Global Market Outlook for 2018
An End or a Beginning?
2017 was a particularly strong year, with broad growth and low inflation creating an almost perfect environment for equity investors. Technology was a significant part of that story. Bitcoin reached $17,000, an increase of over 1,600% since January 1. China, which is transforming into one of the most innovative countries in the world, had one of the most interesting runs we have seen for a while. And there were other less obvious but notable areas of strong price action: Salvator Mundi, a painting of Christ by Leonardo da Vinci, sold for $450 million, and Paul Newman’s Rolex Daytona was the most expensive watch ever sold at auction at about $18 million. Because that kind of price action normally occurs further into a cycle, it is difficult not to think that we are near the end of something. But when we look at some of the themes dominating the markets in 2017, we are clearly at the beginning in many ways.
In This Piece

Looking Back: 2017
• Risk assets led the markets, with emerging markets the strongest performers.
• Underpinning this performance was a broadening of growth in both developed and emerging markets, which we have not seen in more than a decade.
• Returns were driven predominantly by corporate earnings growth.

The Technology Story: Structural and Here to Stay
• Technology is a trend that will likely set the agenda in 2018 and beyond.
• Technology companies have been among the strongest generators and growers of cash flow in both developed and emerging markets.
• Growth in technology is not the result of hype: Something more structural is afoot.

Looking Ahead: Trade-off Between Interest Rates and Growth Less Favorable
• Since 2017 was one of the best years in recent history in terms of economic growth, corporate performance, and equity-market performance, it is natural to ask where we go from here.
• We believe the trade-off between interest rates and growth will likely be marginally less favorable in 2018.
• We do not believe that a deceleration in growth is imminent, but interest rates are likely to begin rising in the United States.

The United States: Where to From Here?
• We appear to be on the cusp of a significant corporate tax cut, and domestic sectors should benefit disproportionately.
• We should also consider the longer-term impact of tax cuts on debt levels.
• The other key component of U.S. growth is the dollar, which we expect to remain stable.

China: From Smokestack to Labtech
• China is transitioning into an innovative, digitally led economy.
• The number of technology graduates, ample venture-capital funding, and tax credits all support Chinese innovation.
• China is under-represented in global equity indices relative to its economic influence, leading us to believe that China’s weight in global benchmarks—and thus its relevance to investors—will increase materially.

Artificial Intelligence’s Coming of Age
• Artificial intelligence is disrupting existing business models, placing new demands on infrastructure, and breaking down societal institutions.
• Most of the potential is largely untapped, and the change across global industries will be drastic.
• However, there are definitive and lasting limitations: Humans will still be relevant.

Being Mindful as We Look Ahead
• It is important to understand the nature of the economic cycle and how far we are into it.
• We are beginning to see signs that we are in the sixth or seventh inning.
• When change comes, it will likely be difficult, because we have been shielded from negative economic and market forces for some time.

This paper is adapted from our annual client event.

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Looking Back: 2017

It was a year characterized by strong and accelerating global economic growth. The broadening nature of growth was particularly noteworthy, as evidenced by strengthening industrial production volumes across the world. Corporate earnings results were bolstered by the expanding economic environment, providing a tailwind for investors. Beyond improving corporate performance, major national elections, especially in Europe, produced outcomes favorable for continued growth.

Risk assets led the markets, as figure 1 illustrates. Emerging markets—which received oxygen from a weak U.S. dollar—performed the strongest, returning 34.2% year to date as of November 29, 2017. Developed markets also performed well, returning 20.1% year to date.

China drove emerging markets’ performance with a return of 50.2%, but was followed by Poland (49.0%), Korea (46.1%), Peru (39.2%), India (38.1%), and Hungary (32.3%).

From a sector perspective, technology led the MSCI ACWI Investable Market Index (IMI). Semiconductors and equipment returned 43.2%, software and services 40.6%, and technology hardware and equipment, 39.8%. Consumer sectors also performed well, with consumer services returning 29.0% and consumer durables and apparel returning 28.5%.

Within fixed income, high-yield bonds outperformed investment-grade bonds. Meanwhile, oil had a weak start but came back in the second half of the year; the opposite was the case with gold, which had a strong first half but weakened in the second half.

