February 2019

TAVAGA MACRO OUTLOOK

INVESTORS OUTPERFORM TRADERS

Increased volatility is an opportunity for long term Investors

Welcome to the first edition of the Tavaga Macro Outlook. Through this series, Tavaga Research aims to calibrate the moving parts in the world of Investing.

A confluence of factors, including increasing household income, urbanization, fragmentation of Indian households, burgeoning middle class and favorable demographics has led to sustained long-term consumption growth. The arrival of millions to the working age population will decrease the dependency ratio further, making a strong case for the growth in Investments in India.

However, it's been more than a decade of financial crisis and India is still facing issues around Corporate defaults and rural agrarian crisis. The domestic economy is coming back to its senses after demonetization; however, India now has now much stronger export and investment linkages with US and Western economies than before. The Indian financial markets aren't immune to global pressures, as seen by the recent volatility following fears of global trade wars, slowing global economy et al.

Tavaga Research has analyzed the moving parts in the Global Macro environment in the context of an Indian Investor. India's structural story remains intact, and a likely global divergence contrast sets the stage for investing in 2019, and beyond.

Salience on a single asset class is the biggest risk that is posed in front of the retail investors. A proper investing strategy isn't meaningful without understanding the moving parts as these, in turn, would impact returns.

Broadly, following themes are likely to play out:

- US economy to remain robust but odds of overheating followed by a recession increasing
- US China geopolitical turmoil to continue
- US and regional markets to diverge in performance
- Flat to Bearish view on Crude Oil, and hence on High Yield Energy Credit market
- Higher than average levels of volatility expected
- RBI to continue dovish stance
- Indian Elections to result in fractured mandate, but GDP growth momentum to continue
- FANG underperformance expected, while Amazon and rest of US Tech sector to be positive

Hope the report helps you make informed decisions. Happy Investing!

This report is authored by Nitin Mathur & Ajit Bhide.

US ECONOMY TO STAY ROBUST

Wage inflation to increase odds of recession in 2020

Leading Indicators, particularly the ISM PMI/NMI in the United States, continue to paint a robust picture of the economy, until the effect of recent stock market and credit market declines begins to seep through into the mainstream economy. However, as US nears capacity constraints, wage increases would add to inflationary pressures, resulting the odds of recession in 2020.

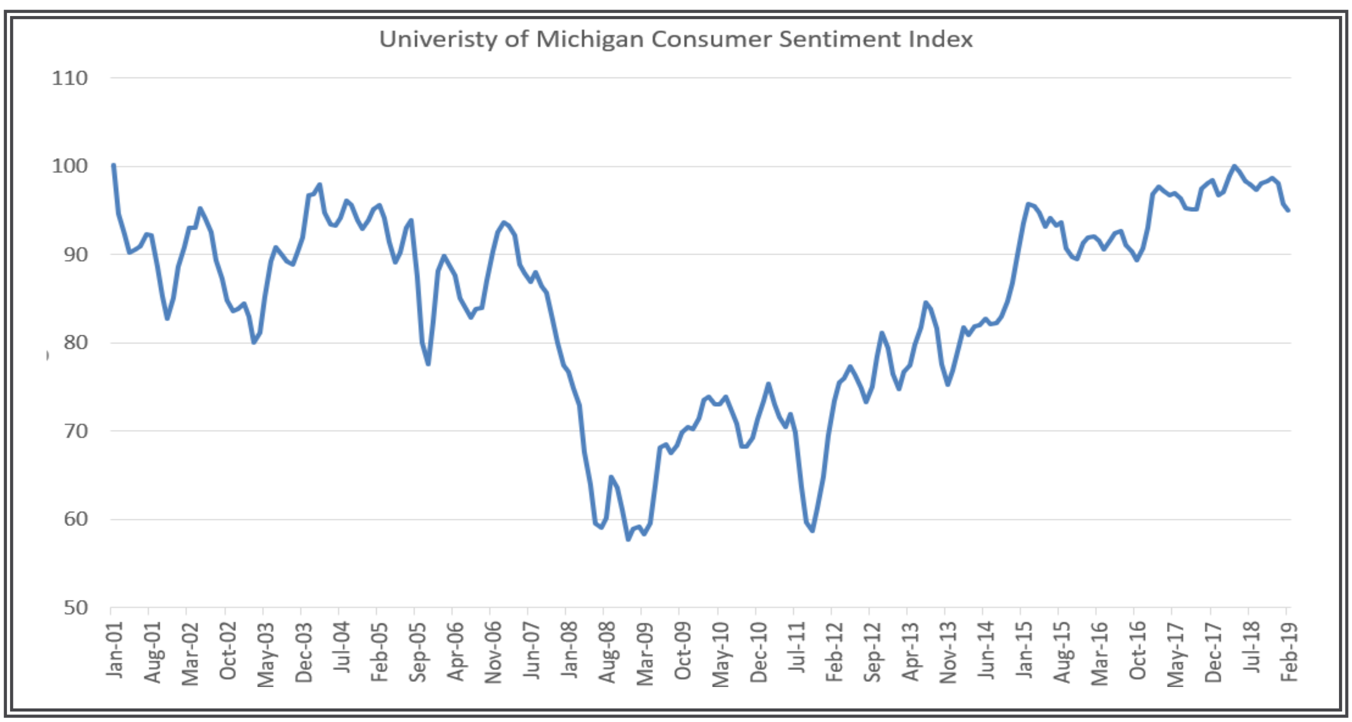
We analyzed the expansions and contractions in ISM PMI data since 1950. In the years since 2010 (included), there were only 7 months of contractions in the data and none of the contractions lasted for more than 6 months, unlike major recessions of past. US is thus in one of the longest expansions in its history - although it's also a very slow recovery compared to previous recessions.

