Is the S&P 500 overvalued?

Why we see increased volatility going forward & a broad correction in global equities.

TENZING PACIFIC INVESTMENT MANAGEMENT

RESEARCH

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In this report we will explore why we believed that the main reference point for global equities, the S&P 500, is overvalued, and why it is generally not a great time to be holding onto too much developed-market equity. We will make our point through exploring the following factors:

- **Valuation of SPDR S&P 500 ETF (S&P 500 proxy) vs. peers**
- **Historical divergence of equity prices & trailing earnings.**
- **Macroeconomic risks**
- **Political risks**
- **How do I position my portfolio?**

Digging into S&P 500 valuation vs. peers

The value of the S&P 500 has surged over 13% since November, riding a wave of optimism and positive sentiment. The index has already achieved the average year-end target for Wall Street analysts in only the second month of the year. The only other occasion that the S&P has exceeded avg. analyst year-end target, since 1999, was in 2012. Is it possible that the short-term exuberance has been irrational? As value investors we've explored this by comparing key price/fundamental ratios of the SPDR S&P 500 exchange-traded fund vs. traditional peer funds tracking the following indexes: Dow Jones, Russell 3000, MSCI All Country, FTSE Pacific, Euro Stoxx 50, FTSE All-World ex-US & UK FTSE 100. We looked at the following key valuation metrics: Price/Earnings which we referenced with price/earnings to growth ratio, forecast sales growth '17, P/CF, P/S & P/BV, all on a forward basis for 2017. For any investment to be viewed as valuable or "cheap" at any point in time, we would like the above ratios to be as low as possible,

An assets current price is a reflection of its true economic value. On a stand-alone basis, the S&P's current forward P/E ratio is 18.22, which is the first time the P/E has been above 17 since 2002. For a bit of context, the average forward P/E ratio from 1990 to July 2015 was 16.5[i]. From a fundamental stand-alone value perspective, we would like equity to be trading below average historical P/E for it to qualify as an attractive buy. Another metric we look at to provide a "check" on P/E ratios is the PEG, where we compare forward P/E to an assets forecast growth rate. The logic is that a high P/E can be justified is forecast earnings growth is considerably high at the same time. Therefore a PEG value of less than 1 often justifies a relatively high P/E. Currently; the S&P's PEG is 1.52, placing a question mark on the current valuation.

We cannot, however, make accurate decisions by viewing an asset in isolation. When comparing with the peers listed below, we found that 89% of peers have a more favorable PEG valuation, and 67% are cheaper on a stand-alone P/E basis.

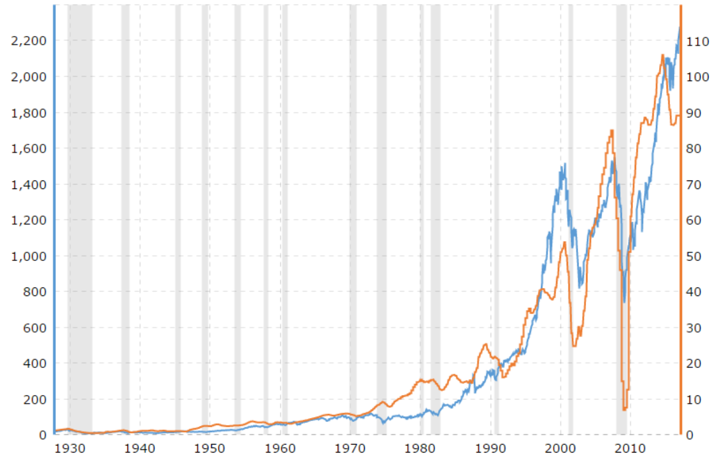
We found that, overall, 78% of peers had the majority of valuation metrics we looked at valued at more attractive levels than the S&P 500.

What was quite interesting was the fact that consensus analyst weightings for all ETFs we evaluated were either "underweight" or "neutral". None were considered "overweight".

One positive is that Asian valuations seem to be the most attractive, ranking superior vs. S&P in all metrics.

The historical divergence of equity prices & trailing earnings.

