Investment Environment Committee Report- Spring 2016

David Newell, David Shoko, Julian Fung, Daniel Duarte, and Conlan Wilson

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Statement of Purpose

The Investment Environment Committee of the Bulldog Student Investment Fund produces a biannual top down examination of the domestic and global economy and sectors of particular interest to the members of the Fund. The objective of the report is to provide information on current and applicable economic trends and events. This information helps the Sector Pitch Teams and the Student Analysts as a whole to better evaluate the individual stocks that are pitched by the Student Analysts.

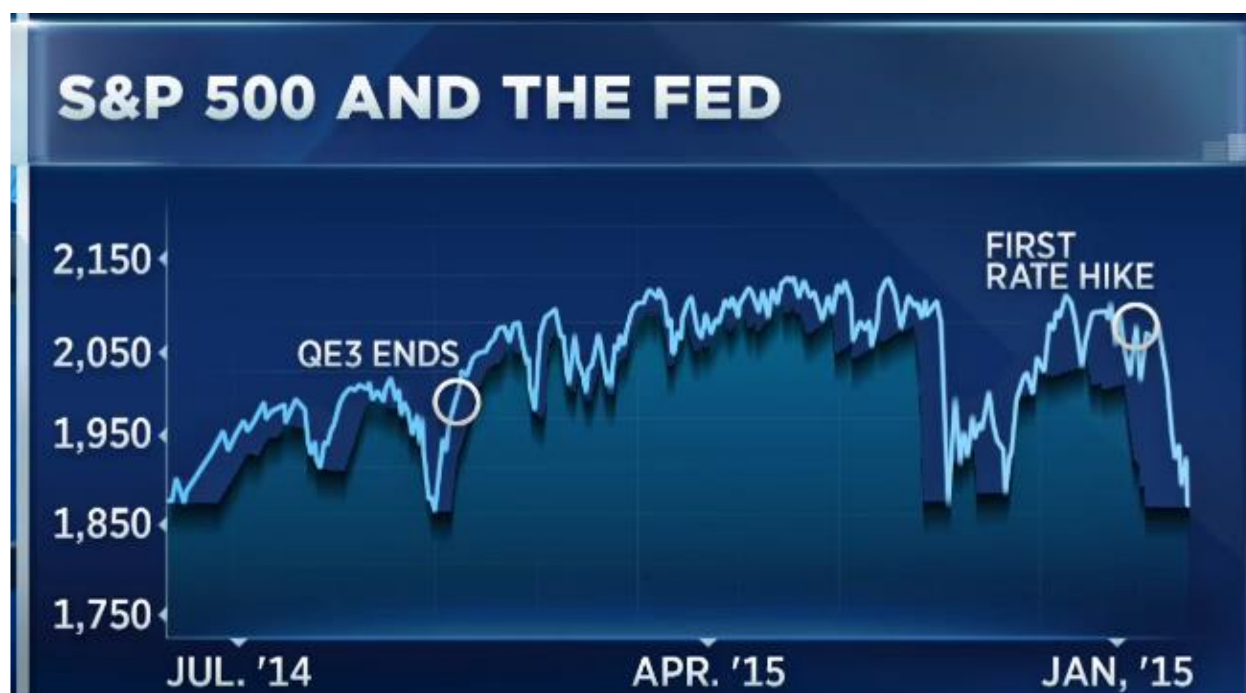
Federal Reserve

After a ten year wait, the Federal Reserve finally increased the Federal Fund target rate rates by 25 basis points (0.25%) to the range between 0.25-0.50%. This rate hike was backed by a strong job report that showed that the unemployment was at 5%, which close to the natural unemployment rate of 4.9%. Going into 2016, the market anticipated four rate hikes, but given the current market volatility, we anticipate that the Fed might raise rates once or twice for 2016. In a recent interview, the Boston Federal Reserve President said:

> *"Global and U.S. economic growth may be slipping and force the Federal Reserve into a more gradual course of rate hikes than officials currently expect"*
> **(Fox Business News)**