“In 2017, returns were driven predominantly by corporate earnings growth (versus valuation, or, in professional parlance, multiple expansion).”

— Olga Bitel

Figure 1:
Strong Returns from Risk Assets

<table>
<thead>
<tr>
<th></th>
<th>YTD (%)</th>
<th>First-Half 2017 (%)</th>
<th>Second-Half 2017 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emerging Markets</td>
<td>34.2</td>
<td>18.1</td>
<td>13.7</td>
</tr>
<tr>
<td>Developed Markets</td>
<td>20.1</td>
<td>10.5</td>
<td>8.6</td>
</tr>
<tr>
<td>Gold</td>
<td>11.1</td>
<td>8.2</td>
<td>2.6</td>
</tr>
<tr>
<td>Global High-Yield Bonds</td>
<td>9.8</td>
<td>6.5</td>
<td>3.1</td>
</tr>
<tr>
<td>Global Investment-Grade Bonds</td>
<td>8.2</td>
<td>5.2</td>
<td>2.9</td>
</tr>
<tr>
<td>Global Sovereign Bonds</td>
<td>6.7</td>
<td>4.3</td>
<td>2.3</td>
</tr>
<tr>
<td>Oil</td>
<td>-14.3</td>
<td>-6.4</td>
<td>-2.7</td>
</tr>
<tr>
<td>U.S. Dollar</td>
<td>-8.9</td>
<td>-6.4</td>
<td>-2.7</td>
</tr>
</tbody>
</table>

Source: Bloomberg, MSCI ACWI IMI, as of November 29, 2017. Past performance is no guarantee of future results.
Underpinning this performance was a broadening of growth in both developed and emerging markets, which we have not seen in more than a decade. As growth broadened, it also strengthened. Year-over-year growth in industrial production volumes, a proxy for growth, ranged from 3% in the United States to 8% in Brazil.

When global growth drives expansion, it shows up in corporate earnings. In 2017, returns were driven predominantly by corporate earnings growth (versus valuation, or, in professional parlance, multiple expansion), as figure 2 illustrates.

That is not to say we did not see any multiple expansion. Delving deeper into the sectoral composition of returns, we did indeed see it, in Europe and the United States, where the economic expansion cycle is further along. There, valuations have moved up, as we would expect in response to stronger growth performance. Figure 3 illustrates.
The Technology Story: Structural and Here to Stay

While the strength and breadth of growth in 2017 have been significant, there are a number of other trends that might set the agenda in 2018 and beyond, and technology is one of them. Certainly, Bitcoin is part of that discussion. Many believe Bitcoin is a bubble, but I like to joke that the definition of a bubble is something going up that we do not own. And blockchain, the distributive technology behind Bitcoin, is very disruptive.

Artificial intelligence was also a theme in 2017. In Saudi Arabia, Sophia became the first robotic citizen. AlphaGo Zero, a self-learning program that was taught only the rules of chess, beat all grand masters within 24 hours. Factory automation and robotics have been some of the strongest equity-market performers. The importance of this is difficult to overstate. Self-learning—a field of computer science that gives computers the ability to learn without being explicitly programmed—will have significant implications that we do not want to overlook.

Moreover, some of the strongest generators of cash flow return on invested capital (CFROIC) in 2017 were within technology: technology hardware and equipment and semiconductors and equipment, as figure 4 illustrates. They were also among the fastest growers of cash flow, in both developed and emerging markets, as figure 5 illustrates. Clearly, then, growth in the technology space is not the result of hype, as it was in the 1990s. Something more significant and structural is afoot, which the market has recognized and rewarded.