Similarly, US Consumer Confidence is moving well past the levels seen during financials led boom of 2002-2007 and testing the 100.0 mark frequently.

ISM PMI – Month Count		
Decade	**EXPANSION**	**CONTRACTION**
1950s	75	45
1960s	99	21
1970s	92	28
1980s	73	47
1990s	79	41
2000s	76	44
2010s (till Jan'19)	102	7

Historically, 85.0 on UMCSI has correlated with 3% GDP growth for the United States. A near 100 reading on UMCSI implies likelihood of robust US GDP growth ahead of 4%+ and provides impetus for higher savings and large inflows into global emerging markets like India.

While a recession may occur in 2020 as a result of stress in the credit market or geopolitical risks, it is unlikely to be a full-blown and long-drawn recession like 2008, but rather a shorter and more manageable one, in our opinion.



Source: Aeroweb, Institute of Supply Management, University of Michigan, Tavaga Research

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US CHINA GEOPOLITICAL TURMOIL TO CONTINUE

Effect on India likely to be marginal

In a speech that was then little noticed, but is now being widely circulated, US Vice-President Mike Pence (on Oct 4th, 2018) outlined what the Trump administration's long-term policy is likely to be with respect to US China relations going forward. While many of the issues between the two countries have been building up since quite some time, it is unclear why now (over the past 6-8 months) the Trump administration has started shifting its policy. For market participants, including us at Tavaga, it has been a rollercoaster ride with geopolitical events.

It seems that the long term *confrontation* essentially stems from the difference between two systems – democracy and markets-based system of the United States vs. the centralized state capitalism model adopted by China. This long-term confrontation is far from over and will likely be played out over the next decade.

In short term as well, US is concerned about the trade deficit, intellectual property theft and China's increased interference in the political affairs of other countries via debt trap diplomacy (Belt and Road Initiative).

We expect increased volatility in the markets surrounding these negotiations over the short as well as long term. VIX has moved significantly higher seeing around 20+ levels after having traded in a much lower range for a long time before then.

We believe that a possible flareup in US-China tensions, along with the Fed tightening, as being a dampener for global risk assets, including Indian markets.

India is a net exporter to the US and a net importer from China. India would be marginally affected to the extent of second or third order effects - one being the impact on overall global risk appetite and second coming directly from the imposition (or lack thereof) of trade tariffs.

While both these effects are marginal, a US China truce would be beneficial to India as global risk appetite would improve. In the long term, the situation will be driven more by geopolitical interests and India would still be in the middle path with an independent foreign policy and hence will only be marginally affected.

Source: CBOE, Tavaga Research

US & EX-US MARKET DIVERGENCE

Global correlation has declined; trend expected to continue

Since June 2018, US markets have started diverging from the global markets. The divergence in relative performance was reversed briefly during the latter part of 2018, but divergence continued again in 2019.

The chart below compares relative performance of 3 indices MSCI ACWI (Global Stocks benchmark), MSCI ACWX (Global Ex US benchmark) and S&P500 (US Stocks benchmark) since 2016.

