Technical Analysis: S&P 500

All clear for now

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Equities | S&P 500 | TECHNICAL ANALYSIS

4 September 2017

- Nearing the end of the current economic expansionary cycle
- Extreme optimism, complacency and greed are showing up
- However, sentiment indicators, price action and interest rate related metrics are not flashing red yet
- General equity market should continue to grind higher until the major indicators signal danger

With the US equity market climbing to new highs, we thought it would be a good time to review the strength of the bull market. From a cyclical economic point of view, we are nearing the end of the expansionary phase where it all started back in June 2009. The current economic expansion is the third longest in history at 98 months, which means a recessionary cycle is about to take over once the current expansionary cycle ends. Each expansionary cycle is met with some form of crisis that leads to a recession with the two most recent crisis resulting in a 50% wipe in the S&P 500. Expansionary cycles are defined as positive QoQ GDP growth while contractionary cycles are defined as negative QoQ GDP growth. The average expansionary cycle is about 60 months, and the longest economic expansion was 119 months during the 1990 decade while the second longest economic expansion lasted for 107 months during the 1960 decade.

Tradable instruments:

ETF:

SPDR DJIA Trust - (AMEX-DIA)

The SPDR Dow Jones Industrial Average ETF tracks a price weighted index of 30 large cap US stocks

SPDR S&P 500 ETF Trust - (AMEX-SPY)

The SPDR S&P 500 ETF tracks a market cap weighted index of US large and midcap stocks selected by the S&P Committee

Powershares QQQ Nasdaq 100 - (Nasdaq:QQQ)

The Powershares QQQ tracks a modified market cap weighted index of 100 NASDAQ listed stocks.

Figure 1. Economic cycle – Current economic expansion is the third longest in history

Economic Expansion	Duration of Economic Expansion	Economic Contraction	Duration of recession
1933 - 1937	51 month	1937 - 1938	12 month
1938 - 1945	81 month	1945 - 1945	7 month
1945 - 1948	38 month	1948 - 1949	10 month
1949 - 1953	46 month	1953 - 1954	9 month
1954 - 1957	40 month	1957 - 1958	7 month
1958 - 1960	25 month	1960 - 1961	9 month
1960 - 1970	107 month	1970 - 1970	10 month
1970 - 1973	37 month	1973 - 1975	15 month
1975 - 1980	58 month	1980 - 1980	6 month
1980 - 1981	12 month	1981 - 1982	16 month
1982 - 1990	92 month	1990 - 1991	9 month
1991 - 2001	119 month	2001 - 2001	8 month
2001 - 2007	73 month	2007 - 2009	18 month
2009 -?	98 month and counting	?	?

Source: Bloomberg, PSR

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The noteworthy part is the current 98 months of economic expansion has outlasted the previous cycle of 73 months where the Global Financial Crisis happened. History does not repeat but often rhymes. Hence, we are not calling the market to top out now with the economic cycle but emphasising the end of the expansion cycle is nearing.

Extreme greed and optimism are a great signal for late stage economic cycle, and the following indicators are suggesting it:

CFD:

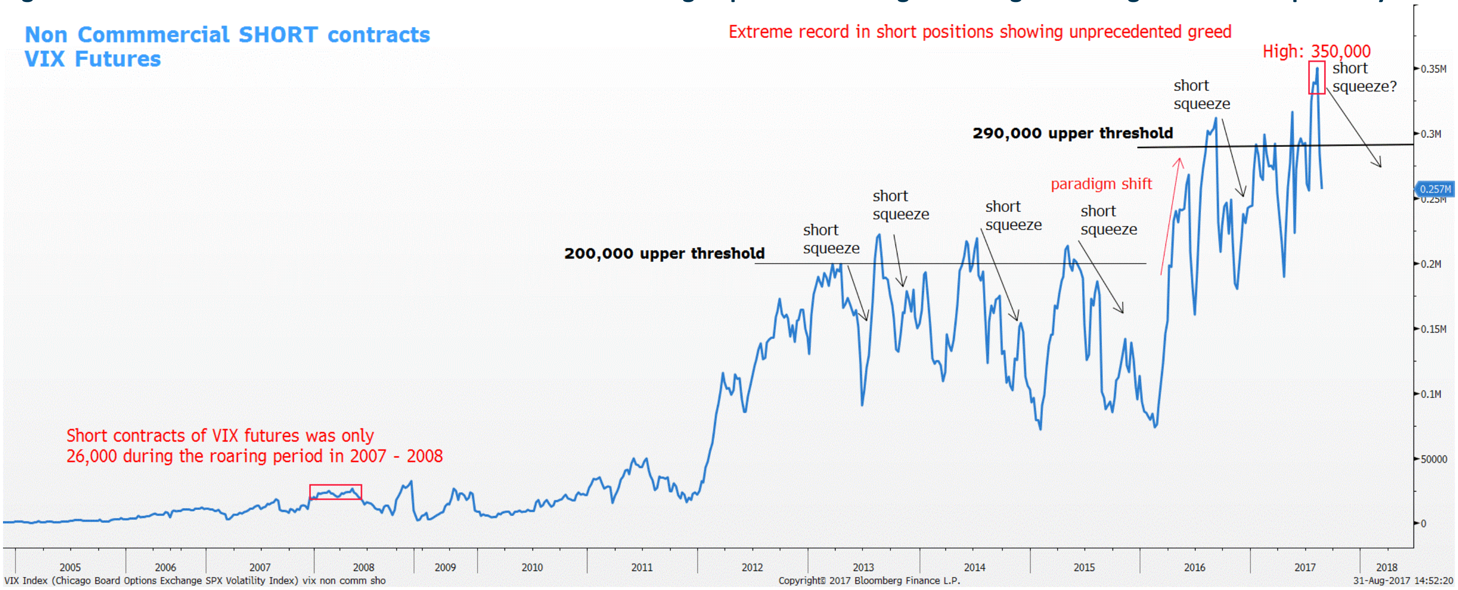
Wall Street Index USD1 CFD – DJI

US SP 500 Index USD5 CFD – INX

US Tech 100 Index USD5 CFD – NDX.X

Figure 2. Equity VIX – hitting a low of 8.84, last seen in 2006 just before GFC blew up

Figure 3. Non-Commercial short contracts VIX Futures – hitting unprecedented high showing extreme greed and complacency



Source: Bloomberg, PSR

Figure 4. Treasury VIX – hitting a low of 4.00 in July 2017, surpassing the GFC low of 4.22 showing extreme complacency