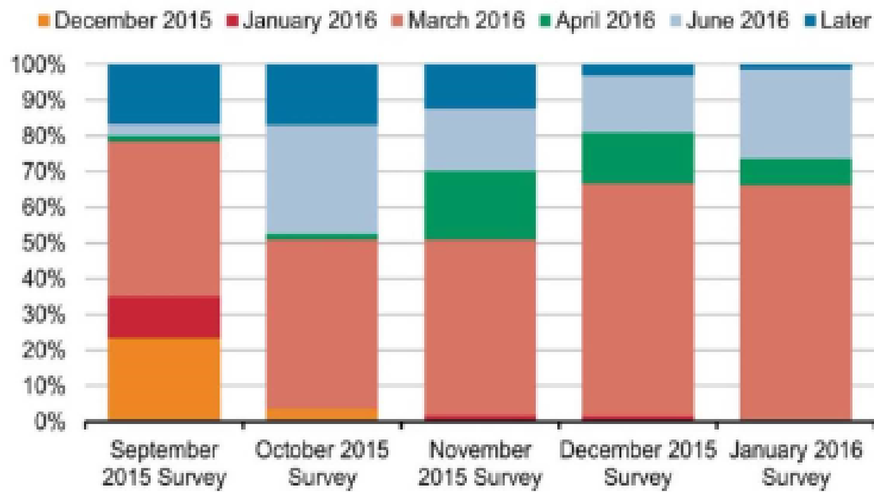
This underscores that the Federal Reserve is concerned with what is happening in China and the overall global weakness, which is already affecting the United States. The financial sector is now caught up in the Federal Reserve interest rate hike decision-making process. Banks such as Wells Fargo, Bank of America, and Citigroup need a substantial increase in interest rates for their earnings to grow. Many analysts forecast 2016 as the year when the banks will rally due to the interest rate hikes coming, the whole sector (which makes up between 15-20% of the S&P 500) has now traded up, and prices of equities in the financial sector will erase its gains if there is no significant increase in interest rates. Due to the prediction that we will probably see one (or two at most) rate hike(s) we suggest that we keep our asset allocation in the financial services as we are well diversified with Wells Fargo, PNC, Capital One and Everest Re Group.

Below is a chart that shows the relationship between the S&P 500 and the Federal Reserve decisions over the past 18 months:



(CNBC)

This shows that since QE3 there has been a lot of volatility for investors in the stock market and that presents a unique opportunity for the Fund. The Investment Environment Committee suggests that within the financial sector we can also look at companies that benefit from market volatility. Companies like Intercontinental Exchange and CME Group would be good investments as they benefit significantly from market volatility. To conclude, we do not foresee the Fed raising rates in January and most forecasters have a strong feeling that the next rate hike is in March. The polling survey by Wall Street Journal from the top economic forecasters suggests that the chance of a March rate is above 60%. The graph below looks at the probabilities of future rate hikes in 2016:



Source: (Wall Street Journal)

As a Committee, we think that a March rate hike is on the table, but the Federal Reserve is data-dependent. If there is soft economic data, we foresee the Federal Reserve raising rates late in the first half of the year (June) or in the second half of 2016.

Macroeconomic Regions Trends and Outlook

Domestic

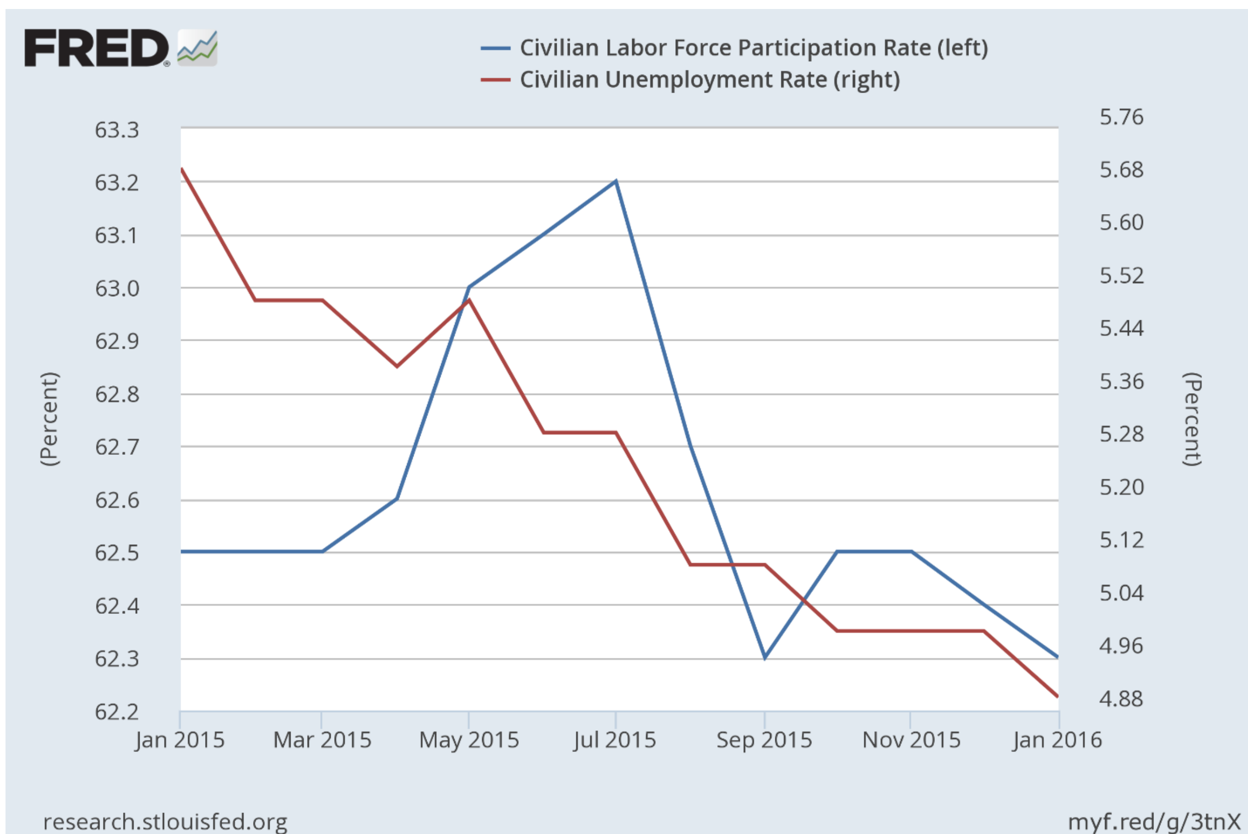
While the U.S. equity markets have pulled back into a bear market territory recently, the U.S. economy is still relatively strong.