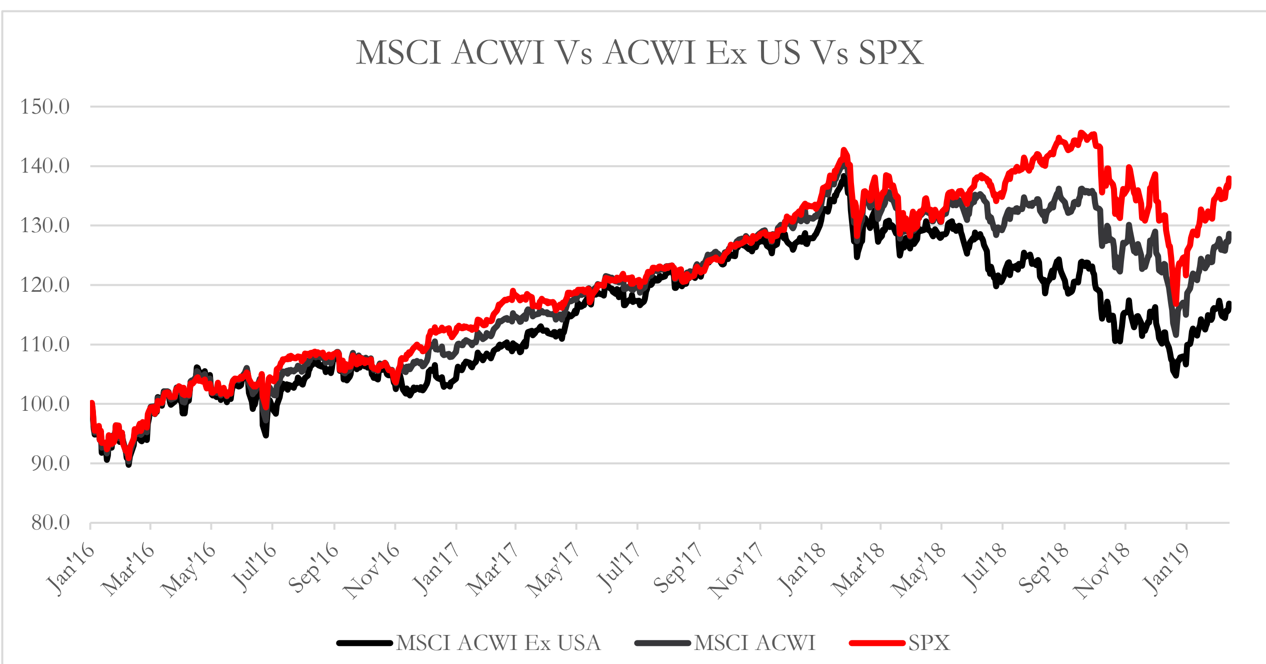
Since early 2009, most global markets had become increasingly correlated (except for Euro Sovereign Crisis) because the primary driver of performance had been the liquidity injected by various central banks post the Global Financial Crisis (GFC). As the effect of GFC draws to a close and the US enters the later stages of business cycle, we expect markets around the world to diverge in performance with discrete characteristics of each market becoming more prominent.

We attribute the market divergence to the following:

- While US is moving into later stages of the business cycle, other markets (Europe, Asia) are yet to recover completely from the stress associated with previous business cycle and thus are likely to remain in a different phase of economic recovery for some time to come.

- Geopolitical tensions (Brexit, US China trade issues) are region-specific and have added to market divergence worldwide.

- China's state directed lending is likely to eventually lead to overcapacity in a number of industries, and thus affect performance of these sectors of the Chinese economy and economies dependent on China. While Technology and newer sectors of the Chinese economy are likely to perform well, the overcapacity sectors will provide a drag, thus moderating the economic growth overall to around 6%, in our opinion.



Source: Yahoo Finance, Tavaga Research

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CRUDE OIL UNLIKELY TO REBOUND

Flat to bearish view based on swap dealer positioning

We are not bullish on crude oil, based on both fundamental and technical factors.

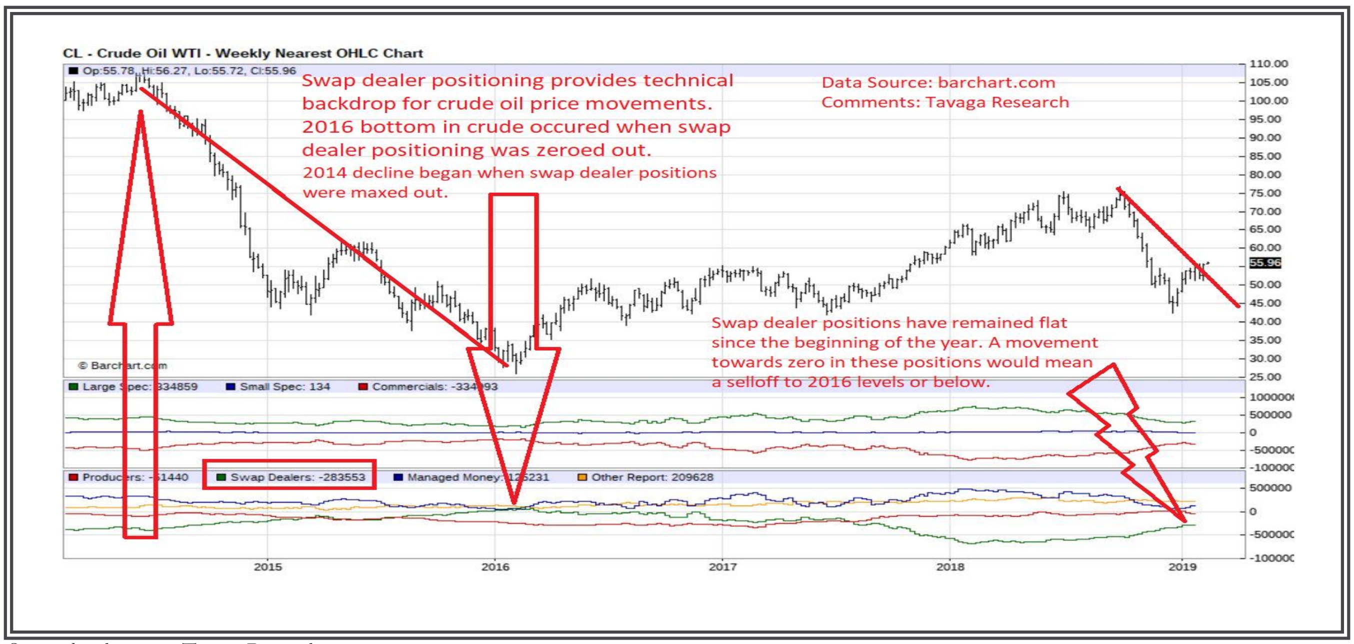
First, we look at the fundamental factors.