“Self-learning ... will have significant implications that we do not want to overlook.”
—Simon Fennell

Figure 4:
Strongest Generators of CFROIC in 2017 (Market Cap Weight)

<table>
<thead>
<tr>
<th>Developed Markets</th>
<th>Developed Markets</th>
<th>Emerging Markets</th>
<th>Emerging Markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software and Services 27.3%</td>
<td>Energy 25.7%</td>
<td>Insurance 18.7%</td>
<td>Consumer Services 18.7%</td>
</tr>
<tr>
<td>Retailing 27.1%</td>
<td>Diversified Financials 14.1%</td>
<td>Household and Personal Products 37.2%</td>
<td>Banks 18.6%</td>
</tr>
<tr>
<td>Technology Hardware and Equipment 22.0%</td>
<td>Capital Goods 14.0%</td>
<td>Semiconductors and Equipment 31.0%</td>
<td>Food and Staples Retailing 14.4%</td>
</tr>
<tr>
<td>Consumer Services 21.8%</td>
<td>Semiconductors and Equipment 11.1%</td>
<td>Software and Services 27.6%</td>
<td>Software and Services 12.9%</td>
</tr>
<tr>
<td>Semiconductors and Equipment 21.8%</td>
<td>Healthcare Equipment and Services 6.8%</td>
<td>Consumer Services 25.0%</td>
<td>Durables and Apparel 12.8%</td>
</tr>
<tr>
<td>Household and Personal Products 21.2%</td>
<td>Technology Hardware and Equipment 3.4%</td>
<td>Telecommunication Services 24.5%</td>
<td>Insurance 11.9%</td>
</tr>
<tr>
<td>Food and Staples Retailing 20.1%</td>
<td>Pharma Biotech and Life Sciences 3.3%</td>
<td>Food and Staples Retailing 23.0%</td>
<td>Automobiles and Components 9.8%</td>
</tr>
<tr>
<td>Insurance 19.2%</td>
<td>Durables and Apparel 2.9%</td>
<td>Technology Hardware and Equipment 19.9%</td>
<td>Retailing 9.7%</td>
</tr>
<tr>
<td>Commercial and Professional Services 18.4%</td>
<td>Commercial and Professional Services 1.8%</td>
<td>Food, Beverage, and Tobacco 19.6%</td>
<td>Semiconductors and Equipment 8.3%</td>
</tr>
<tr>
<td>Durables and Apparel 18.4%</td>
<td>Food and Staples Retailing 0.7%</td>
<td>Durables and Apparel 16.7%</td>
<td>Food, Beverage, and Tobacco 6.8%</td>
</tr>
</tbody>
</table>

Source: MSCI, as of November 27, 2017. CFROIC is cash flow return on invested capital.
Looking more specifically at emerging markets, as shown in figure 6, we see a similar picture. In 2005, returns were broadly dispersed across a number of industries. In 2017, technology dominated the top 10 industry groups. Software and services, media, technology hardware and equipment, and semiconductors and equipment had the highest returns. Consumer services came in fifth. Again, something structural is clearly occurring.

Whatever is happening, it is not a new development; it has been occurring for quite some time. As figure 7 shows, the technology sector has been increasing in the MSCI Emerging Markets Index for six years. Two large and dominant companies, Alibaba and Tencent, together account for about 10% of the index, but the change in the technology composition of the index is not exclusively due to these two companies; there are many companies in emerging markets, particularly China, that are at the forefront of the technology revolution. In the United States, we look to them for innovative solutions across a number of industries. It is an exciting market segment for active investors.

That is not to say emerging markets are a homogeneous group. All of these countries face different macroeconomic issues: elections in Mexico and Brazil, monetary policy in Turkey, bank recapitalization in India, higher oil prices and ongoing banking-sector consolidation in Russia. As a result, their returns will be driven by country-specific, idiosyncratic factors that will continue to be important.

**Figure 6:**
Emerging Market Equity Returns by Industry Group

<table>
<thead>
<tr>
<th>Top 10 Industry Groups in 2005</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>55.89%</td>
</tr>
<tr>
<td>Food and Staples Retailing</td>
<td>39.14%</td>
</tr>
<tr>
<td>Automobiles and Components</td>
<td>33.18%</td>
</tr>
<tr>
<td>Pharmaceuticals, Biotechnology, and Life Sciences</td>
<td>32.16%</td>
</tr>
<tr>
<td>Commercial and Professional Services</td>
<td>32.13%</td>
</tr>
<tr>
<td>Food, Beverage, and Tobacco</td>
<td>31.93%</td>
</tr>
<tr>
<td>Utilities</td>
<td>30.17%</td>
</tr>
<tr>
<td>Banks</td>
<td>28.32%</td>
</tr>
<tr>
<td>Diversified Financials</td>
<td>26.23%</td>
</tr>
<tr>
<td>Semiconductors and Equipment</td>
<td>25.56%</td>
</tr>
</tbody>
</table>

Source: MSCI, as of November 25, 2005, for 2005 data.