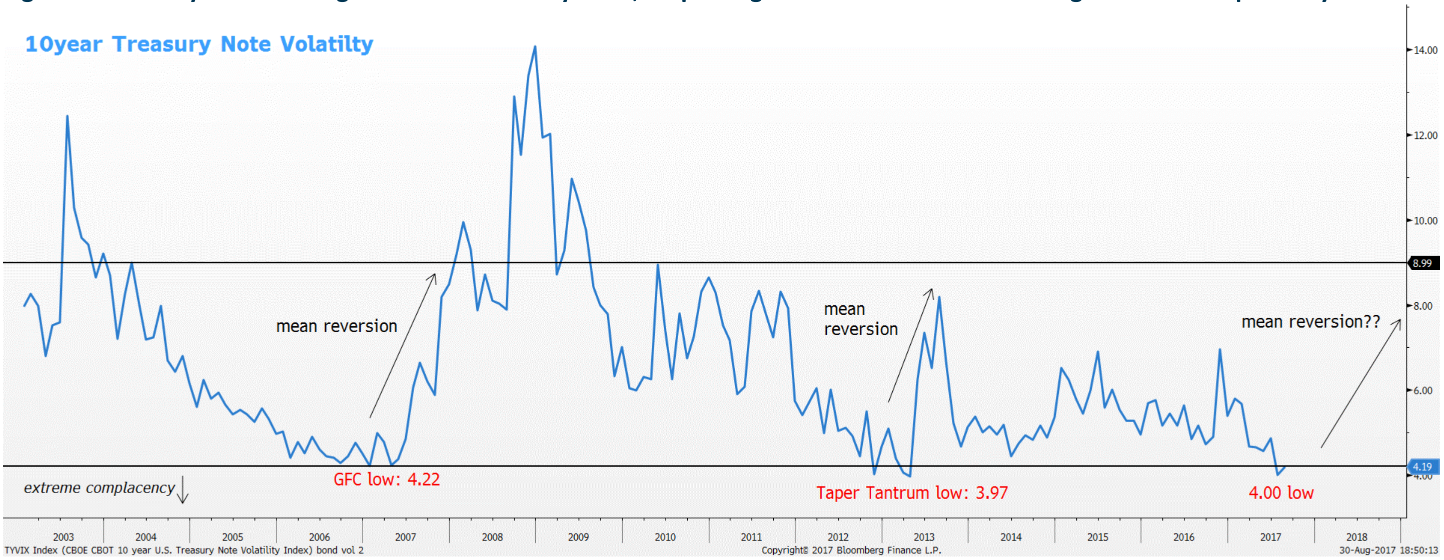


Figure 5. Conference Board Consumer Confidence – exceeding pre-crisis highs

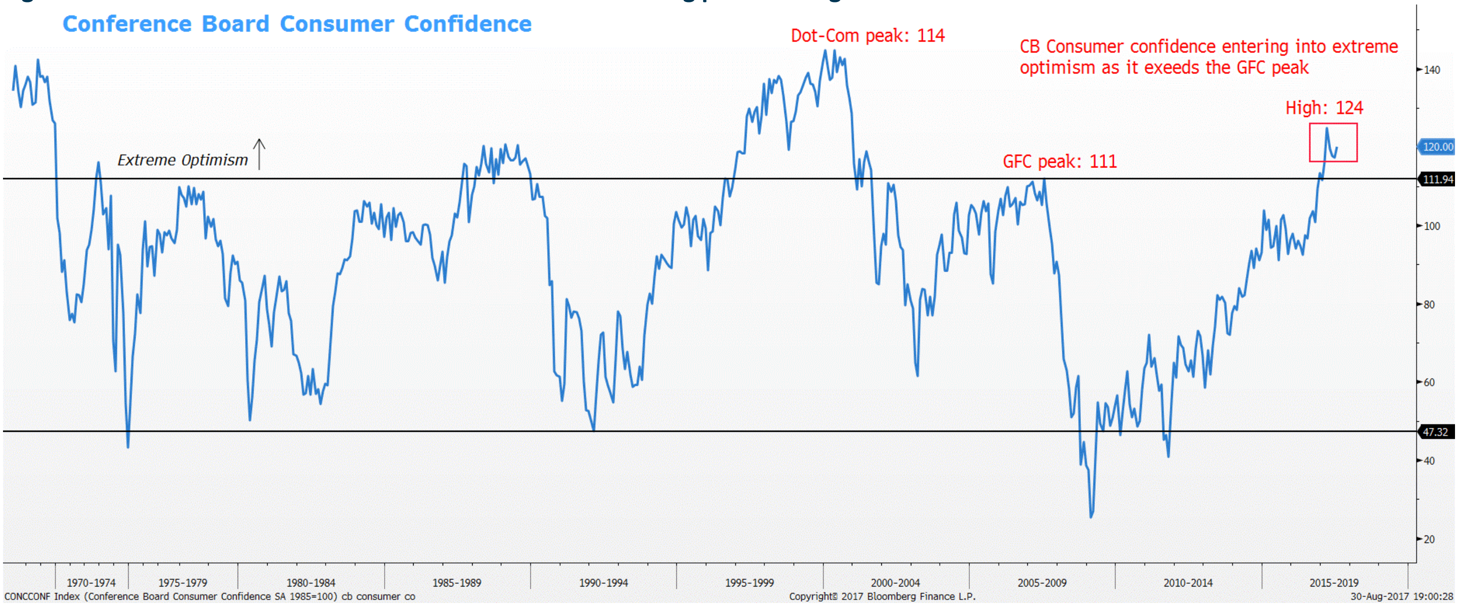
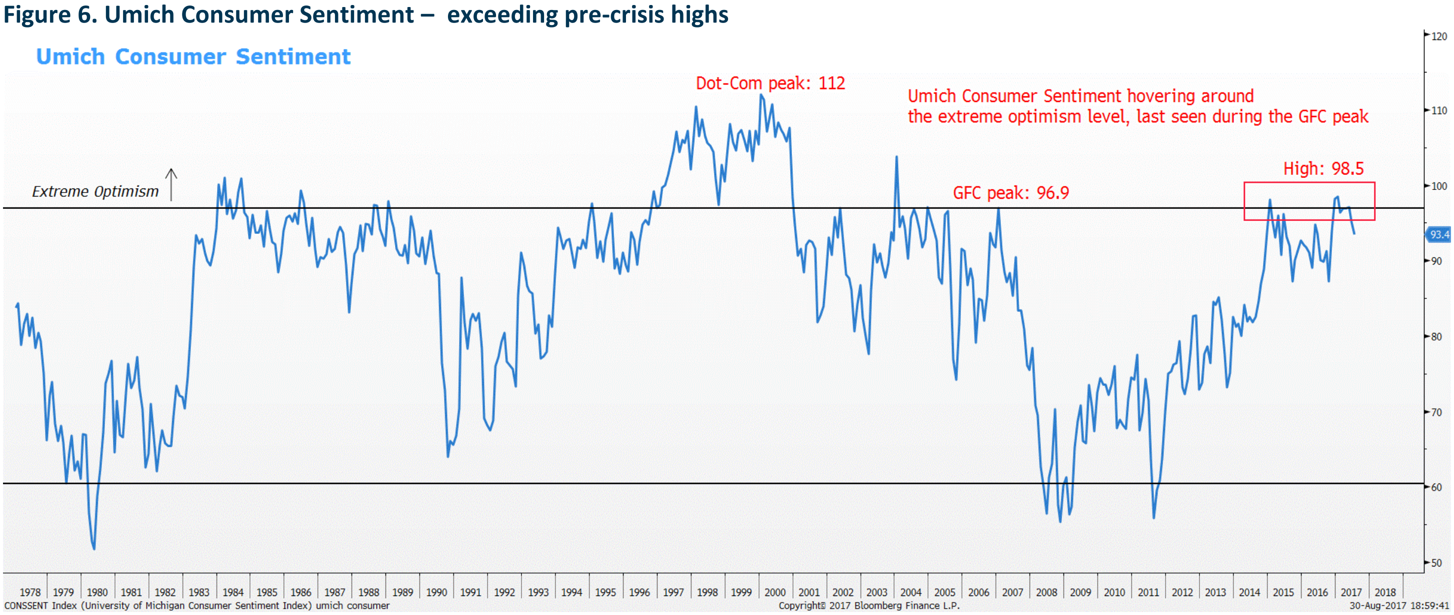