- Starting 2014, US oil production has increased at a rapid pace, surpassing Russia and Saudi Arabia as the world's largest producer. The erstwhile perceived oligopoly of OPEC has now been handicapped. Even the combination of Russia and OPEC unlikely wields any monopolistic power in today's crude oil market.
- Earlier price declines of 2014/2015 would have caused significant capex reductions and hence lower capacities. While true to a certain extent, Tavaga does not take the view in its entirety. The high yield market of US ensured robust funding was available to marginal distressed assets. This ensured that there was no incentive to cut production – rather incentivizing volumes even at lower price levels to maintain dollar revenue.

Tavaga expects a similar trend to repeat after the recent crude oil price declines. It is unlikely that any major short-term fundamental offsets emerge to price decline.

On the technical side, disaggregated commitment of traders' report supports our bearish view. Swap dealer positioning in the disaggregated Commitment of Traders's reports (by CFTC) provides technical backdrop to WTI Crude.

- There are parallels to the 2014-2016 price declines. 2016 bottom in WTI occurred after Swap dealer positioning got "zeroed out". Similarly, 2014 decline began as Swap dealer positioning got maxed out to levels where further open interest could not be sustained by market makers.
- With present commitments of Swap Dealers far from being close to zero, it looks increasingly probable that the story would repeat itself.



Source: barchart.com, Tavaga Research

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HIGH YIELD CREDIT A KEY MONITORABLE

Crude Oil leads declines in High Yield Energy Credit

Parts of the High Yield and Investment Grade Credit Market are likely to be affected as US economy moves into the later stages of the business cycle.

As seen in the chart below, High Yield Energy sector sold off considerably during the last crude oil selloff in 2014/2015 – and then recovered at a rapid pace as Crude Oil rebounded.

In case crude oil prices go down even further in 2019 as is our view in this outlook, this is likely to weigh in on the Energy sector within the credit markets, and might ripple into other parts of the credit market including Emerging Market debt like India.

While contagion effect appears unlikely at this stage of the global business cycle, it cannot be ruled out in latter part of 2019 or in 2020.

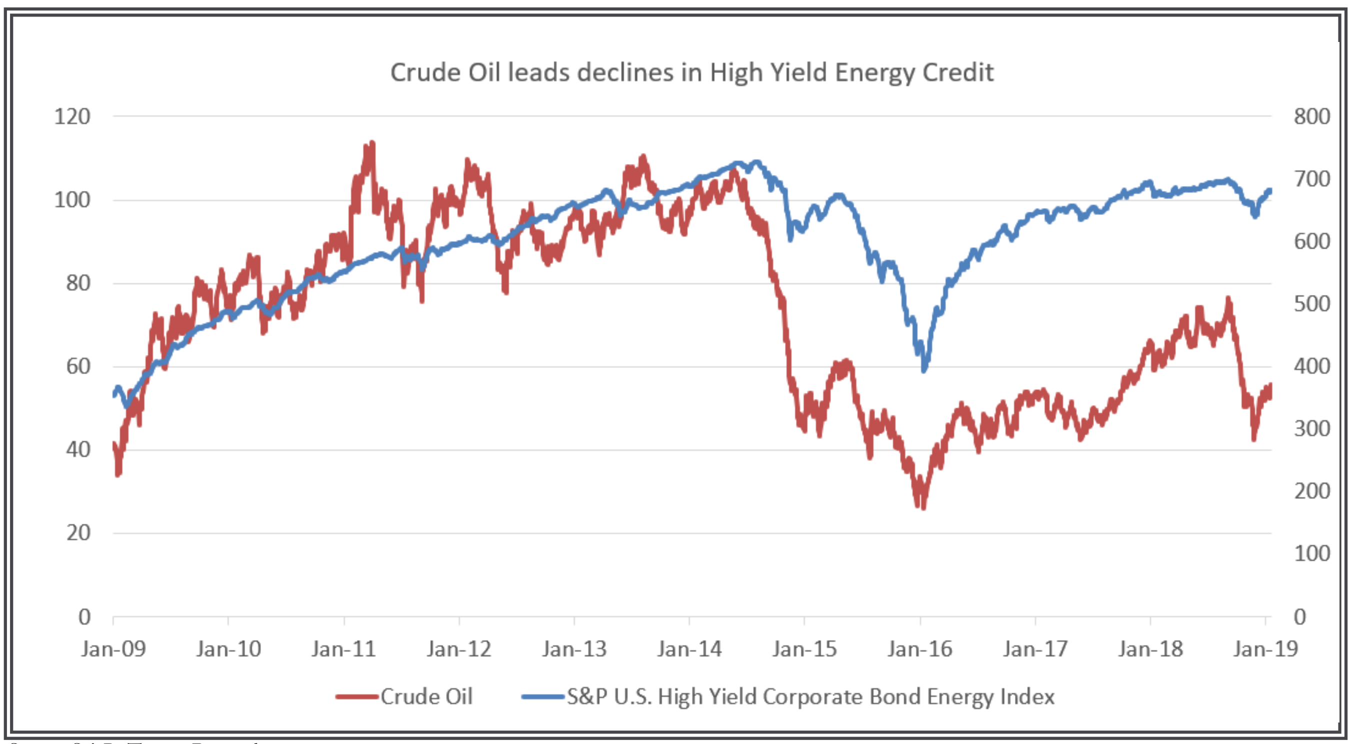
Other than a possible contagion effect emanating from a oil price collapse, there could be other trigger points that could derail the High Yield market as a whole, some of which are described below.