<table>
<thead>
<tr>
<th>Top 10 Industry Groups in 2017</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Software and Services</td>
<td>79.61%</td>
</tr>
<tr>
<td>Media</td>
<td>60.18%</td>
</tr>
<tr>
<td>Technology Hardware and Equipment</td>
<td>54.29%</td>
</tr>
<tr>
<td>Semiconductors and Equipment</td>
<td>52.59%</td>
</tr>
<tr>
<td>Consumer Services</td>
<td>46.53%</td>
</tr>
<tr>
<td>Insurance</td>
<td>44.43%</td>
</tr>
<tr>
<td>Pharmaceuticals, Biotechnology, and Life Sciences</td>
<td>35.74%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>35.60%</td>
</tr>
<tr>
<td>Household and Personal Products</td>
<td>31.59%</td>
</tr>
<tr>
<td>Automobiles and Components</td>
<td>31.36%</td>
</tr>
</tbody>
</table>

Source: MSCI, as of November 27, 2017, for 2017 data. Past performance is no guarantee of future results.

“Something more significant and structural is afoot, which the market has recognized and rewarded.”
— Olga Bitel
**Looking Ahead: Trade-off Between Interest Rates and Growth Less Favorable**

Since 2017 was one of the best years in recent history in terms of economic growth, corporate performance, and equity-market performance, it is natural to ask where we go from here.

Looking ahead, we believe the trade-off between interest rates and growth will likely be marginally less favorable. Comparing the global manufacturing purchasing managers index (PMI), which is a proxy for economic growth, to the 10-year U.S. Treasury yield, as we do in figure 8, we see that a measurable gap has opened. In other words, the fixed-income markets have not appreciated the magnitude and breadth of economic growth. Either growth must decelerate or interest rates must rise.

We do not believe that a deceleration in growth is imminent, but interest rates are likely to begin rising in the United States, so it is worth thinking about the impact. In 2017 there were three periods of rising interest rates, as figure 9 illustrates. During those periods, we saw a rotation in the market away from growth and toward more value. This is not surprising; what is interesting is that these moves toward value have not been long-lasting. Once market participants and companies adjusted to higher interest rates, growth resumed. In other words, economic growth ultimately prevailed in terms of return generation. We expect that to be the case in 2018 given the marginally less favorable trade-off between interest rates and growth.
The United States: Where to From Here?

Looking at regions more specifically, in the United States, we appear to be on the cusp of a significant corporate tax cut. Figure 10 shows which industries are most likely to be positively affected by the change. As shown, most domestic sectors, such as retail, telecommunications, and utilities, which have had a relatively high marginal tax rate, will benefit disproportionately from a corporate tax cut. It is not surprising, then, that we have recently seen a rotation in U.S. equity-market performance away from high-tech, fast-growing companies and those with significant exports (which already enjoy relatively low tax rates) toward more domestic sectors.

Beyond the near-term stimulative effect of tax cuts, we should also consider their longer-term impact on debt levels and the sustainability of accumulated debt. As figure 11 illustrates, the Congressional Budget Office (CBO) projects that at some point in the next five years, we will cross the 85% ratio of debt to gross domestic product. This is a significant threshold because empirical studies suggest that at this level, we will begin to observe a meaningful slowdown in economic activity. We do not know whether that will happen, but we should be mindful of it.