From July 2014 to March 2016 the S&P 500 experienced an earnings recession for 21 consecutive months. At the same time the value of the S&P increased by 7%. Theoretically, an increase in stock prices would be a forecast for future earnings growth. Is there precedent for such divergence? We found that this is only the second time since 1987 that trailing earnings have lagged S&P 500 valuations, the previous time was from Feb '97 – Dec '98. This was during the period of the Dotcom bubble, which was followed by a stock market crash, with the NASDAQ composite losing 78% of its value, followed by a recession during 2001. The S&P 500 lost over 44% in value August 2000 – Jan '03.



S&P 500 index with its trailing twelve month earnings per share (EPS) value back to 1926. Macrotrends.net

Macroeconomic Risks.

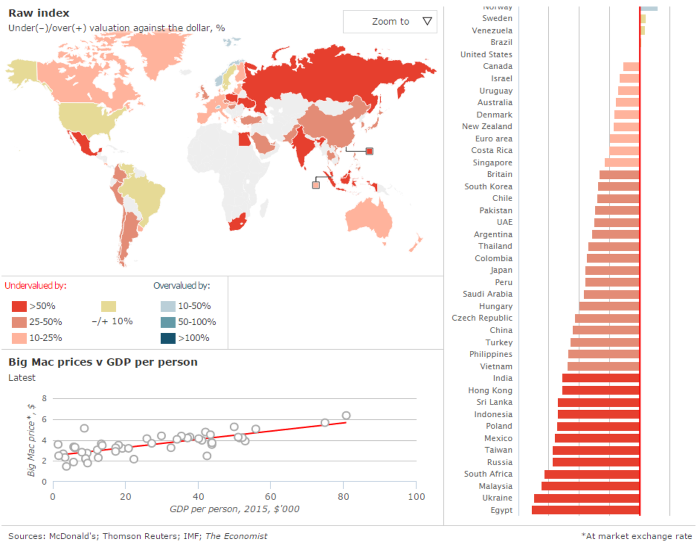
One of our main duties to clients is managing their portfolio risk adequately. We usually look at the following factors by evaluating the following:

- **The value of USD**
- **Probability of US recession**
- **Investor confidence & sentiment**
- **Interest rates**
- **Investor complacency**

USD value has been particularly worrisome of late, due to the fact that most manufacturing inputs & commodities are priced in USD. Also, much of global sovereign debt is issued in USD, which means that as the USD strengthens it becomes incrementally more expensive to service debt, leading to inflationary pressures and slower real growth. This is particularly prevalent in emerging markets, where USD denominated debts more than doubled from $2 trillion to 4.5 trillion from 2009 - 2014[ii]. The value of the US dollar vs. a basket of peers is currently trading at a 5-year high, +30% since February 2012.

Additionally, The Economist's big Mac Index, a measure of currency values in terms of purchasing power parity shows that 40 global currencies are undervalued vs. the USD, 80% of which are undervalued by more than 20%.

Economist Big Mac Index



With consensus that the US Federal reserve will hike interest rates 3 times this year, this could prolong Dollar strength and continue to weigh on foreign importers.

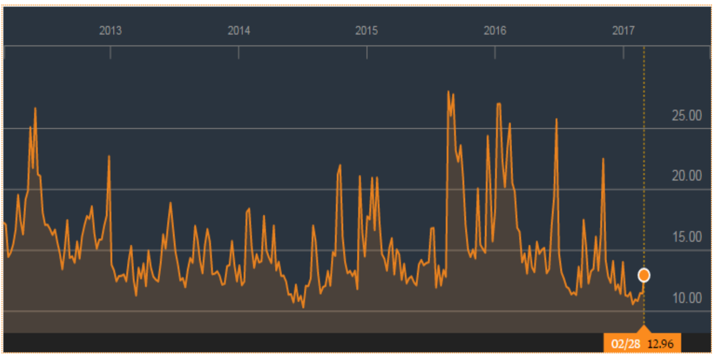
According to the St. Louis Fed, the smoothed probability of a US[iii] recession increased by 2% from Oct'16 – Nov '16, the largest such increase since Dec '12 – Jan '13.

