected and bond prices rallied on investor concerns that the economy would weaken without continuing monetary stimulus. Markets stuck to the same script following the end of QE3 in October 2014 (at least

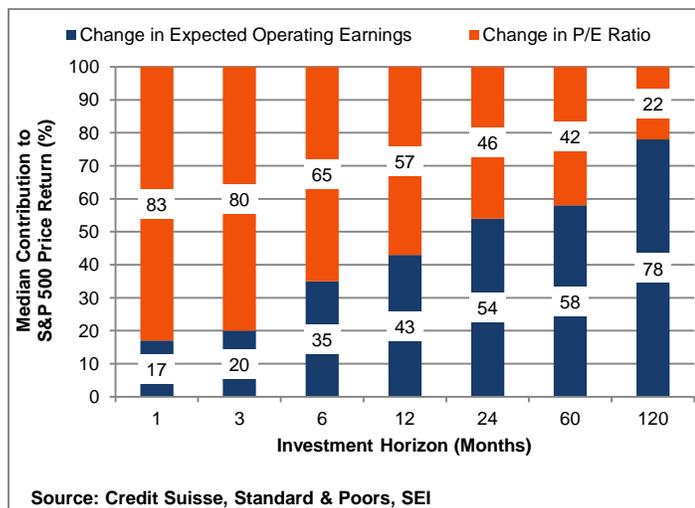
for the first 18 months). However, as Exhibit 11 shows, equities broke out of their trading range around March 2016 and posted a 40% total return by January 2018. Bonds, by contrast, declined 5% in total-return terms over the same period.

In the current quantitative tightening phase, whether coincidental or not, the stock market has struggled while bonds have moved in a rather narrow range. Of course, there are many factors that influence stock and bond prices beyond what the Fed does with its balance sheet. The FOMC's hope that quantitative tightening would prove as dull as watching paint dry was dashed by the stock market's fourth-quarter swoon.

Life is a state of mind, as we are told in the final scene of "Being There." Short-term market fluctuations certainly are dependent on investors' collective state of mind. At SEI, we have held a positive view of risk assets for most of this long bull market. When speaking with investors who are nervous about the stock market's valuation, we continue to urge them to keep a longer-term focus. Until we see a more significant deterioration in the economic and financial fundamentals that have underpinned the global bull market in risk assets over the past two years, our default investment stance is to stay the course.

It's also important to remember that short-term movements in the stock market have a certain serendipitous quality to them. Exhibit 12, provided by investment strategist Jonathan Golub of Credit Suisse, examines the change in S&P 500 Index price returns over various investment horizons—breaking it down by contribution from the change in expected operating earnings and contribution from the change in the price-to-earnings (P/E) ratio.

**Exhibit 12: Keeping an Eye on the Investment Perennials**



In any given month, precious little of the change in the stock market can be attributed to earnings: On average, it amounts to less than one-fifth of the return. Even at the end of a single year, changes in valuation dominate. This reflects the importance of investors' expectations in the price-setting process. Over a two-year time horizon, however, fundamentals start to matter more than investor psychology. It's only after observing the market over a 10-year time frame that earnings emerge as the primary driver of equity value. Since the fundamentals still look sound to us, we continue to give the U.S. bull market the benefit of the doubt.

The monthly swings in risk-on/risk-off sentiment have been especially frustrating for active equity managers. From a factor-based perspective, valuation dispersions are high around the world; this should bode well for value stocks in the years ahead. Quality remains expensive, while momentum is marginally unattractive at this time. Low-volatility stocks look fairly priced.

In the U.S., SEI's large- and small-cap portfolios remained overweight to value-oriented equities (especially financial stocks). This hurt performance in the first quarter, as expensive technology stocks made a major comeback from their fourth-quarter drubbing. Exposure to more stable growth sectors (mainly healthcare and consumer stocks) provided resistance to market pullbacks. There is some concern regarding the rollover in earnings revisions and the market's narrow breadth (that is, the limited number of stocks participating in the advance).

SEI's core fixed-income portfolios added to risk at the end of the fourth quarter, which turned out to be a timely move. As credit spreads tightened through the first quarter, some of those positions began to unwind. The portfolios were slightly long-duration, expecting some additional easing of bond yields following the Fed's pivot to a more dovish stance. Our limited-duration strategies maintained a short-duration posture despite recent Fed actions and commentary; they recently increased exposure to paper issued by industrial companies.

There were no material changes in SEI's high-yield bond strategies. We remained short duration and featured higher yields against the benchmark. Credit quality was in line with the benchmark. It should be no surprise that the high-yield bond market performed well in the first quarter, along with other risk assets. Spreads declined sharply; default rates are expected to continue to fall below 2%, a notably low level. Most managers reduced risk in the first quarter as the high-yield market rebounded, waiting for opportunities to develop.

## Emerging Economies Could Use Some Chinese Fertilizer

In our year-end Economic Outlook report, we correctly forecast that world equity markets were poised for a strong recovery off the late December lows. We assumed the sharp price correction sustained during the fourth quarter overstated the weakness in economic fundamentals and the various uncertainties (including Fed tightening, tariff fears and Brexit) that plagued the markets throughout much of 2018. We firmly believed that most equity markets were deeply oversold, and pointed out the similarity of the U.S. selloff to other important inflection points—such as August to September 2011 and January to February 2016, periods when global stock markets also embarked on V-shaped recoveries. As long as the roots are not severed, all is well.

Emerging-market valuations remain attractive, in our opinion. In Exhibit 13, we show that the MSCI Emerging Markets Index is trading at a substantial 22% discount to the MSCI World Index (11.8 times the expected earnings over the next 12 months versus 15.3 for the MSCI World Index). The discount was even greater at the beginning of 2016, at about 30%, but the MSCI Emerging Markets Index price-to-earnings ratio remains just one multiple point higher in absolute terms than it was back then.