Figure 10:
Current Effective Tax Rate by Industry Group

<table>
<thead>
<tr>
<th>Developed Markets</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Retailing</td>
<td>35.0%</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>33.7%</td>
</tr>
<tr>
<td>Industrial Services</td>
<td>32.5%</td>
</tr>
<tr>
<td>Utilities</td>
<td>31.5%</td>
</tr>
<tr>
<td>Staples Retailing</td>
<td>31.3%</td>
</tr>
<tr>
<td>Healthcare Equipment and Services</td>
<td>30.2%</td>
</tr>
<tr>
<td>Materials</td>
<td>29.8%</td>
</tr>
<tr>
<td>Diversified Financials</td>
<td>29.3%</td>
</tr>
<tr>
<td>Media</td>
<td>29.1%</td>
</tr>
<tr>
<td>Transportation</td>
<td>28.8%</td>
</tr>
<tr>
<td>Banks</td>
<td>28.6%</td>
</tr>
<tr>
<td>Food, Beverage, and Tobacco</td>
<td>27.8%</td>
</tr>
<tr>
<td>Consumer Services</td>
<td>27.5%</td>
</tr>
<tr>
<td>Household and Personal Products</td>
<td>27.0%</td>
</tr>
<tr>
<td>Capital Goods</td>
<td>26.7%</td>
</tr>
<tr>
<td>S&amp;P 500 Index</td>
<td>26.2%</td>
</tr>
<tr>
<td>Consumer Durables</td>
<td>23.3%</td>
</tr>
<tr>
<td>Insurance</td>
<td>23.0%</td>
</tr>
<tr>
<td>Technology Hardware</td>
<td>22.8%</td>
</tr>
<tr>
<td>Software and Services</td>
<td>19.8%</td>
</tr>
<tr>
<td>Semis</td>
<td>19.3%</td>
</tr>
<tr>
<td>Pharmaceuticals and Biotechnology</td>
<td>18.9%</td>
</tr>
<tr>
<td>Autos</td>
<td>17.1%</td>
</tr>
<tr>
<td>Energy</td>
<td>14.9%</td>
</tr>
<tr>
<td>REITs</td>
<td>3.5%</td>
</tr>
</tbody>
</table>

Source: Credit Suisse, as of November 30, 2017.

Figure 11:
Estimated Debt as a Percentage of GDP

Source: Congressional Budget Office, as of November 30, 2017.
The other key component of U.S. growth is the dollar. It was relatively weaker this year, providing oxygen to emerging markets. To understand how it will perform in 2018, we can consider three levers of exchange rates: the economic growth differential between trading partners, the yield differential between trading partners, and liquidity (how many dollars flow abroad to power international trade). By all three of these measures, we see a continuation of current trends, as figures 12, 13, and 14 illustrate. So, we expect the U.S. dollar to remain stable at current levels, rising only marginally depending on net flows between incoming capital and the amount of debt the U.S. Treasury issues next year.

**Figure 12:**
Growth Differential

![Growth Differential Graph](image)

Source: Bloomberg, as of November 30, 2017. EA refers to euro area.

**Figure 13:**
Yield Differential

![Yield Differential Graph](image)

Source: Bloomberg, as of November 30, 2017. EA refers to euro area.

**Figure 14:**
U.S. Dollar Liquidity (in Billions)

![Liquidity Graph](image)

Source: Bloomberg, as of November 30, 2017.
China: From Smokestack to Labtech

China is commonly characterized as a smokestack economy, addicted to debt, infrastructure investment, cheap manual labor, low-value exports, and polluting industries. But that is changing, as China’s 2017 equity-market return of 50% suggests. The challenge: Can China justify those returns and make the aggressive leap into an innovative, digitally led economy?

Growth in the country’s population and change in its demographics are often discussed, but China is also dominating the world in internet usage, with 731 million users in 2017 versus just 434 million in the European Union, 432 million in India, and 237 million in the United States. Tencent’s WeChat, the popular Chinese chat app, has surpassed 700 million users, quickly catching up to Facebook’s Messenger and WhatsApp.

Scaling across a user base of hundreds of millions has led to innovation in business models. Consider, for example, that online payment companies Tenpay and Alipay are now encroaching on (even surpassing) the number of online payments seen by Visa and MasterCard, Figure 15 illustrates.

The opportunity to gain exposure to these companies, which we see as both self-funding and self-growing, is important to us as investors. The story is no longer about “Made in China” but rather “Invented in China.”