- When the Fed decides to tighten the noose on the low rate environment that has been in play since the global financial crisis.

A rising rate environment could end up in a significant and correlated selloff in the high yield and investment grade space leading to a possible contagion.

- Geopolitical event triggered by Brexit or a flareup in US China relations.

Geopolitical event like Brexit or a flareup in US China relations might trigger a risk off which may spread into the high yield market.



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GLOBAL AND NIFTY VOLATILITY

VIX is likely to average higher than in recent past

Volatility in the global equity markets, both implied and realized, has seen a dip since 2008. Tavaga believes that this trend is over for this business cycle and that VIX is likely to average higher, at least higher than recent past.

There are several reasons for us to believe this:

US Fed continues to wind down its balance sheet and remains in a slow rate hike phase. This is likely to add volatility to a market that had gotten addicted to a steady liquidity support from the Bernanke-Yellen era. Even a pause, or a data dependent wait-and-watch approach, would create uncertainty for equity markets.

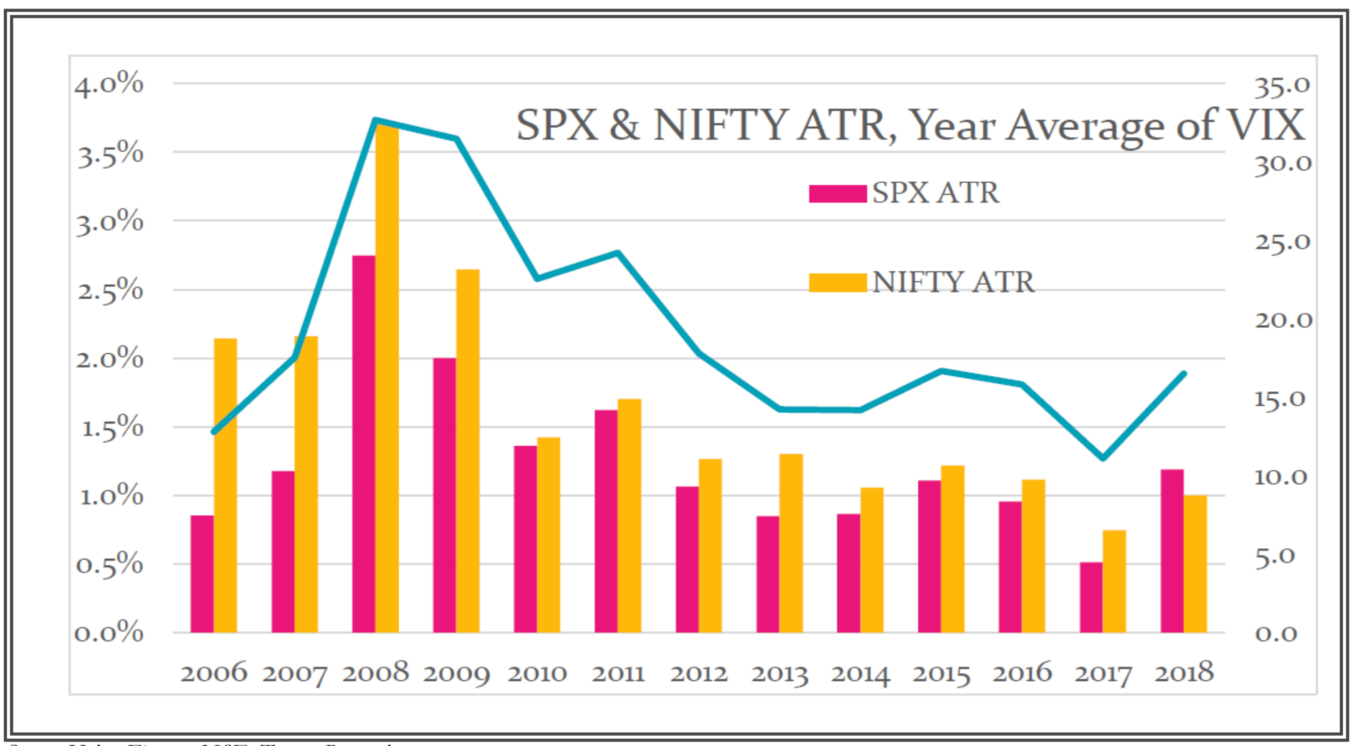
Tweets by President Trump on the Fed, and US China tensions have added additional uncertainty to an already heightened volatile regime. Given the stress in the credit markets including Investment Grade (GE et al.) names, we expect VIX to average higher than the past few years.