From a sentiment perspective, global investor confidence has been lower than expected, considering stock price moves over the last few months, with the State Street Global Investor Confidence index at the lowest level since August '16[iv]. CNN Money's fear & greed index, which registers market emotion, was registered at "extreme greed" one week ago, indicating potential overconfidence which could be followed by a correction & mean reversion.

US Fed has increased the Federal Funds target rate by 50 bps in the last two years, with member of the FOMC becoming increasingly hawkish, the consensus is for three hikes during 2017. The problem is that rates had not moved for 5+ years prior to the initial hike at the end of 2015, & with many central banks having flooded global markets with cheap liquidity post-0'8; the debt overhang could cast a shadow over the momentum of any recovery if rates are increased aggressively.

Investor Complacency

The CBOE volatility index, commonly known as the VIX or "fear" index, has been at an almost historically low range, hitting its lowest value of 10.97 at the end of January. This was the indexes lowest level since April '14. This matters because the index shows the markets expectations of 30-day volatility, using the implied volatility of S&P 500 index options. Therefore, the lower the value of the index, the less volatility is expected in the market and the more complacent investors become. Lengthy bouts of complacency are usually followed by large increases in volatility. The index has increased by 22% since the end of January, indicating that fear is creeping back into the market.



Chicago Board Options Exchange SPX Volatility Index.

Source: Bloomberg

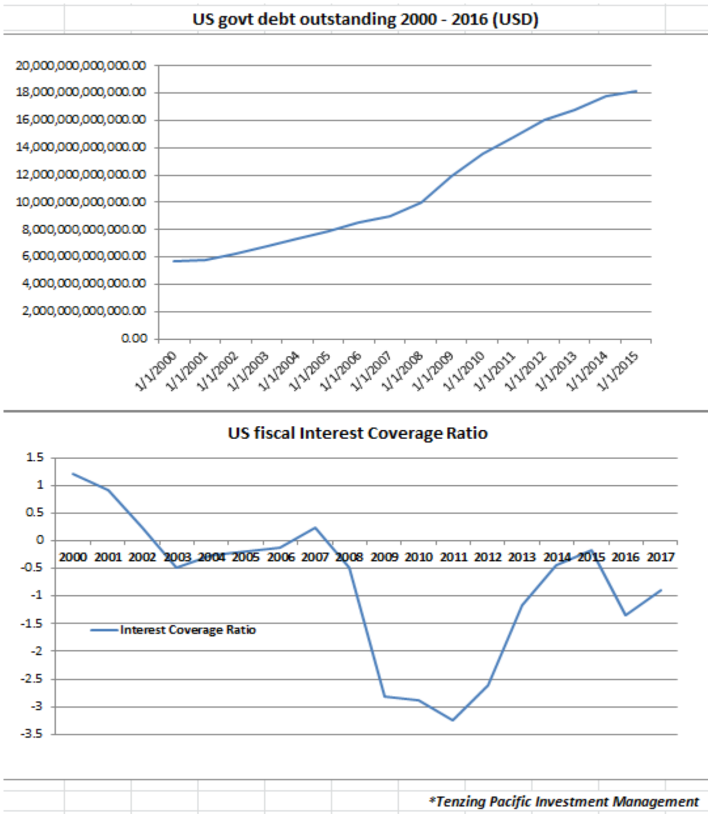
Political Risks (US)

In November 2017, the US decided to elect an ex-reality TV star as president. A man with a skeptical view of free trade, who has endowed a Mr. Steve Bannon, an individual who is extremely skeptical of globalism, with deep nationalistic views, who some have described as a "nihilist", with the title of "chief strategist" and a seat on the national security council, unprecedented for someone in the position.

The risk Trump presents is twofold: 1.) exacerbating US government debt through increased defense and infrastructure spending without addressing revenues & sufficient cuts (deficit spending). 2.) Initiating trade wars with Mexico & China, through implementing a [border adjustment tax]() on the former, and labeling the latter a currency manipulator, imposing import tariffs all

Of which would be to the detriment of the American consumer. Coupled with an interest rate hike cycle; this could present a number of hurdles to continued economic growth, to say the least.