The number of Chinese science, technology, engineering, and mathematics graduates should support this transformation: 4.7 million in 2016, according to McKinsey Global Institute, versus 2.6 million for India and 568,000 for the United States.

Ample funding is available to innovative Chinese companies. Although the United States received the most venture capital in 2016 in virtual reality, autonomous driving, artificial intelligence, and robotics, China was not far behind—and it received the most in financial technology. Figure 16 illustrates.

The story is no longer about ‘Made in China’ but rather ‘Invented in China.’
— Simon Fennell

Figure 16:
Venture Capital Investment by Technology (in Billions)

Financial Technology

Virtual Reality

Robotics and Drones

Artificial Intelligence

Autonomous Driving

Source: UBS, as of December 31, 2016. References to specific companies are provided for illustrative purposes only and should not be interpreted as an investment recommendation to buy or sell any security.
Also supporting Chinese innovation are tax credits. Certified high-technology and new-technology companies could receive a preferential income tax rate of 15%, 10 percentage points lower than the statutory rate of 25%. There is also a 150% tax deduction for eligible research-and-development expenditures.

Lastly, China has one of the largest, most liquid, and fastest-growing equity markets in the world. The Shanghai and Shenzhen stock exchanges list 3,500 companies with an aggregate market capitalization of $7.5 trillion, as shown in figure 17. This market cap is second only to those of the New York Stock Exchange and Nasdaq, and multiple times larger than other major emerging markets, such as South Korea and Taiwan.

Yet China is under-represented in global equity indices relative to its economic influence, as shown in figure 18. China accounts for a substantial part of the world in terms of economic influence: 15% of global gross domestic product, 11% of global trade, and 11% of global consumption. Yet China composes just 3% of the All Country World Index (ACWI). Additionally, when MSCI includes China A-Shares in its indices in June 2018, they will represent just 1% of the MSCI Emerging Markets Index and 0.1% of the MSCI ACWI. This leads us to believe that China’s weight in global benchmarks—and thus its relevance to investors—will increase materially over the next decade.

“China has one of the largest, most liquid, and fastest-growing equity markets in the world. … Yet China is under-represented in global equity indices relative to its economic influence.”

— Simon Fennell
Artificial Intelligence’s Coming of Age

Any discussion of innovation would be incomplete without touching on artificial intelligence. Perception, cognition, visualization, and language processing are all becoming central to corporate innovation. That is disrupting existing business models, placing new demands on infrastructure, and even breaking down societal institutions. Not all of these changes are positive, but understanding artificial intelligence is important for us as investors.

We see artificial intelligence everywhere. In energy, it is helping us understand how we can use the grid more efficiently. In manufacturing, it is increasing use of 3-D printing. And consider that machines can already detect errors in vision and speech faster than humans can, as figure 19 illustrates. This has vast implications in areas such as medicine, where the visual element of cancer diagnosis could no longer be conducted by humans. Even at William Blair, we look to machine learning to try to help us understand moves in markets and to make us better investors.

Artificial intelligence requires exponentially more processing power, and that is one reason we have seen semiconductors and equipment rewarded by the market. But valuation is important. The pixie dust from Silicon Valley is very influential, and we do not want to get carried away in pursuing investment opportunities.

Still, most of the potential from artificial intelligence remains largely untapped. What we are living through today is not unlike the machinery revolutions we have experienced in the past. Consider electricity, the steam engine, and more recently the proliferation of desktop computing in the 1980s.

With artificial intelligence, the level and breadth of change across global industries are likely to be similar. Competitive sets will change drastically.

But there is no accepted blueprint. Every industry, every company, every manager must find a way to adopt and adapt to artificial intelligence. As a result, the process will be slow. This is one reason, from an economic perspective, we are seeing low productivity (as shown in figure 20) and low wage growth even though economic growth is strong. Again, this is not an accident. We have seen it before, during the industrial revolution. Once the proliferation of a technology is substantial enough—when more than 50% of companies have adopted it—productivity growth emerges in spades, and with that, wage growth appears. But we are not there yet. The share of artificial intelligence’s potential value captured is just 5% in manufacturing, 10% in U.S. healthcare, 15% in the European Union public sector, 25% in location-targeted mobile advertising services, and 30% in U.S. retail.
As excited as we are about artificial intelligence, we do not want to overhype it. There are definitive and lasting limitations. For example, machines trained to perform detail-specific tasks already perform better than humans. But their knowledge does not generalize. A machine may perform one task well, but that does not mean it will perform 10 other tasks well. There is something in the human brain that will not go away anytime soon.