### Exhibit 13: Cheap Thrills



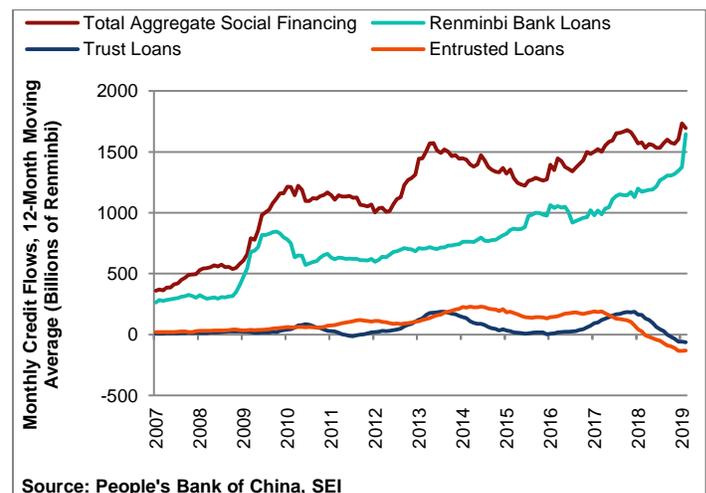
As recently as 2011, the MSCI Emerging Markets Index was trading at a modest discount range of only 10% to 15% versus the MSCI World Index. That discount widened considerably between 2011 and 2014, mainly owing to a sharp increase in developed-world valuations. Since then, the relative valuation of the MSCI Emerging Markets Index has recovered at a slow pace.

There's no denying that a sustained improvement in emerging markets depends on better global growth. So far, we haven't seen much improvement. However, as we

pointed out at the beginning of this report, there are some green shoots emerging if you look closely enough. In our view, China is the linchpin; we are optimistic that the country's economic conditions will improve as it begins to feel the lagged impact of easier economic and monetary policies. Unfortunately, we won't get a good idea of how effective the Chinese government's actions will be for another month or two—even data that one can normally take at face value have been badly distorted by the Lunar New Year.

Although the People's Bank of China has not lowered its official prime lending rate, market-based interest rates declined significantly. Required reserve ratios also have fallen sharply, adding to the liquidity of the banking system. The campaign to exert control over the shadow banking system (amounting to some 12% of social aggregate financing) appears to be easing as well. Exhibit 14 highlights the major elements of China's broadly-measured credit financing. Renminbi bank loans (shown here as a 12-month moving average in order to remove the intense seasonal fluctuations) have soared this year. Entrusted loans and trust loans, two types of shadow-banking funding, tentatively appear to be stabilizing. The Chinese government also recently created a targeted medium-term facility to support lending to privately-run businesses. Fiscal-stimulus measures, meanwhile, include a reduction in the value-added tax and a pickup in government infrastructure projects.

### Exhibit 14: China Credit Growth Begins to Bloom



The impact of these measures is the subject of some controversy among China watchers. Capital Economics, a consultancy used by SEI, estimates that the fiscal measures (both implemented and announced) could increase the government's budget deficit by roughly 2% of the GDP. That would only be half as much as the fiscal stimulus deployed in the 2015-to-2016 period, and pales in comparison to the stimulus provided during the global financial crisis (10% of China's GDP). The scale of stimulus from falling interest rates also is expected to be

less than those supplied in the other two periods. That being said, we expect the Chinese government will become increasingly aggressive if the economy doesn't respond.

In our view, domestic political pressures will likely force the government to ease its monetary policy. Those political pressures certainly are influencing the country's trade negotiations with the U.S. President Xi Jinping does not want the Chinese economy to sag during this historic year that marks the 70th anniversary of the Communist Party coming to power in China and the 30th anniversary of the Tiananmen Square student protests. President Donald Trump is grappling with similar pressures on the American side of the negotiating table. He does not want the U.S. economy to sputter or the stock market to turn down as the country heads into a presidential election year. To put it bluntly, the leaders of both countries need a "win."

For that reason, we think China and the U.S. could reach a broader trade agreement than most observers currently expect. Besides more Chinese purchases of U.S. agricultural and industrial goods, the coming trade deal could put China on a course to open up its economy to more competition. It also should limit some of China's more egregious trading practices, such as forced technology transfer and cyber theft, that have long been a source of frustration for the U.S. and other countries. This is a more optimistic view than we expressed three months ago, when we still held doubts that any deal could be reached. Since that time, the Trump administration has deferred tariff increases. Both sides now recognize the damage done to their economies and financial markets by the trade standoff. While many view the delay in finalizing a trade deal as a bad sign, we believe it simply shows that both sides are willing to grapple with the hard, substantive issues that would make any agreement broader and more meaningful.

Our near-term optimism, however, is tempered somewhat by strategic considerations for the longer run. It's quite likely that U.S.-Chinese relations will remain tense as a result of the geopolitical competition that continues to build between the world's preeminent superpower and its up-and-coming competitor. Even after an agreement is reached that addresses the immediate issues, we anticipate more arguments with China about its trading practices in the future. As a result, foreign companies will likely seek to diversify their supply chains over time as an insurance policy against future tariffs and trade disruptions.

The hit to global growth and equity markets caused (at least in part) by the trade battles of the past year shows that China's economy cannot be marginalized. It is simply too big and too integrated with the rest of the world. The world is not going back to the bad old days of the Cold War, when the globe was divided into two distinct ideological and economic camps. It was much easier to

isolate the former Soviet Union back then because there was little economic interaction or overlap with the rest of the world. That is not the case today with China.

A broad agreement on trade would provide a much-needed boost to the Chinese economy. It also would benefit nations that have high export exposure to China, both directly and through the supply-chain network. Exhibit 15 details the direct exposure of these countries to China in terms of exports as a percent of GDP. It shouldn't be a surprise that China's most extensive trading relationships are with its geographic neighbors: Singapore and Taiwan have the largest direct export exposure at 16% or more of their respective GDP; Malaysia and Korea each export the equivalent of more than 9% of their particular GDP; Thailand and Australia send the equivalent of about 6%; and Japan exports only 2.7% of its GDP, but its China-dependent sales total more than 9% of revenues for large, publicly-traded companies. Germany is the biggest European exporter at nearly 4% of its GDP, while its China-dependent sales total more than 6%. Meanwhile, within the S&P 500 Index, China-related revenues are 5.5% of total revenues.