Labor productivity grew at 2.2% annualized in Q3 2015, below the 3.5% growth in Q2 2015. This Q3 growth is above the ten-year average of 1.7% growth in past Q3s. The continuing growth in labor productivity bodes well for growth in wages, which will lead to growth in consumer spending. The continued growth in productivity will depend to heavily on continued and increasing growth in private non-residential investments.

Wages fell slightly during Q3, although total compensation grew during Q3 by an annualized 4% in Q3 although down from Q2 growth is still higher than ten-year average for all

quarters and for past ten Q3. The average hourly wage fell in December; however, it rose again in January.

Unemployment has fallen from 5.7% in January 2015 to 4.9% in January 2016, during the same period; the labor force participation rate has fallen from 62.5% to 62.3%. The labor force participation rate is well below the recent average; the last time the labor force participation rate was at 62.4% was in April of 1978. While the decline in the labor force participation rate has played a role in decreasing unemployment and indicates that there is more slack in the labor market currently than would normally be seen when unemployment is at 4.9%, there are other secular trends that help to explain the decline. One major trend is the retirement of baby boomers, the second largest generation in the U.S.; another trend is increasing education, in recent years individuals have increased the amount of time they spend in school to maintain their earning potential due to the erosion in value of high school diplomas, associate and bachelor degrees.



Source: St. Louis Federal Reserve Bank

The collapse in oil and natural gas prices has proved to be a mixed blessing to the U.S. economy. The U.S., in the past few years has become a major oil producer; on December 18th, 2015, Congress voted to allow the export of crude oil from the U.S. for the first time since 1978. In the past five years, energy production has become a larger component of the U.S. economy, providing a significant portion of new, high paying jobs created. Due to the increased prominence of the energy sector, the layoffs, and salary cuts for workers in the industry due to the low oil and natural gas prices has proved to be a headwind to improving labor markets. The layoffs, salary cuts, and decreased investment by energy firms have offset part of the benefit that lower gas prices have on consumers. Consumers have spent part of the saving from lower gas prices on new vehicles as seen with the increased sales of trucks and SUVs. In addition, the personal saving rate has been gradually increases since the fall of 2014, absorbing a significant fraction of the consumer surplus from lower energy prices.

The normalization of monetary policy by the Federal Reserve with the increase of the Federal Funds rates are positive for banks, however, for the larger economy has a couple of negative side effects. The divergence of the monetary policy of U.S. and other central banks including the Bank of Japan, the European Central Bank, and the People's Bank of China has led to the strengthening of the dollar compared to other currencies. The stronger dollar is reducing exports and reducing the earning of U.S. firms, as they need to bring their earning from abroad back to the U.S. dollar for reporting purposes.

Overall consumer spending is one of the bright spots in the U.S. economy consumer-spending rose 2.2% annualized in Q4 2015, 3.1% for the year as a whole, outpacing inflation. Spending on new homes and renovations of homes grew at 8.1% annualized in Q4 2015 down from Q1-Q3, for 2016 housing spending is expected to grow around 8% due to higher interest rates and supply and demand for homes approaching equilibrium. The stronger growth in consumer spending offset weak numbers in private nonresidential fixed investments such on plants, property, equipment and intellectual property, in Q4 private nonresidential fixed investments fell by 0.34%, although for 2015 it rose by 1.35%. Major contributors for the weak private investment growth include reduced investments for commodity production, primarily oil due to low prices and lower expectations for exports due to the strong dollar.

Although the U.S. economy is facing some headwinds, it is expected to continue to improve during 2016 unless there is a major adverse shock, although there are challenges for domestic equities due to decreasing firm profitability once share buybacks have been excluded.