Pablo Picasso expressed it as, “[Computers] are useless. They only give you answers.” We do not believe that computers are useless, but agree that they cannot pose questions. And progress, throughout history, has been driven by questions—by people probing for the next exciting topic to explore. So entrepreneurs, innovators, scientists, and creators will continue to prosper. Technology will simply help answer their questions and free them to begin asking new ones.

“**There is something in the human brain that will not go away anytime soon. … Entrepreneurs, innovators, scientists, and creators will continue to prosper.**”

— Olga Bitel

Robots also cannot replace human connection. You may have seen Sophia, the latest empathetic robot, in YouTube videos. Clearly, robots today can recognize the human state—whether we are happy or sad—increasingly well. But they can do little to change that state. We are a social species: we rely on others to motivate us, shame us, propel us forward. That, certainly, will remain in the purview of human endeavors.

U.S. retail, one of the first industries to be disrupted by artificial intelligence, provides a good example of how unlikely humans are to be replaced by machines is. Employment in U.S. retail is at a seven-decade high, as figure 21 illustrates. Employment in e-commerce sectors—those supposedly dominated by artificial intelligence—is growing much faster than general retail, as figure 22 illustrates. However mechanized a retail company is, it still relies on people, and these people are much more productive than they would be in the absence of the machines. That is why, despite rapid employment growth in e-commerce, we are also seeing significantly higher wage growth compared to general retail, as figure 23 illustrates. This suggests that machines will not make us redundant, but will enhance our capabilities and make us more productive.
Still, there is a darker side to artificial intelligence, the ramifications of which we are just now experiencing.

Earlier in the decade, there was much discussion about ground-up democracy in the form of social media galvanizing popular movements and making political change possible in Egypt and Ukraine. More recently we have experienced similar societal trends with the Trump campaign and Brexit.

Social media companies gather and generate a tremendous amount of data, and they use that data to tweak and promote content so it goes viral. They are happy to monetize that knowledge by selling it to advertisers and political campaigns. It is not an accident that during the Brexit referendum this methodology was used extensively by the “Leave” campaign, which generated more than 1 billion Facebook messages designed to drive its desired outcome. The Trump campaign took this strategy to another level, averaging between 50,000 and 60,000 messages per day. Targeting is so specific, it can pinpoint a dozen people in a particular jurisdiction who are likely to respond to a message. This is affecting the information we consume, and ultimately, the decisions we make.

Not surprisingly, we are beginning to see a backlash against the way social media companies use data. A bill currently in Congress, the Honest Ads Act, would require internet companies to disclose more about their advertisers and store copies of all political ads for the public to view. Essentially, it wants social media to be held to the same standards as other forms of media, be it print, television, or radio. But many people believe that does not go far enough. In Germany, for example, social media sites must either take down fake news and hateful content within 24 hours of its appearance or pay a €50 million fine.

There are even more radical proposals on the table, such as social media companies changing their business models so they receive revenue not from advertisers and purchasers of proprietary information but subscriptions. Some even want social media companies to be regulated like public utilities. We are likely to hear more about this in the years to come.

Being Mindful as We Look Ahead

We are trying to understand these forces and use our understanding to position our portfolios. The synchronized global recovery is well understood, and global growth remains firm. For us, though, it is important to understand the nature of the cycle and how far we are into it. There are signs—including the sale of Leonardo da Vinci’s Salvator Mundi and Paul Newman’s Rolex Daytona—that suggest we are in the sixth or seventh inning.

The low-volatility regimes we have experienced in the equity and fixed-income markets carry potential risks. When change comes, it will likely be difficult, because we have been shielded from natural cyclical behavior—from negative economic and market forces—for some time.