**Exhibit 15: Feeding the Dragon**

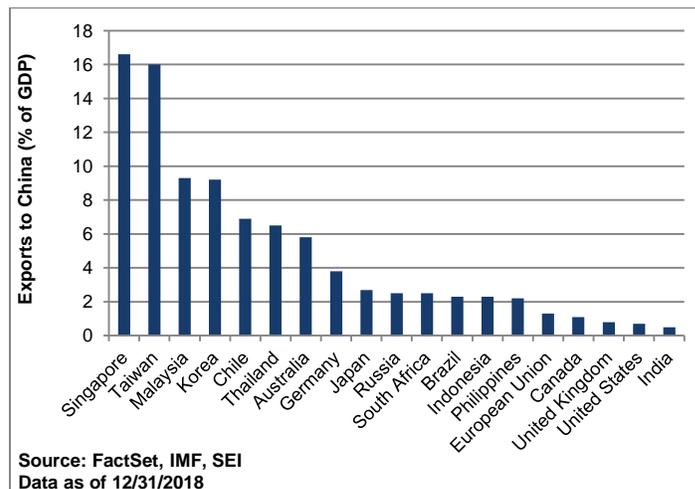


Exhibit 16 reveals a fairly close correlation between the performance of the MSCI Emerging Markets Index (Total Return) and the change in China's imports of merchandise goods, both measured on a year-over-year basis. It should be clear that economic improvement in China is the key ingredient needed for a rebound in emerging-market equities. A weaker U.S. dollar would be an additional plus. So would political and economic stability and improvement in places like Brazil, India and South Africa. However, since China, South Korea and Taiwan now account for 57% of the market capitalization of the MSCI Emerging Markets Index, the performance of this popular benchmark will depend on the economic fortunes of China and its immediate neighbors.

## Exhibit 16: Emerging-Market Bulls and Bears are Made in China



SEI's emerging-market equity strategies were underweight China, South Korea and Taiwan. This does not indicate a negative view. Our portfolios maintain structural underweights to the latter two countries as they are not viewed as emerging stock markets, while China tends to be underweighted because the technology sector's market capitalization is too concentrated. Latin America was favored—especially Brazil, as its economy continued to recover from a harsh recession (its CLIs led all countries as measured by the OECD as seen in Exhibit 3). Frontier markets and small-cap stocks underperformed last year as investor outflows from emerging markets hit a 10-year high. We see plenty of opportunities in emerging equities as investors gain confidence that the worst is behind for the asset class.

In emerging-market debt, our underweight to hard-currency (USD) debt versus local currency debt was significantly reduced—bringing it to 3% to 4% versus 15% to 20% in 2017, when emerging markets were investor darlings. Our portfolios were overweight the hard-currency sovereign debt members of the Gulf Cooperation Council, which just entered the benchmark. We also favored Latin American sovereign debt, such as that of Argentina and Brazil, which offer high inflation-adjusted yields.

### Spring in Europe Delayed Yet Again

Getting to a more vibrant economy is a tough row to hoe for Europe. Many of the region's problems are structural and difficult to improve. Europe's demographic profile, for example, looks rather bleak. Outside of France, where immigration from North Africa over the years has slowed the rise in the population's median age, Europeans are rapidly aging and population growth itself is minimal.

Europe's fertility rate is well below replacement, except for in France, Iceland, Sweden, the U.K. and Norway. The

rate is conventionally defined as 2.1 births per woman. Fertility rates in Italy and Germany are below 1.5 (where Japan is currently); rates in Hungary, Spain and Greece are below 1.4; Portugal's and Poland's rates are even lower.

In all, Japan's experience over the past two decades looks to be an instructive template for Europe's demographic future. The question is whether the Europe can maintain a similarly buoyant real GDP per capita. Table 1 shows that Europe is the only major region in the world where the population is expected to contract between now and 2050.

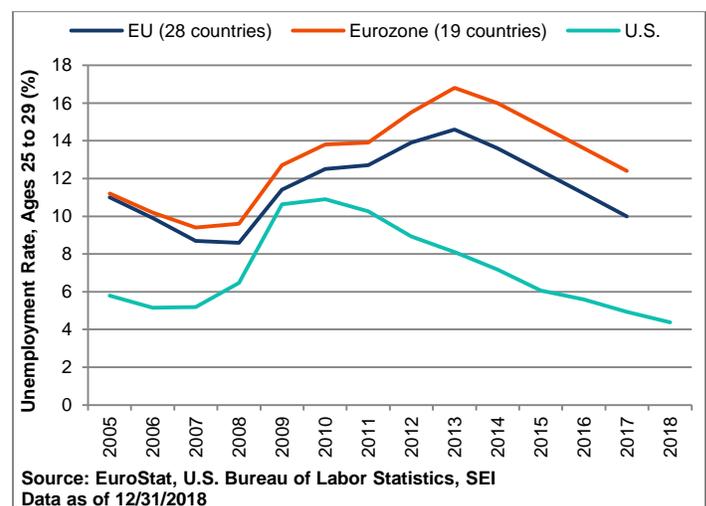
TABLE 1. POPULATION OF THE WORLD AND REGIONS, 2017, 2030, 2050 AND 2100, ACCORDING TO THE MEDIUM-VARIANT PROJECTION

Region	Population (millions)			
	2017	2030	2050	2100
World	7 550	8 551	9 772	11 184
Africa	1 256	1 704	2 528	4 468
Asia	4 504	4 947	5 257	4 780
Europe	742	739	716	653
Latin America and the Caribbean	646	718	780	712
Northern America	361	395	435	499
Oceania	41	48	57	72

Source: United Nations, Department of Economic and Social Affairs, Population Division (2017). *World Population Prospects: The 2017 Revision*. New York: United Nations.

Convincing young people to have more children in aging societies is hard. It's even harder when economic policies are tilted against them. Exhibit 17 highlights the unemployment rate of Europeans aged 25 to 29.