Equity Volatility, in turn, is strongly correlated with Credit spreads – both affecting each other in a virtuous cycle. In the event of a credit contagion in the high yield market, equity market becomes a subsequent casualty resulting in a further spike in volatility.

Why is this important for an Indian investor? The answer is simple – Global equity volatility and NIFTY volatility are linked. Chart below shows the Average True Range (ATR) of NIFTY and S&P 500, along with values of VIX.

A tightening Fed generally causes higher average ATRs for S&P500 and thus higher values for average implied volatility / VIX over the year.

Since 2010, NIFTY ATRs have closely matched S&P 500 ATRs, proving that global volatility drives volatility in Indian markets, even though the markets differentiate themselves in relative performance over time.



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RBI MONETARY POLICY TO STAY DOVISH

Continuation of initial dovish stance expected; positive for equity markets

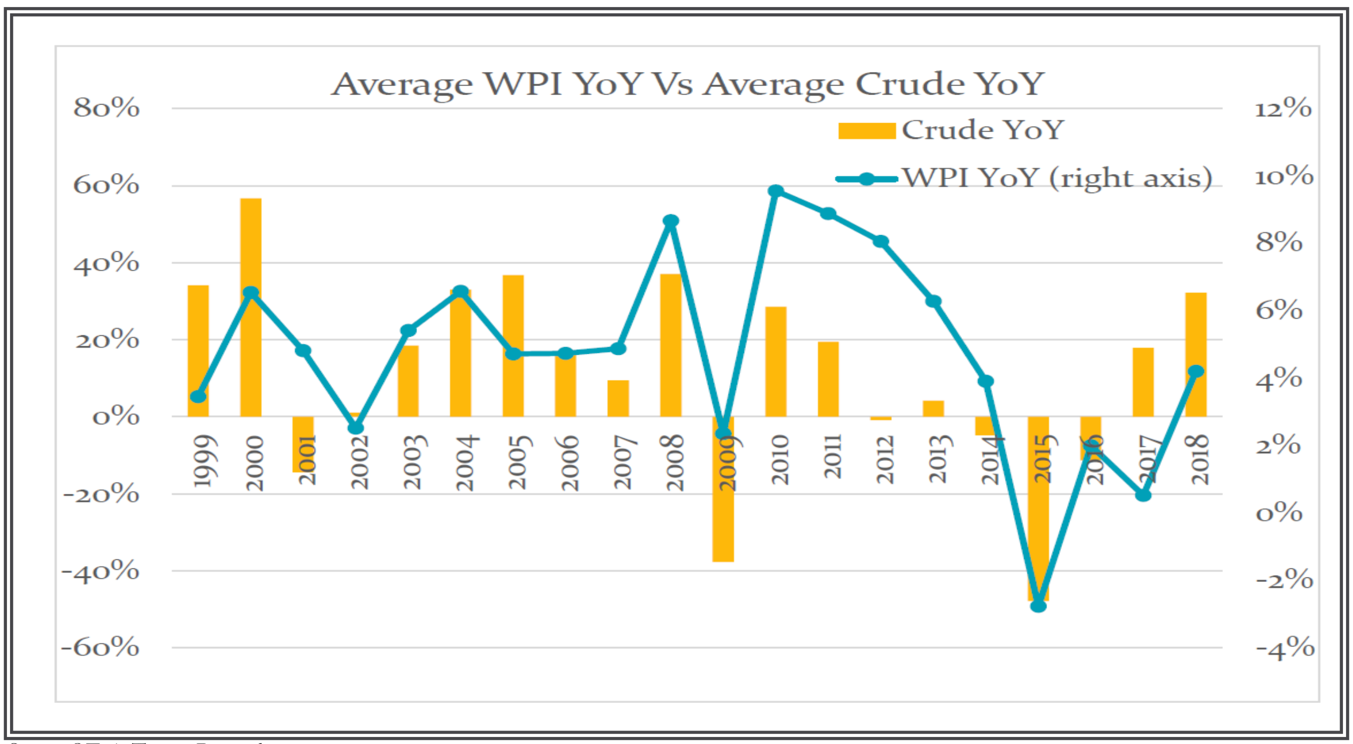
Having discussed the global markets outlook in detail, we now discuss the India-specific environment in the next few sections, beginning with the Reserve Bank of India (RBI's) monetary policy stance.