Europe

A slow economic recovery is expected to continue throughout 2016 due to the slowdown in emerging economies and the recent sharp fall in global trade. The recovery has been mainly driven by a combination of factors including stronger consumption and the European Central Bank's willingness to continue and expand their expansionary monetary policy. While the European Union economy still benefits from those tailwinds, they are being more than offset from increased global uncertainty, geopolitical tensions, and the current state of emerging market economies, especially oil exporting countries. Normalization of U.S. monetary policy could have a negative effect in Europe due to the challenges that stronger dollar and higher U.S. interest rates pose to emerging markets could spill over into Europe through reduced demand for European exports and increased financial volatility.

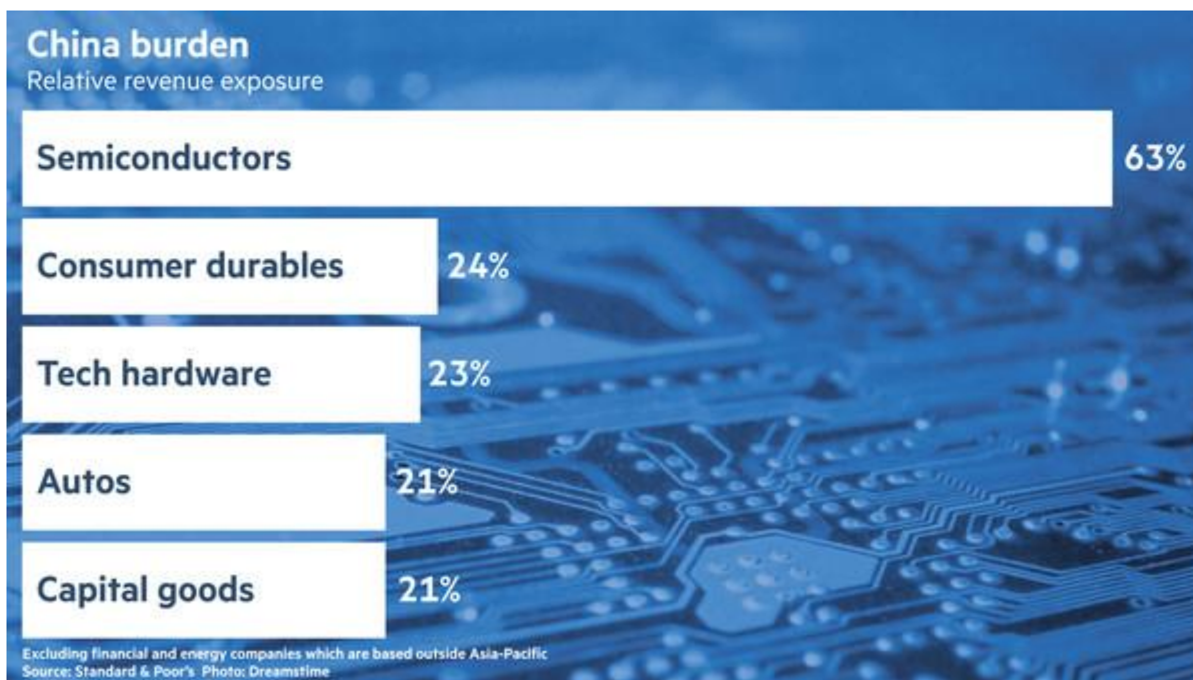
Annual inflation in the Eurozone for December 2015 was 0.2 percent, which increased from 0.1 percent in November. Even though it is still low, it has improved in comparison to the inflation rate recorded in the December of 2014 (-0.2 percent). The latest data released by the European Central Bank for December suggests that low inflation continues to be the major concern for officials at the ECB. Given that the sole mandate of the ECB is to maintain stable prices, the continuing disflation and even deflation in the Eurozone indicates accommodative monetary policy until inflation increases. As a result of the low inflation, measures to drive up inflation such as the Quantitative-Easing program launched in March of 2015 are expected to be expanded in upcoming months. In March, an expansion of the ECB's QE program is expected. The increase in purchases of bonds issued by EU member states is projected to be 10 billion Euros per month, bring the total purchases to 70 billion Euros per month. The objective is to ease longer duration lending conditions and stimulate consumption. Additionally the negative interest rates the ECB pays on deposits that banks place with the ECB is having major adverse side effects on bank earning in Europe. Interest rates remained very low, thus signaling that current monetary policy is having little effect on the economy and on driving up inflation rates to the 2 percent target. This implies that current external factors are putting pressure on inflation in the European Union such as the ultra-low oil prices.

Sources: Eurostat (inflation)

Overall, the economic outlook of the Eurozone economy improved in the previous years and seems to be on the path for its strongest economic expansion since 2010 although still below its prerecession growth rates. Domestic demand has been the strongest driver of the recovery aided by tailwinds such as low energy prices, the QE program, and the associated low interest rates. Aside from low inflation, the European economy still struggles with high unemployment especially in countries such as Spain and Italy. As it has been observed over the last months, major central banks will continue pursuing divergent policies given that the ECB will eventually expand its stimulus to the Euro area while the U.K. and the U.S remain on the path of low steady growth. The Bank of England has even considered starting moving interest rates up.