With the S&P 500 having increased in value by such a large amount over such a short period of time, one would think markets are pricing in an excess of 3.5% pa GDP growth going forward, through supply-side measures like tax reform, removal of burdensome regulations & infrastructure spending, for which 1 Trillion Dollars is sought. The problem is: are these measures economically viable? US govt debt is in excess of 20 Trillion Dollars, coupled with a persistent revenue deficit means that the US essentially has to borrow money to finance its interest costs.



US govt debt outstanding vs. fiscal interest coverage ratio 2000 – 2015. Data provided by US treasury

So where will the funds come from? Trade tariffs hurting consumers? Repatriation of US multinational corporate assets? There are far too many ambiguities present, in our view, to justify such levels of short-term exuberance.

Political Risks (EU)

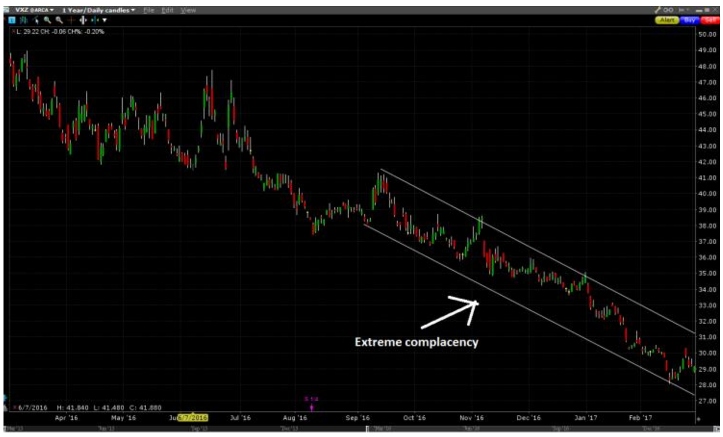
The rise of nationalistic populism has swept Europe since the BREXIT referendum last June. Populism is reshaping our world, and many political arenas. Europe is once again in the spotlight in 2017, with Eurosceptics Marine Le Pen & Geert Wilders looking for upsets in the French & Dutch elections respectively. In France, the favorite for keeping Le Pen & her anti-Europe hoards at bay, conservative candidate François Fillon, has already been dealt a blow following the revelation that he is facing formal investigation over a fake job scandal involving his wife. The consistently evolving uncertainty relating to the future of trade relations within the EU & globally is a large existential risk which we believe has not been adequately price into the value of the Euro & European, and by extension most DM equities.

How do I position my portfolio?

Within the ETF space there are a number of options to hedge against the risk of a broad DM equity sell-off. The most obvious option would be safe-haven precious metals like gold and silvers, where exposure is provided through the SPDR Gold Shares (GLD) & iShares Silver ETFs. GLD has already increased by almost 8% in value this year, demonstrating the traders have been slightly skeptical of current valuations and are buying insurance.

1-year GLD chart

Another option would be to profit from volatility through a rise in the value of the VIX index. Exposure to VIX mid-term VIX futures. Exposure can be gained through the iPath S&P 500 VIX Mid-Term futures ETN (VXZ), which is 39% cheaper from one year ago.



1-year VXZ chart

It might also be prudent to allocate to alternative assets that are not correlated to equity markets. Some available options would be the Vallea Global Macro Fund, which is a hedge fund investing in an unconstrained array of liquid securities.

Invoice financing is also an option, a type of P2P investing where investors are matched with small-to-medium sized companies, where investors are able to buy short term invoices at a discount, earning much higher yields than conventional stocks and bonds.

Conclusion

The risks are abundant. However, maintaining a global asset allocation to a number of asset classes, not being afraid to allocate to alternatives, will serve investors well in the short-run.

References

[i] https://www.clevelandfed.org/newsroom-and-events/publications/economic-trends/2015-economic-trends/et-20150810-comparing-price-to-earnings-ratios.aspx
[ii] http://www.economist.com/news/finance-and-economics/21646803-debt-ridden-emerging-markets-are-heading-nasty-dollar-hangover-feeling-green
[ii] https://fred.stlouisfed.org/series/RECPROUSM156N
[ii] http://www.statestreet.com/ideas/investor-confidence-index.html
[iii] https://fred.stlouisfed.org/series/RECPROUSM156N
[iv] http://www.statestreet.com/ideas/investor-confidence-index.html