India is a net importer of oil. WPI inflation in India has been significantly correlated with the price of Crude Oil globally. As Crude Oil prices have softened globally and are likely to continue for some time, RBI is likely to continue its recent rate cuts as the WPI inflation gauge also moderates.

This is likely to happen even as Fed continues its hiking stance in the United States. The divergence in rates is likely to be a net positive for the Indian economy.

Other things being equal, this divergence is likely to have different effect on different markets:

- Currency: INR is likely to strengthen if Oil prices remain as low as they are currently or if they stabilize in a range where WTI is below 60 USD/barrel.
- Rate Sensitives: Equity market performance is expected to be better in the rate sensitive sectors (Autos, Banks) of the economy.
- PSU banks might also be positively affected by the policies undertaken after the appointment of the new RBI governor Mr. Shaktikantha Das.
- OIS Swap Rates on the long end (10Y) are likely to soften and Longer End GOI Treasuries are likely to experience positive bias.



Source: OEA, Tavaga Research

INDIAN GENERAL ELECTIONS

Elections just a blip; Economy to grow at 7%+

Market performance is likely to be positive, even if election results are unfavorable per popular estimates.

Historically, election year performance of the equity market has been positive over the last 4 general election cycles, despite average or relatively weak GDP growth prints during the period.

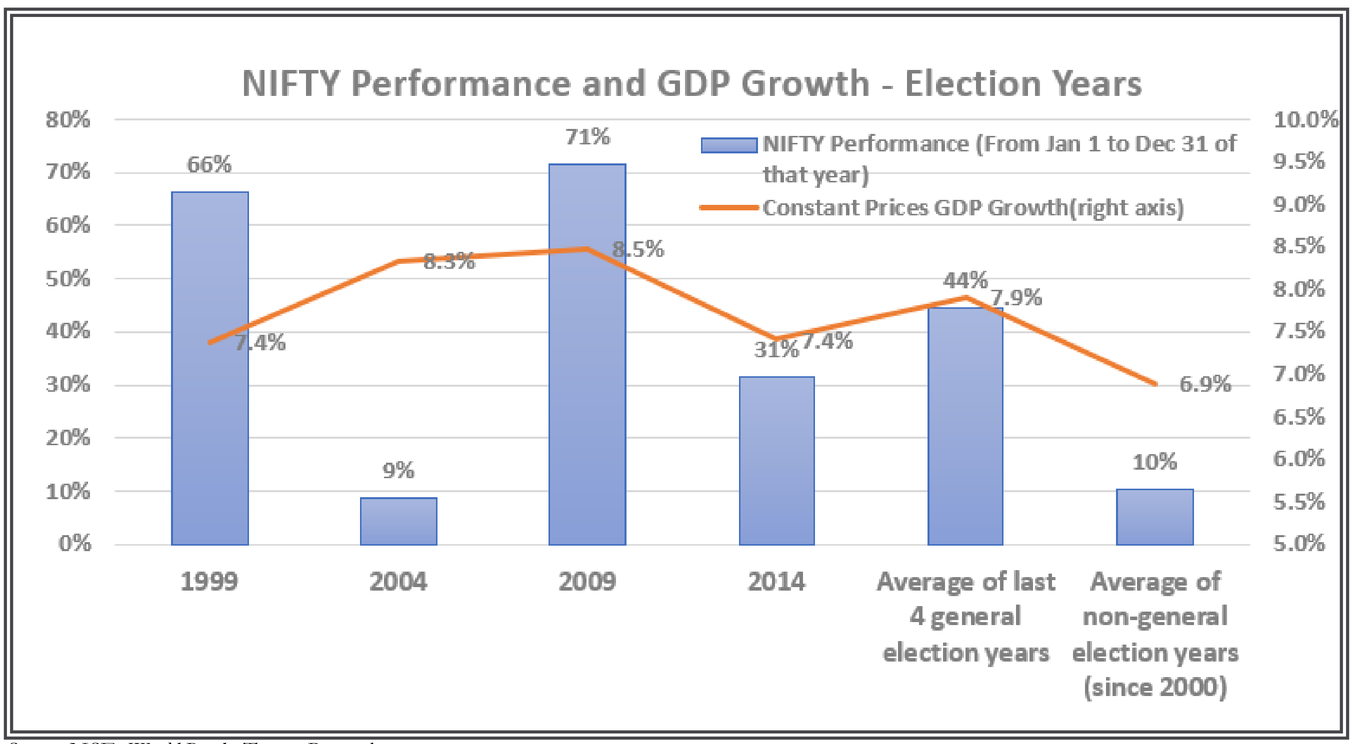
We attribute this to the fact that market expectations are muted ahead of the elections, given the difficulty associated with predicting a general election as large as India with multiple parties and multiple coalition combination possibilities.

Speculative investors would keep cash reserves to benefit from associated event-driven election volatility. Risk averse investors tend to also lower their holdings ahead of election results. Thus, overall risk appetite remains low ahead of the elections, and this time it's no different.

2019 estimated growth rate of 7.4% (IMF estimate) would be in line with GDP growth seen in the last 4 election years.