China

China is at the center of what can be considered one of its largest economic transitions in decades, as it strives to shift away from an export-driven to a consumption driven economy. China, the second largest economy in the world, is facing major headwinds and as a result is unable to sustain high growth rates for the past decades. Since the 1980s, China's growth rate averaged 10% a year. All aspects of a growth function – increases in labor, capital, and productivity – have been slowing down. China's working-age population peaked in 2012. Investments also appears to have topped out at nearly 50% of total GDP. Finally, China has also narrowed down the technological gap with rich countries, implying lower productivity growth moving forward. The IMF projects that the Chinses economy will grow at 6.3% in 2016 with its growth rate declining further in 2017. Due to the growth rate being below the current target of 6.5%, further actions by the Chinese's government is possible attempt stimulate the economy.



Relative global sector exposure Source: Standard & Poor's

This slowdown in China's economy is a cause for concern as it could further fuel market instability globally and drag down global growth. Premier Li Keqiang announced that the country has dimmed expectations for growth, setting 6.5% growth as a new floor instead of the 7% previously announced for the upcoming years until 2020. While global investors have taken a beating in the midst of uncertainty about China's economic growth, there are potentially larger, more insidious impacts that are looming around companies far beyond China's shores. Industries such as mining and automobile are extremely vulnerable to the slowdown. Outside of Asia, Latin America is particularly exposed, with 10% of its exports headed for China. In addition, the slowdown in China topped with the strengthening of the dollar has also caused the Chinese to lose confidence in the yuan, resulting in significant attempts to make foreign investments by Chinese nationals. This desperate search for safe havens outside of the country has caused China to sharpen its efforts to halt money outflow from the country. Its latest measures include forcing foreign companies in China to repatriate earnings, shrinking the pool of Chinese yuan available for banks in Hong Kong to make loans, and banning yuan based funds from foreign investments.

Andrew Roberts, head of credit at Royal Bank of Scotland, asserted that “China has set off a major correction and it is going to snowball.” As the saying goes, “when China sneezes, the world catches a cold,” the impact of China’s slowdown will have major implications on the rest of the world. On a positive note, while this shift is pinching heavy-construction equipment and industrial machinery manufacturers, the service sector remains reasonably robust and has become a dominant driver of China’s growth since 2012. The service sector includes a broad variety of industries including restaurants, hair salons, and hotels.

President Xi Jinping constructed a five-year plan to shift China’s economy to a consumption-driven economy with less central planning. The plan calls for increasing consumer spending and gradually raising the retirement age to hedge a labor force that is losing ground to an aging population. Beijing also eliminated its long-held policy limiting of Chinese parents to one child due to its aging population. This act of rebalancing – trying to become less dependent on investments and more reliant on consumption for its economic growth – is proving more difficult than expected. University of California San Diego professor Victor Shih said, “Unfortunately, I fully expect the priority of growth to supersede any reform or rebalancing.” Shih points out that though there have been shifts from heavy industry to other sectors, he does not really see many fundamental changes, as the Chinese are still laying out a comprehensive set of objectives, which are often against market logic.

IMF managing director Christine Lagarde says that the slowdown of growth is a phenomenon that was predicted, expected, anticipated, and the IMF believes that it is a good move. However, she adds, “There will be little bumps on the road because no transition can be made absolutely smooth without any disruption, without any volatility.”

Emerging Markets

The emerging market economies continues to face a few major challenges, the slowdown of the Chinese economy and the corresponding decline in commodity prices and the strong U.S. dollar, however, conditions are expected to improve during 2016.

As China does not have an insatiable need for raw materials, the supply of commodities exceeds demand leading to a decline in prices. The fall in commodity prices, have mixed effects for emerging market economies; as emerging markets produce a significant amount of commodities, the fall in prices have affected government revenue, civilian employment, and private investments. The fall in oil prices, which has reached a 12-year low in January of 2016,

has caused significant challenges for nations that depend on revenue from oil production to fund the government. While the low oil prices are causing hardships for oil dependent states, the low oil prices are forcing those governments to take steps to reform their economy. Multiple states have reduced their energy subsidies; one of the most surprising is Saudi Arabia, which has significantly cut back its subsidy of energy and utilities to its citizens. At the same time, emerging market economies that are net importers commodities are enjoying low costs of inputs.

The U.S. dollar has appreciated significantly in the past year, aided by the strength of the U.S. economy and the weakness of the global economy. This has made more challenging for firms in emerging markets to pay back their dollar-denominated debt. Another factor in the appreciation of the dollar is normalization of the monetary policy by the Fed, which has reduced the incentive to invest in emerging markets due to expected higher domestic interest rates, this is seen as 2015 had the first net outflow of investments from emerging markets in decades.