### Exhibit 17: Jobs Are Still Hard to Find

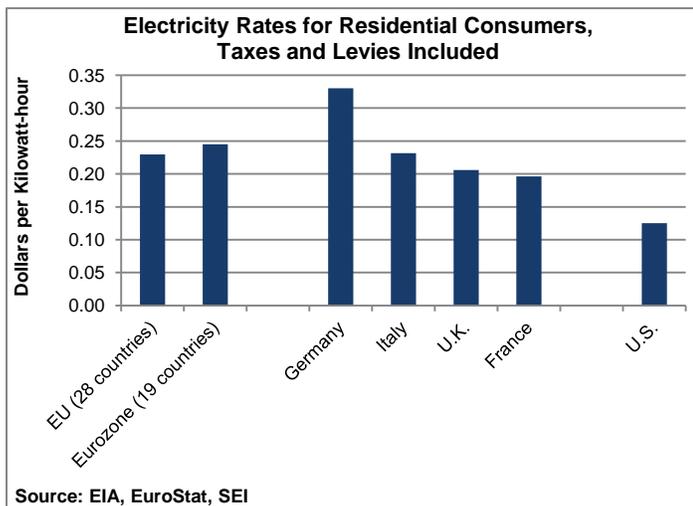


Across the EU, the unemployment rate for this cohort is still in double digits. By comparison, the average annual unemployment rate in the U.S. for the 25-to-29 age group has fallen dramatically since the 2009-to-2011 period and is approaching just 4%. Many of those young adults in Europe who are counted as employed are temporary contract workers who do not have the same job security or benefits enjoyed by full-time employees. Across all age

categories of employees in the EU, 11.3% fall into this contract-worker category.

Of course, demographics alone do not explain all of Europe's poor economic performance. A well-developed welfare state has its costs in the form of high taxation, extensive work rules, and regulations. This burden hurts the region's competitiveness and impedes new business formation. Even the worthy goal of reducing fossil-fuel emissions adds to the cost of doing business. Exhibit 18 shows the cost of a kilowatt hour of electricity across selected countries. The average cost of electricity to residential consumers totals \$0.23 (€0.21) per kilowatt-hour. Germany is one of the most expensive countries for household users, charging nearly \$0.33 (€0.30) on average. By comparison, U.S. households pay the equivalent of just \$0.12 (€0.11) at the current exchange rate of \$1.12 to the euro.

**Exhibit 18: It's Hard to Be Green**

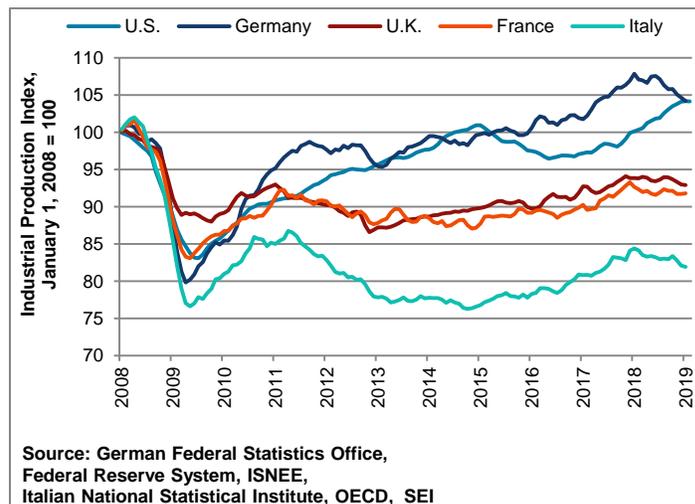


The cost of energy has become a sore subject in Europe. In France, the government's decision to increase the carbon tax on fuel was the spark that started the so-called yellow-jacket protests. The demonstrations have now morphed into a more general protest against the French government and the country's political and economic elite. Meanwhile, Germany's auto industry has been badly disrupted by the emissions scandal and the imposition of new standards; although we still view this more as a temporary setback than an existential threat.

The shadow of a looming trade war with the U.S. surely hasn't helped business sentiment or investor confidence in Europe. We doubt tariffs will be imposed on European autos, but the headline risks may continue to have negative impacts—and it's still possible that Trump will turn his full attention to trade with Europe once the negotiations with China reach a conclusion. (China's slowdown is an additional factor behind Europe's exports decline.) Exhibit 19 highlights the sharp decline in

industrial production endured by Germany in 2018. France and the U.K. also contracted, while Italy held the bottom spot at the beginning of this year. Not only was Italy's industrial production in decline for the 2018 calendar year, but it was 18% below its January 2008 level at the start of this year.

**Exhibit 19: Losing Ground**



Investor pessimism about Europe appears overwhelming. As March came to a close, German 10-year bond yields slipped below zero for the first time since 2016. Growth forecasts have been ratcheted downward sharply. The European Central Bank, for example, recently cut its forecast for GDP growth in the eurozone for 2019 to 1.1% versus a prediction of 1.7% just three months ago. Interest-rate normalization is on hold through year-end and probably well beyond. A third round of bank-lending incentives (called targeted refinancing operations, or TLTRO-III) to households and businesses is being put in place as the central bank seeks a way to pull the eurozone out of its economic morass. Given the litany of woes we just went through, it's a wonder that European equities have almost managed to keep pace with the performance of U.S. equities in the year to date: The MSCI Europe ex UK Index (Total Return) was up 12.6% in local-currency terms during the first quarter versus the MSCI USA Index return of 13.7%.