Sudden inflationary pressures and wage growth acceleration would alter investor return expectations, driving bond yields and volatility materially higher, while potentially triggering equity-leadership rotation both across and within sectors. Financials would be expected to benefit from higher rates, but increased caution would be warranted for financially leveraged companies. We want to be mindful of this.

Returning to some of the themes we discussed earlier—technology and the rise of innovation in China—we are optimistic. Despite the growing likelihood of a cyclical slowdown within the technology sector, we believe that strong secular growth will continue.

From a geographic perspective, we believe that emerging markets continue to offer attractive investment opportunities heading into 2018. In particular, there are abundant opportunities to invest in China’s growth, but we are mindful of the significant share-price gains in 2017 from the perspective of near-term momentum reversal risk.

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— Simon Fennell
Global Market Outlook for 2018: An End or a Beginning?
What We Are Reading and Listening To

Books
The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies | Erik Brynjolfsson and Andrew McAfee
The Sting of the Wild | Justin O. Schmidt
The Four: The Hidden DNA of Amazon, Apple, Facebook, and Google | Scott Galloway
The Future of War: A History | Lawrence Freedman
Shoe Dog: A Memoir by the Creator of Nike | Phil Knight
Scale: The Universal Laws of Growth, Innovation, Sustainability, and the Pace of Life in Organisms, Cities, Economies, and Companies | Geoffrey West
Leonardo da Vinci | Walter Isaacson
Superforecasting: The Art and Science of Prediction | Philip E. Tetlock and Dan Gardner
The Black Swan: The Impact of the Highly Improbable | Nassim Nicholas Taleb
The Looting Machine: Warlords, Oligarchs, Corporations, Smugglers, and the Theft of Africa’s Wealth | Tom Burgi

Podcasts
The Whiskey Rebellion
The London School of Economics and Political Science Masters in Business with Barry Ritholtz
Curious Minds
Waking Up
The Hilarious World of Depression
HBR Ideacast
Lore
The Economist: Babbage
Revisionist History
Authors

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Simon Fennell is a portfolio manager for the International Growth, International Small Cap Growth, and International Leaders strategies. He joined William Blair in 2011 as a TMT research analyst focusing on idea generation and strategy more broadly. Before joining William Blair, Simon was a managing director in the equities division at Goldman Sachs in London and Boston, where he was responsible for institutional equity research coverage for European and international stocks. Previously, Simon was in the corporate finance group at Lehman Brothers in London and Hong Kong, working in the M&A and debt capital markets groups. Education: M.A., University of Edinburgh; MBA, Johnson Graduate School of Management, Cornell University.

Olga Bitel, Global Strategist
Olga Bitel joined William Blair in 2009. As Investment Management’s global strategist, she is responsible for economic research and analysis across all regions and sectors. She distills macroeconomic and geopolitical developments into actionable insights for global, international, and emerging market equity portfolios within a multifaceted strategic framework. Additionally, she provides insight on cyclical turning points and structural trends as inputs into portfolio construction in predominantly bottom-up investment approaches. Olga represents the firm with current and prospective clients in one-on-one settings, conference calls, and written communications. With her contributions to the William Blair “Investing Insights” blog, she is regularly quoted in the media. She is also a frequent speaker at major global investment conferences along with influential colleagues in the industry, heads of state, and global political figures. Before joining William Blair, Olga was a senior economist at the National Institute of Economic and Social Research in London, United Kingdom, where she produced macroeconomic forecasts for most Asian economies and led thematic research projects for some of the world’s best known international organizations including the Organization of Petroleum Exporting Countries (OPEC) and the International Monetary Fund (IMF), among others. Education: B.A., University of Chicago; M.Sc. economics, London School of Economics and Political Science.
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Index Definitions

The MSCI Emerging Markets Index consists of 24 countries representing 10% of world market capitalization. The MSCI World Index represents large- and mid-cap equity performance across 23 developed-markets countries. The MSCI ACWI represents mid- and large-cap countries across 23 developed markets and 24 emerging markets. The MSCI ACWI IMI represents small-, mid-, and large-cap countries across 20 developed markets and 24 emerging markets. Indices are unmanaged, do not incur fees and expenses, and cannot be invested in directly.

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