One of the most promising events in the economies around the Pacific Rim is the Trans-Pacific Partnership, which is projected to be ratified in 2016. This free trade agreement will reduce tariffs and increase protections for intellectual property increasing international trade. Among the biggest beneficiaries is Vietnam, which is also benefits from the manufacturing shift out of China to nations with lower cost of labor, due to increasing wages of Chinese employees.

Select Sector Trends and Outlook

Basic Materials

The basic materials sector has been the hardest hit by the decline in commodity prices as most companies in the sector rely on high commodity prices to maintain high levels of profitability and increasing commodity prices for margin expansion.

Industrial Metals: For the industrial metals industry, demand will remain strong in the years to come given their varied uses. While industrial metals will gain from healthy momentum in automotive and recovery in the construction space, the industry remains troubled by a number of headwinds. The sector is facing the perennial problem of oversupply instead of lack of demand and that has severely affected commodity prices. All base metal commodities (iron,

aluminum, copper) have been reliant on the Chinese's growth, and the current supply of all these commodities is overwhelming Chinese demand growth leading to a supply glut.

A strong dollar has also a negative effect on commodities as the prices of commodities are quoted in the dollar. Commodity prices tend to move in opposite directions to the dollar; both markets remain closely linked to each other as every turn in the dollar either is followed by, or coincides with, a turn in the price of commodities. The strengthening of the dollar has led to a drop in industrial metals' prices. The interest rate hike has made the dollar stronger, with further rate hikes likely, which does not bode well for industrial metal prices.

Chemicals: The broad-based meltdown in commodities this year has put several industries in the basic materials space on slippery ground, and the $5 trillion global chemical industry is no exception. As expected, the highly cyclical industry is not without its challenges, as headwinds such as soft agriculture market fundamentals, depressed demand in energy markets, slowdown in China, lumpiness in Europe and a stronger dollar weighed on the performance of chemical companies this year. Chemical companies remain actively focused on increasing their reach in high-growth markets to cut their exposure on businesses that are grappling with weak demand and input cost pressures. Strategic measures including acquisitions, cost management, and productivity improvement also remain the prime focus of these companies to stay afloat in the prevailing difficult global economic backdrop.

Agricultural/Specialty chemical companies like DuPont and Dow Chemical look attractive in this sector as these companies are reinventing themselves through merging and breaking into three companies in order that each of the new firms will be more focused on a specific industry. These sort of moves are attractive for value investors. The sector has many attractive companies that will either be merging or breaking up and these moves can be beneficial for value investors. Going into the later part of 2016, BSIF should examine the chemical industry in more depth in a later pitch cycle.

Consumer Cyclical

After taking a hit during the Great Recession, the consumer cyclical industry has been resilient during the past few years. Looking forward, there have been many positive developments that point towards continued success. First, the United States posted higher than expected December gains and saw labor force participation rise, along with job growth across demographics and industries coupled with wage growth. Additionally, low commodity prices give

consumers more discretionary spending power. Lastly, the Federal Reserve's monetary policy, despite the recent rate hikes, appears to be dovish, which coupled with easing by central banks in other developed markets could help the consumer.

Despite these positive factors, consumers seem to be tentative for a number of reasons. On the jobs side, wage growth has been slow, and underemployment persists. Additionally, Charles Schwab reports that Americans are less willing to take on debt, as debt as a percentage of disposable income has not hit pre-recession levels. Furthermore, negative factors for the industry include a reported retailer inventory buildup, and fierce competition both of which would drive prices and profitability down. While there is no conclusive evidence, there are at least some indications that consumers in general, and especially millennials, have altered their spending habits after the Great Recession. Lastly, there is the potential for a faster than currently expected Federal Reserve rate hikes, which would be a hindrance for the sector.

Consumer Defensive

The financial instability that has characterized the beginning of 2016 and the current global economic outlook gives reasons to consider the consumer defensive sector as a potential investment. Consumers will keep consuming household necessities regardless of the economic outlook thus; this sector will continue to trend higher. During the next quarters, companies in the defensive sector will still benefit from low commodity prices triggered by low oil prices as the decline affects a wide range of input costs. The agricultural sector and manufacturing sector are the major beneficiaries from lower energy costs. Economic growth, however, has slowed down since December of 2015 suggesting that the next rate hikes projected for this year by the Federal Reserve may or not materialize raising expectations and volatility in the market. Therefore, in any portfolio the consumer defensive sector will cushion any increases in market volatility. On the downside, the current accommodative monetary policy by major central banks excluding the Fed may have a positive effect on the sector. Thus if the rate hike schedule by the Fed materializes, the result would be increasing volatility and less accommodative monetary policy which would favor the defensive sector. In the longer run, increasing interest rates will reduce the attractiveness of defensive stocks due to higher yields on less risky assets such as bonds.