**Not OK in the U.K.**

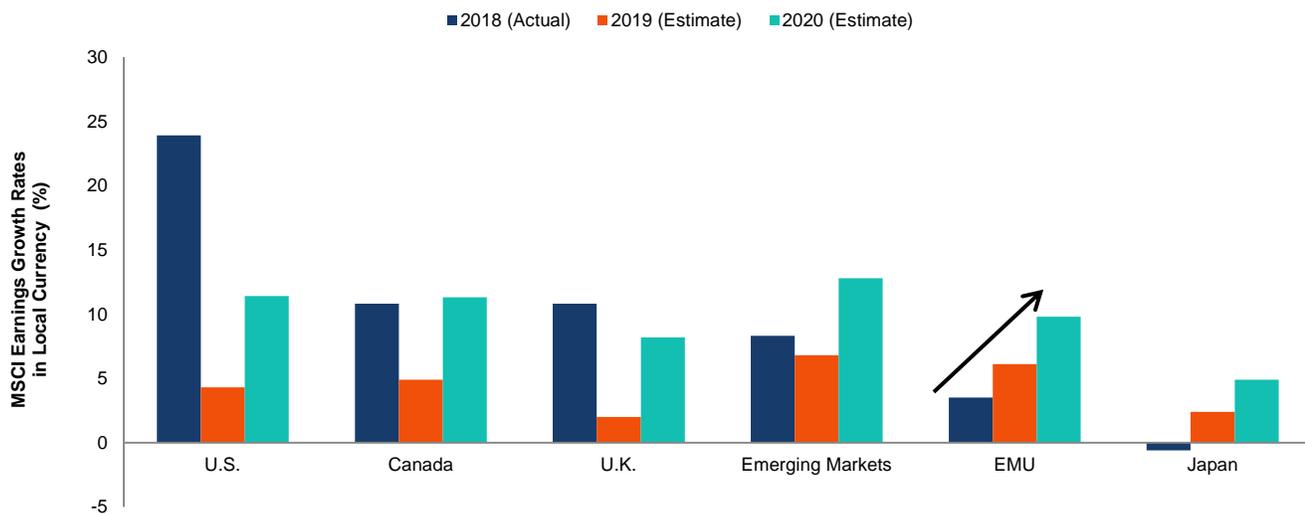
To paraphrase Karl Marx, history repeats itself—first as tragedy, then as farce. When it comes to the debate over Brexit, history seems to be repeating itself on a weekly basis. Over the course of three days in early March, Britain's Parliament: (1) voted against the current deal that Prime Minister Theresa May negotiated with the EU; (2) voted against a so-called hard (or "no-deal") Brexit; (3) voted to delay Brexit, which was scheduled to occur at the end of March.

The EU set a tight extension of April 12 for the U.K. to decide on its course of action. We don't see a quick resolution to the impasse, unless Parliament agrees to May's deal in exchange for her resignation. That means either a hard Brexit is on its way, or that a longer delay will need to be put in place with the understanding that the U.K. will fundamentally rethink its position. A longer delay could entail another referendum or even a change of government. It also means that the U.K. must participate in the EU parliamentary elections starting on May 23.

In our view, the best-case scenario is one in which the U.K. maintains close ties to the EU through a customs union. Failing that, a second referendum either on Brexit alternatives or on Brexit itself makes sense now that voters have a better understanding of the costs and consequences of leaving. However, a referendum on reversing Brexit would risk political upheaval given the number of people who still support leaving. Both Prime Minister May and Parliament also will have to reverse their stated positions. It would be nice if we could say that a no-deal Brexit is off the table, but that's not the case. The likelihood of a hard Brexit may have declined, but this worst-case scenario is still a real possibility. As this report goes to press, U.K. Parliament has taken the Brexit votes out of the Prime Minister's hands as it tries (unsuccessfully, so far) to find a consensus on an alternative plan.

The uncertainty surrounding Brexit outcomes and timing remains a depressant for economic growth in the U.K and the rest of Europe. Exhibit 20 indicates that bottom-up analysts expect earnings in the U.K to decelerate to only 2% in 2019 versus a surprisingly strong 10.8% in 2018.

**Exhibit 20: Too Optimistic?**



Source: MSCI, Yardeni Research, SEI  
Past performance is no guarantee of future results.

Although Brexit is looking likely, SEI's global equity portfolios have not registered any material shifts in positioning, instead taking a long-term perspective in the face of the ongoing short-term uncertainty.

In fixed income, our global portfolios were underweight duration in the U.S., the U.K. and Japan. Europe was the exception, although they were short duration in Germany and long duration elsewhere. They look for the yield curve to steepen, with the front end expected to move lower. In general, our global bond portfolios were long sterling and short both the euro and the U.S. dollar.

**Seeking a Portfolio for All Seasons**

The plunge in risk assets in the fourth quarter and the subsequent bounce back in the first quarter of this year is a reminder that one should always expect the unexpected when it comes to investing. Exhibit 21 ranks the performance of 11 different asset classes from best to worst in a given year. Cash was king in 2018, providing a 2.1% return. However, cash was consistently one of the worst performers in most other years going back to 2009.

Emerging equities fell at the other end of the performance spectrum in 2018, sustaining a total-return loss of 14.6%. This asset class has been particularly volatile, both to the upside and to the downside: while emerging equities settled at the bottom of the heap last year, it was the best category in 2017 and posted a double-digit return in 2016. For the most part, the performance of different assets can vary quite a bit from one year to the next as seen in the quilt-like pattern highlighted in Exhibit 21.