While we feel that a full majority in the Lok Sabha for the NDA is unlikely, our high probability scenarios see a fractured mandate led by either BJP or Congress. Given the problems faced by the ruling BJP-led government, the next government formation is unlikely to take any drastic actions like GST or demonetization and would continue with the policy reforms initiated under this regime.

Therefore, we expect a positive bias to Indian equities over the entire year. Consumption constitutes 60% of India's GDP and in an election year, focus on rural themes are likely to increase in terms of central government policy. Given this context, we expect FMCG sector to continue its recent outperformance, despite very high valuations as compared to the historical levels.



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US TECH STOCKS PROVIDES DIVERSIFICATION

FANG, not FAANG, is likely to underperform

FAANG (Facebook, Apple, Amazon, Netflix and Google - Alphabet) and Microsoft account for over 44% of NASDAQ 100. In the last decade, the US Tech sector has been an outperformer to the broader US market indices, primarily on account of Index buying and best in class Technology innovation coming from the US based Tech giants. The market ignored the high valuations, despite high volatility in several individual stocks.

2018 was a mixed bag though, as regulators took notice of several data privacy issues with social media behemoths. A slowdown warning from Chinese smart phone market rattled the market further.

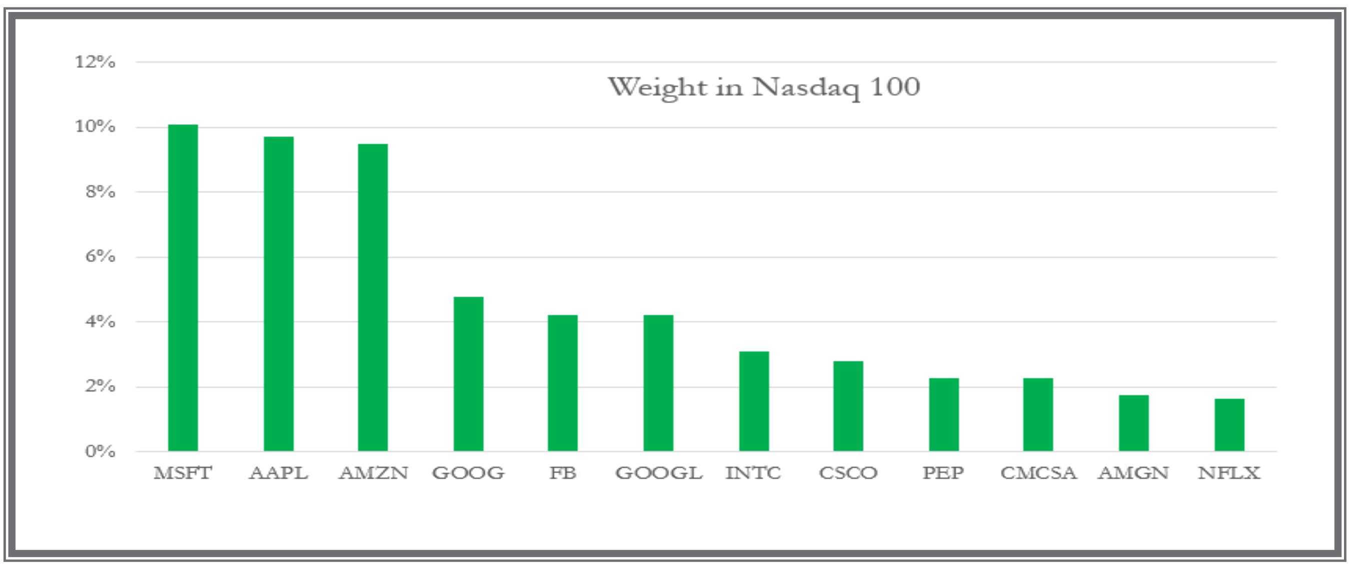
As index buying fizzles out, market has started to correct this bias and move into better quality stocks and those with a relatively smaller market capitalization within the index. As a result, we witnessed a sharp correction in the FAANG stocks in the second half of 2018.

Regulatory-compliance is an imperative, and US social media behemoths aren't immune from it. Tavaga Research believes that the worst is behind as companies invested significant time and resources in getting the Compliance right for the US Tech sector.

Tavaga Research expects the market to start differentiating between the good and bad performing Tech names. Those who face headwinds are the ones who continue to face market growth constrains, regulatory headwinds or disruptive innovation.

We expect FANG (Facebook, Apple, Netflix, and Google) to remain flat to bearish due to marginal regulatory headwinds and competition in some cases. On the other hand, we expect good quality names in the rest of the tech sector to outperform the broader markets from present levels. We are positive from Amazon's healthcare gamble and this might keep its stock price at or near the current stratospheric levels, despite Bezos-related headline risk.

From the perspective of an Indian investor, we believe that exposure to USD denominated Nasdaq 100 adds to diversification benefits, given remaining portfolio of an average investor is allocated to Indian equities.



Source: slickcharts.com, Tavaga Research

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