Energy

Since the summer of 2014, oil prices have fallen significantly from above $100 per barrel to below $30 in February of 2016. The low oil prices have led to decrease in revenue for petroleum producing companies and associated oil service companies. However, the lower prices for crude oil has been a boon for refineries, which have increased their margins as the price of inputs have fallen faster than the price of the refined petroleum products. While oil companies in the U.S. and the rest of the world have cut back on investments, oil production has increased on the aggregate. In the U.S., the drill count has fallen dramatically from 2014; however, oil companies have learned how to be more efficient at both drilling new wells and maintaining output at current wells. As a result, there has only been a small decrease in oil production in the U.S. The decrease in U.S. production has been offset by increased production other nations including Saudi Arabia, Iraq, and Iran.

Another factor that may keep oil prices low further into the future is the lifting of sanctions on Iran as part of a multination deal to prevent Iran from developing nuclear weapons for at least the next decade. Iran currently produces 2.9 million barrels of oil per day and is planning to increase its production by 1 million barrels per day by the end of the year; this increase may offset further declines in the U.S. production.

There are few major reasons why oil prices could increase in the short term: the first is OPEC reducing its output to increase prices, another is a geopolitical event that threatens to disrupt the production, or transportation of oil, finally, the domestic production of oil could fall as financing to domestic oil companies dries up. OPEC has reached a deal to for Russia, Qatar, Saudi Arabia and Venezuela to limit their produce to level produced in January 2016. The major issue with this deal is it requires both Iraq and Iran to limit their production to the level produced in January 2016, which Iran is unlikely to do. Even if Iran and Iraq agree to the terms supply would still exceed demand for a significant portion of 2016. Due to increasing interest rates and continuing low prices, it may become more difficult for firms to continue to borrow to cover the operating expenses including the cost of serving the debt.

Coal has been the key power source since the early days of the industrial revolution. The dominance of coal has been on wane in recent years due to multiple factors, which have been accelerating in the past couple years. The first factor is the current costs and expectations for higher future costs of reducing the emissions from coal. The second is the decrease in the price of natural gas, which is a substitute for coal in terms of generating electricity, leading to the

conversion of existing coal power plants to run on natural gas. In the U.S., the percentage of power generated by coal has been steadily falling and as has been displaced by natural gas and to a less extent by renewable energy.

There is a gradual shift away from fossil fuels driven by two major factors, the larger factor is environmental regulations, both current and expected which are attempting to reduce the carbon emissions with the goal of minimizing the impact of climate change. The second factor is that the price of alternative energy is continuing to fall; this is seen in the two major types of alternative energy, photovoltaic cells, and wind turbines. The challenge with alternative energy for BSIF is that most companies in that industry do not have the characteristics of a value stock and face a higher risk of failing.

While there is a slow shift away from carbon-based fuels, it will take decades for humanity to complete the transition; in the meantime, carbon-based fuels will continue to play a pivotal role in powering the world. One of the areas seeing growth is natural gas, which is displacing coal, and to a lesser extent gasoline and diesel. As low oil prices may persist for the intermediate term, BSIF may want to explore investing in an oil refinery, watching the crack spreads to ensure that they are not decreasing.

Financials

The recent rate hike by the Federal Reserve in December has been great news for the banking sector as a boost was particularly in need at the time. This is because the net interest margins for U.S. banks that peaked at over 3.8% in 2010 was down to less than 3% in late 2015; a huge amount of forgone profits. Furthermore, there are implications of further rate hikes in the near future, as FOMC announced its plans to normalize monetary policy. This also works in the favor of banks, as higher rates translate to higher profits. However, the fact that non-US borrowers have been enthusiastic borrowers of dollar debt should not be forgotten. Higher interest rates make for a stronger dollar and more expensive payments in the borrower's' local currencies, resulting in less demand for borrowing abroad.

The financial sector also faces very disruptive forces moving forward, largely due to technological advances. Fintech is the name given for startups in the financial sector. These new companies are applying cutting-edge technological tools such as efficient algorithms, big data analytics, and cloud computing to create efficient, personalized, and holistic financial services and products to customers. Automated algorithms, known as robo-advisors are slowly

replacing traditional wealth management methods, both startups and established firms, which are creating their own algorithm managed retirement portfolios, are investing assets that would have gone to traditional wealth managers. Although it is proving difficult to change, financial institutions can no longer cling onto decade-old solutions and management styles. Financial service firms must adapt to the rise of Fintech to remain competitive in the future.

Healthcare

The healthcare sector is experiencing a powerful tailwind of increasing medical spending. Spending is projected to grow at 5.8% per year through 2024, in part driven by an aging population. The area that has experienced the highest growth in spending in the healthcare sector is prescription drugs at 12.6% in 2014.