## Exhibit 21: Tracking the Annual Harvest

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Emerging Equity 78.5%	US Small Cap 26.8%	TIPS 13.6%	Emerging Equity 18.2%	US Small Cap 38.8%	US Large Cap 13.2%	US Large Cap 0.9%	US Small Cap 21.3%	Emerging Equity 37.3%	Cash 2.1%
US High Yield 58.2%	Emerging Equity 18.9%	US Core Fixed 7.8%	Int'l Equity 17.3%	US Large Cap 33.1%	US Core Fixed 6.0%	Short Duration 0.7%	US High Yield 17.1%	Int'l Equity 25.0%	Short Duration 1.6%
Int'l Equity 31.8%	Commodities 16.8%	US High Yield 5.0%	Emerging Debt 17.2%	Int'l Equity 22.8%	US Small Cap 4.9%	US Core Fixed 0.5%	US Large Cap 12.0%	US Large Cap 21.7%	US Core Fixed 0.0%
US Large Cap 28.4%	US Large Cap 16.1%	Emerging Debt 2.8%	US Large Cap 16.4%	US High Yield 7.4%	TIPS 3.6%	Cash 0.2%	Commodities 11.8%	US Small Cap 14.6%	TIPS -1.3%
US Small Cap 27.1%	US High Yield 15.1%	Short Duration 1.7%	US Small Cap 16.4%	Short Duration 0.6%	US High Yield 2.5%	Int'l Equity -0.8%	Emerging Equity 11.2%	Emerging Debt 12.7%	US High Yield -2.1%
Emerging Debt 26.0%	Emerging Debt 14.0%	US Large Cap 1.5%	US High Yield 15.8%	Cash 0.2%	Short Duration 0.8%	TIPS -1.4%	Emerging Debt 10.2%	US High Yield 7.5%	US Large Cap -4.8%
Commodities 18.9%	Int'l Equity 7.8%	Cash 0.3%	TIPS 7.0%	US Core Fixed -2.0%	Emerging Debt 0.7%	US Small Cap -4.4%	TIPS 4.7%	US Core Fixed 3.5%	Emerging Debt -5.2%
TIPS 11.4%	US Core Fixed 6.5%	US Small Cap -4.2%	US Core Fixed 4.2%	Emerging Equity -2.6%	Cash 0.2%	US High Yield -4.5%	US Core Fixed 2.6%	TIPS 3.0%	US Small Cap -11.0%
US Core Fixed 5.9%	TIPS 6.3%	Int'l Equity -12.1%	Short Duration 1.3%	Emerging Debt -7.1%	Emerging Equity -2.2%	Emerging Debt -7.1%	Short Duration 1.3%	Commodities 1.7%	Commodities -11.2%
Short Duration 5.0%	Short Duration 2.6%	Commodities -13.3%	Cash 0.5%	TIPS -8.6%	Int'l Equity -4.9%	Emerging Equity -14.9%	Int'l Equity 1.0%	Cash 1.1%	Int'l Equity -13.8%
Cash 1.0%	Cash 0.3%	Emerging Equity -18.4%	Commodities -1.1%	Commodities -9.5%	Commodities -17.0%	Commodities -24.7%	Cash 0.7%	Short Duration 0.9%	Emerging Equity -14.6%

Source: Bloomberg, SEI

### Past performance is not a guarantee of future results

Annual performance data from 1/1/2009 through 12/31/2018. Asset-class proxy indexes: US Large = Russell 1000 Index, US Small = Russell 2000 Index, Int'l Equity = MSCI EAFE Index, EM Equity = MSCI Emerging Markets Index, Core Fixed = Bloomberg Barclays U.S. Aggregate Bond Index, High Yield = Bloomberg Barclays U.S. Corporate High-Yield Total Return Index, EM Debt = 50% JP Morgan EMBI Global Diversified Index and 50% JP Morgan GBI EM Global Diversified Index, TIPS = Bloomberg Barclays U.S. Treasury Inflation Notes Index, Commodities = Bloomberg Commodity Index, Short-Duration = Bloomberg Barclays Aggregate 1-3 Years Index, Cash = ICE BofAML USD 3-Month Deposit Offered Rate Constant Maturity Index

In a world where the best- and worst-performing asset classes tend to dominate the headlines, it's easy to lose sight of the fact that a diversified investment portfolio is generally the most reliable approach for meeting long-term investment objectives. Diversification is a time-tested component of portfolio construction, especially when looked at through the lens of risk-adjusted returns.

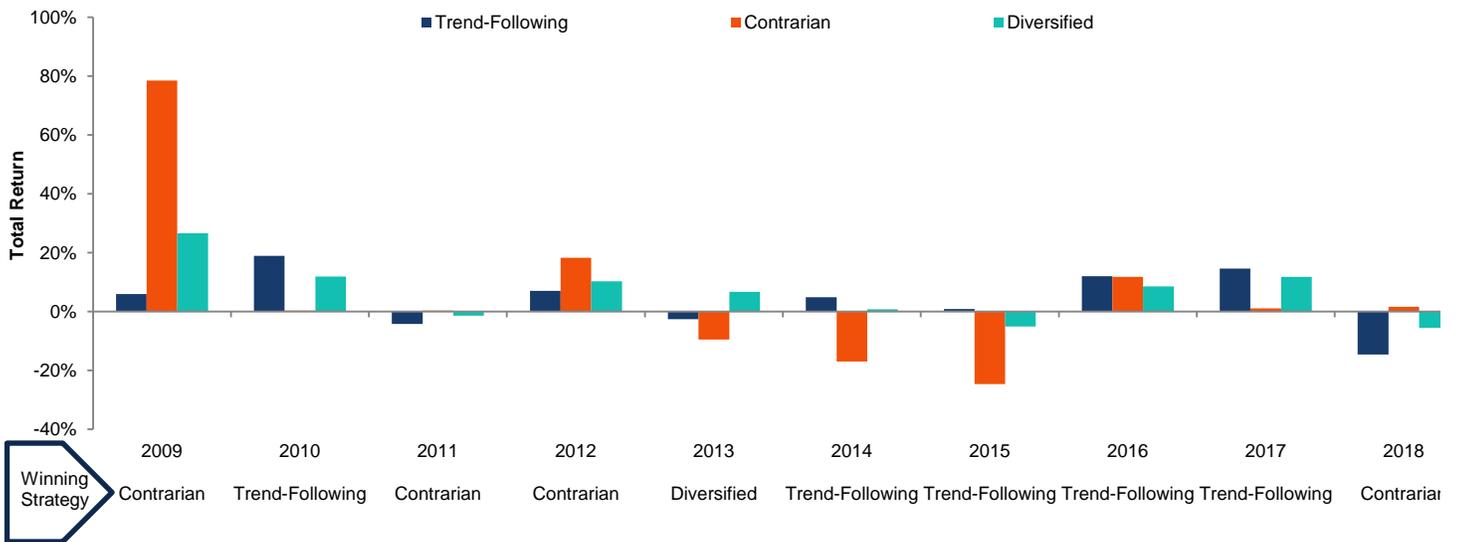
By design, a diversified portfolio is going to hold a mix of asset classes, some of which will outperform and some of which will underperform in any given year. As a result, a diversified portfolio seldom beats the top-performing asset class in a given year.

Exhibit 22 considers three simple investment strategies: Trend-Following, Contrarian and Diversified (described below). It shows which has done best on a year-by-year basis over the past 10 calendar years, from 2009 to 2018.

- **Trend-Following** invests only in the top-performing asset class of the prior year.
- **Contrarian** invests only in the worst-performing asset class of the prior year.
- **Diversified** holds equal amounts (1/11th) of all available asset classes, year in and year out.

In this case, the Trend-Following strategy takes the prize, beating out the other two strategies half of the time. The Contrarian approach won in four of those 10 years—it was the best strategy in 2018. Meanwhile, the Diversified approach was the equivalent of a sickly plant, winning only once in those 10 years (2013).

## Exhibit 22: The Diversified Portfolio Almost Always Disappoints in a Given Year...



Three naïve investment strategies, any of which can outperform over a given 10-year period. The naïve diversification strategy only would have outperformed in one of the years.

Source: Bloomberg, SEI

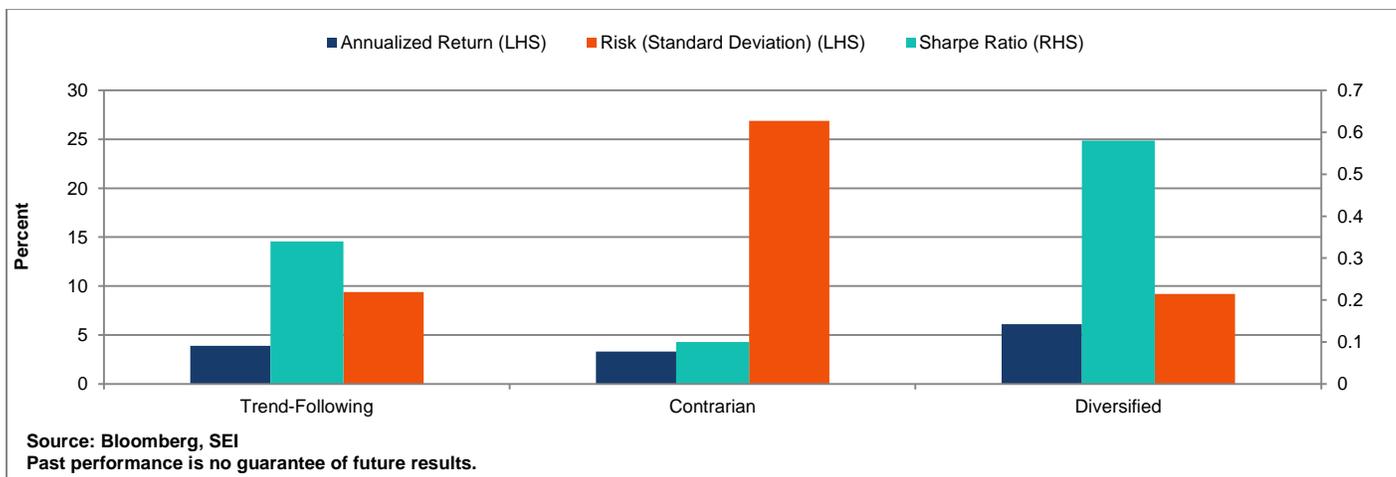
It is clear that diversification as an investment approach rarely wins from one year to the next. But, then, Diversified rarely loses—and therein lies its beauty. By avoiding the big losses that the other two strategies sustain from time to time, it actually wins out in the long run.

Exhibit 23 examines the performance of the same three strategies over the entire 10-year period (rather than on a year-to-year basis, as in Exhibit 22).

In terms of both absolute and risk-adjusted returns, diversification turns out to be the strongest approach over the past decade.

One never really knows what the investment climate will be like from one year to the next. A diversified portfolio provides a prudent approach over time. Not all assets in the portfolio will do well at the same time, and the list of winners and losers will constantly change. But the principles of diversification seek to create a portfolio that weathers all seasons. And that's something Chance the gardener would understand.

## Exhibit 23: ...but Boring is Best When Cultivating Long-Term Investments



Source: Bloomberg, SEI  
Past performance is no guarantee of future results.

## Glossary

**Cyclical** sectors, industries or stocks are those whose performance is closely tied to the economic environment and business cycle. Cyclical sectors tend to benefit when the economy is expanding.

**Duration** is a measure of a security's price sensitivity to changes in interest rates. Specifically, duration measures the potential change in value of a bond that would result from a 1% change in interest rates. The shorter the duration of a bond, the less its price will potentially change as interest rates go up or down; conversely, the longer the duration of a bond, the more its price will potentially change.

**Momentum** refers to the tendency for assets' recent relative performance to continue in the near future.

**Sharpe ratio** is a measurement of the reward per unit of risk, which is calculated by using standard deviation (risk) and excess return over a risk-free index.

**Spread** is the additional yield, usually expressed in basis points (one basis point is 0.01%), that an index or security offers relative to a comparable duration index or security (the latter is often a risk-free credit, such as sovereign government debt). A spread sector generally includes non-government sectors in which investors demand additional yield above government bonds for assumed increased risk.

**Standard deviation** is a statistical measure of historical volatility. A statistical measure of the distance a quantity is likely to lie from its average value. It is applied to the annual rate of return of an investment, to measure the investment's volatility (risk). Standard deviation is synonymous with volatility, in that the greater the standard deviation the more volatile an investment's return will be. A standard deviation of zero would mean an investment has a return rate that never varies.

**Stability** refers to the tendency for low-risk and high-quality assets to generate higher risk-adjusted returns.

**Value** refers to the tendency for relatively-cheap assets to outperform relatively-expensive assets.

## Index Definitions

**Bloomberg Barclays Aggregate 1-3 Years Index:** The Bloomberg Barclays Aggregate 1-3 Years Index includes medium and larger issues of U.S. government, investment-grade corporate and investment-grade international, U.S. dollar-denominated, publicly-available bonds that have maturities of between 1 and 3 years.