While there is currently significant talk among politicians of capping drug prices, due to the current composition of the legislative branch and the lobbying power of the pharmaceutical industry, such actions would challenging to implement. A positive event for the biotech industry is the Trans-Pacific Partnership extends important legal protections to medicines produced by biotech companies. The TPP mandates a minimum seven-year patent protection for biologic drugs in all of the signing states, local governments are allowed enact a longer period of patent protection. The major focus on pharmaceutical and biotech firms has been on discovering new specialty drugs as they command a premium price relative to normal drugs. Spending on traditional drugs is projected to be below the growth in overall spending while the growth in spending specialty drugs are expected to outpace overall spending healthcare spending.

A consequence of the increasing medical costs and pressure to increase shareholder value, the current five largest health insurance companies are in a round of consolidation: Aetna is in the process of acquiring Humana, while Anthem is trying to purchase Cigna; the current largest, UnitedHealth Group is not undertaking a large M&A activity at this time. If regulators approve all of the mergers, addition M&A activity is highly likely in other segments of the healthcare industry to compensate for the increased negotiating power of health insurance companies.

Industrials

Industrial sector growth was at multi-year low in 2015, marking it one of the worst years for industrial metals in history. China’s economic slowdown has dragged the industrial sector

along with it, as it is the world's top metals consumer. Furthermore, interest rate hikes in the U.S. caused the dollar to gain strength, leading to cheaper dollar-denominated commodities such as base metals. Additionally, base metals prices have also been driven down by the oversupply from large producers in the industry. In order to stay afloat and remain competitive, mining companies have been cutting costs, decreasing production and dividends, and selling assets.

Moving forward, the World Steel Association predicted global steel demand to decrease considerably in 2016. It expects Chinese steel usage to decrease from 3.5% in 2015 to 2% in 2016. Analysts remain skeptical that prices for steel-making materials will rise above $40 a ton in the next few years. Aluminum and copper prices will also remain under downward pressure due to an oversupply in the market. Major low-cost copper producers continue to sell even as prices fall, in an effort to drive high-cost producers out of the market.

A slowing global economy, excessive supply and the increased strength of the dollar all contribute to the bearishness in the industrial sector. In spite of this, there are positives for the industry. The growing automotive, packaging and airline industries are expected to support the demand of base metals. Another positive trend is the widespread use of base metals in transportation, manufacturing, construction. Coupled with long-term limited supplies from existing mines and the absence of new major development projects will lead to a decrease in supply. Finally, India appears promising area for growth in demand for base metals given its current low level of aluminum consumption and high urban population growth and continuing economic growth.

Technology

The technology sector shows some challenges in 2016. Recent improvements in processing, data storage, bandwidth, and chip design, along with other advances present countless opportunities for the sector in the coming years. Cloud computing, data analytics, and the internet of things have profound business impacts, not just on the technology sector. There have also been promising advances in 3D printing in everything from healthcare to manufacturing. Additionally, according to Deloitte, technology based businesses are shifting towards consumption-based business models, allowing customers to pay based on need and usage.

The past few years has seen the meteoric rise of technology unicorns, however, the last few months have been more challenging for tech startups. The recent volatility in the equity markets are discouraging unicorns and other startups from holding IPOs. At the same time, a number of tech startups have been forced in subsequent rounds of funding to reduce the valuation of the firm; shareholders at some of the largest startups have been forced to write down the value of the shares they hold. Most noticeable, was Fidelity, which wrote down the value of its shares in Snapchat by 25%. Other industry factors to watch are ongoing security concerns and regulation in the forms of privacy and taxation.

Privacy concerns raised in the wake of Edward Snowden's revelations of U.S. government spying continue to have implications for the technology firms. Computer and network security has become a major issue for corporations and the governments in the past couple of years with the increase of advanced persistent threats and use of hacking as a method of warfare. Companies around the world, especially banks expected to increase spending on cybersecurity in the upcoming years.

Additionally, taxation may become a factor in the coming years, both with sales taxes on goods sold through online stores collected by states and on the profits that technology firms are avoiding through arm's length transactions and the infamous double Dutch sandwich technique of using tax treaties to avoid paying taxes.

Conclusion

Overall 2016 will be a year with a number of challenges; however, current projections expect improvements over 2015 in improving labor markets and continuing economic growth. The IMF projects the global economy to grow at 3.4% in 2016 and 3.6% in 2017, up from an estimated 3.1% in 2015. In the U.S., the Federal Reserve is expected to continue to normalize monetary policy during 2016, although only a couple of rate hikes are expected. Around the rest of the world, many central banks are attempting to stimulate their economies with negative interest rates and increased quantitative easing. The ECB is expected to expand their quantitative easing program this spring; overall Europe's economy is expected to improve in 2016. One of the areas of global concern is the slowdown in China as they transition from an export driven economy to a consumption driven economy. This slowdown has had major impacts on commodity prices, financial markets, and emerging market economies. While in the

first months of 2016 there have been questions about the strength of the global economy, there are reasons to expect the 2016 will improve as the year progresses.