**Bloomberg Barclays U.S. Aggregate Bond Index:** The Bloomberg Barclays U.S. Aggregate Bond Index is a benchmark index composed of U.S. securities in Treasury, government-related, corporate and securitized sectors. It includes securities that are of investment-grade quality or better, have at least one year to maturity and have an outstanding par value of at least \$250 million.

**Bloomberg Barclays U.S. Corporate High-Yield Total Return Index:** The Bloomberg Barclays US Corporate High-Yield Total Return Index measures the USD-denominated, high yield, fixed-rate corporate bond market. Securities are classified as high yield if the middle rating of Moody's, Fitch and S&P is Ba1/BB+/BB+ or below. Bonds from issuers with an emerging markets country of risk, based on Barclays EM country definition, are excluded.

**Bloomberg Barclays U.S. Treasury Bond Index:** The Bloomberg Barclays U.S. Treasury Bond Index includes public obligations of the U.S. Treasury, such as U.S. government bonds. Certain Treasury bills are excluded by a maturity constraint. Certain special issues, such as state and local government series bonds (SLGs) as well as U.S. Treasury inflation-protected securities, are excluded.

**Bloomberg Barclays U.S. Treasury Inflation Notes Index:** The Bloomberg Barclays U.S. Treasury Inflation Notes Index measures the performance of the US Treasury inflation-protected Securities (TIPS) market.

**Bloomberg Commodity Index:** The Bloomberg Commodity Index is a broadly diversified index designed to measure the performance of futures contracts on physical commodities.

**Citigroup Economic Surprise Indexes:** The Citigroup Economic Surprise Indexes are objective and quantitative measures of economic news. They are defined as weighted historical standard deviations of data surprises (actual releases versus Bloomberg survey median). A positive reading of the Economic Surprise Index suggests that economic

releases have, on balance, been beating consensus. The indexes are calculated daily in a rolling three-month window. The weights of economic indicators are derived from relative high-frequency spot FX impacts of 1 standard deviation data surprises.

**Composite Index of Leading Indicators (U.S. Conference Board):** The Composite Index of Leading Indicators (U.S. Conference Board) is used to help predict the overall condition of the U.S. economy.

**ICE BofAML USD 3-Month Deposit Offered Rate Constant Maturity Index:** The ICE BofAML USD 3-Month Deposit Offered Rate Constant Maturity Index is an unmanaged index that tracks the total-return performance of U.S. Treasury securities maturing in 90 days.

**Industrial Production Index:** The Industrial Production Index is an economic indicator published by the Federal Reserve Board of the U.S. that measures the real production output of manufacturing, mining and utilities. Production indexes are computed mainly as Fisher indexes, with the weights based on annual estimates of value added.

**JP Morgan EMBI Global Diversified Index:** The J.P. Morgan EMBI Global Diversified Index is a benchmark index for measuring the total-return performance of international government bonds issued by emerging-market countries that are considered sovereign (issued in something other than local currency) and that meet specific liquidity and structural requirements.

**JP Morgan GBI EM Global Diversified Index:** The JPMorgan GBI EM Global Diversified Index tracks the performance of debt instruments issued in domestic currencies by emerging market governments.

**MSCI EAFE Index:** The MSCI EAFE Index is an unmanaged, market-capitalization-weighted equity index that represents the developed world outside North America.

**MSCI Emerging Markets Index:** The MSCI Emerging Markets Index is a free float-adjusted market-capitalization-weighted index designed to measure the performance of global emerging-market equities.

**MSCI Europe ex-UK Index:** The MSCI Europe ex-UK Index is a free float-adjusted market-capitalization-weighted index that captures large- and mid-cap representation across 14 developed-market countries in Europe (Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden and Switzerland). The Index covers approximately 85% of the free float-adjusted market capitalization across European developed markets excluding the U.K.

**MSCI World Index:** The MSCI World Index is a free float-adjusted market-capitalization-weighted index that is designed to measure the equity-market performance of developed markets. The Index consists of 24 developed-market country indexes.

**MSCI World ex-USA Index:** The MSCI World ex-USA Index is designed to measure the performance of the large- and mid-cap segments of 22 out of 23 developed-market countries (not including the U.S.) and 24 emerging-market countries.

**Purchasing Managers' Index (PMI):** The PMI is an indicator of economic health for manufacturing and service sectors. Its purpose is to provide information about current business conditions to company decision makers, analysts and purchasing managers.

**Russell 1000 Index:** The Russell 1000 Index includes 1,000 of the largest U.S. equity securities based on market cap and current index membership; it is used to measure the activity of the U.S. large-cap equity market.

**Russell 2000 Index:** The Russell 2000 Index includes 2000 small-cap U.S. equity names and is used to measure the activity of the U.S. small-cap equity market.

**S&P 500 Index:** The S&P 500 Index is an unmanaged, market-weighted index that consists of 500 of the largest publicly-traded U.S. companies and is considered representative of the broad U.S. stock market.

**St. Louis Fed Financial Stress Index:** The St. Louis Fed Financial Stress Index measures the degree of financial stress in the markets and is constructed from 18 weekly data series, including seven interest-rate series, six yield spreads, and five other indicators. Each of these variables captures some aspect of financial stress. Accordingly, as the level of financial stress in the economy changes, the data series are likely to move together.

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*There are risks involved with investing, including loss of principal. International investments may involve risk of capital loss from unfavorable fluctuation in currency values, from differences in generally accepted accounting principles or from economic or political instability in other nations. Emerging markets involve heightened risks related to the same factors as well as increased volatility and lower trading volume.*

*Narrowly focused investments and smaller companies typically exhibit higher volatility. Bonds and bond funds will decrease in value as interest rates rise. High-yield bonds involve greater risks of default or downgrade and are more volatile than investment-grade securities, due to the speculative nature of their investments.*

*Past performance does not guarantee future results. Index returns are for illustrative purposes only and do not represent actual portfolio performance. Index returns do not reflect any management fees, transaction costs or expenses. One cannot invest directly in an index.*

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