Figure 6. Umich Consumer Sentiment – exceeding pre-crisis highs



Source: Bloomberg, PSR

Figure 7. Bloomberg Consumer Comfort – exceeding pre-crisis highs

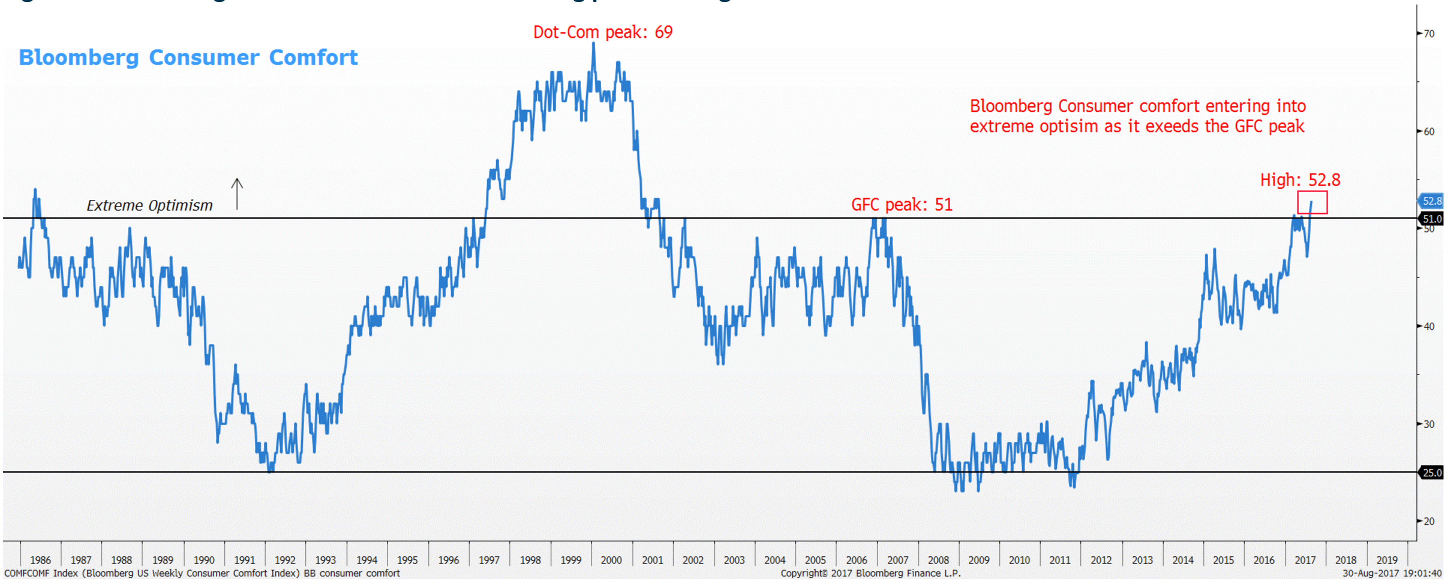
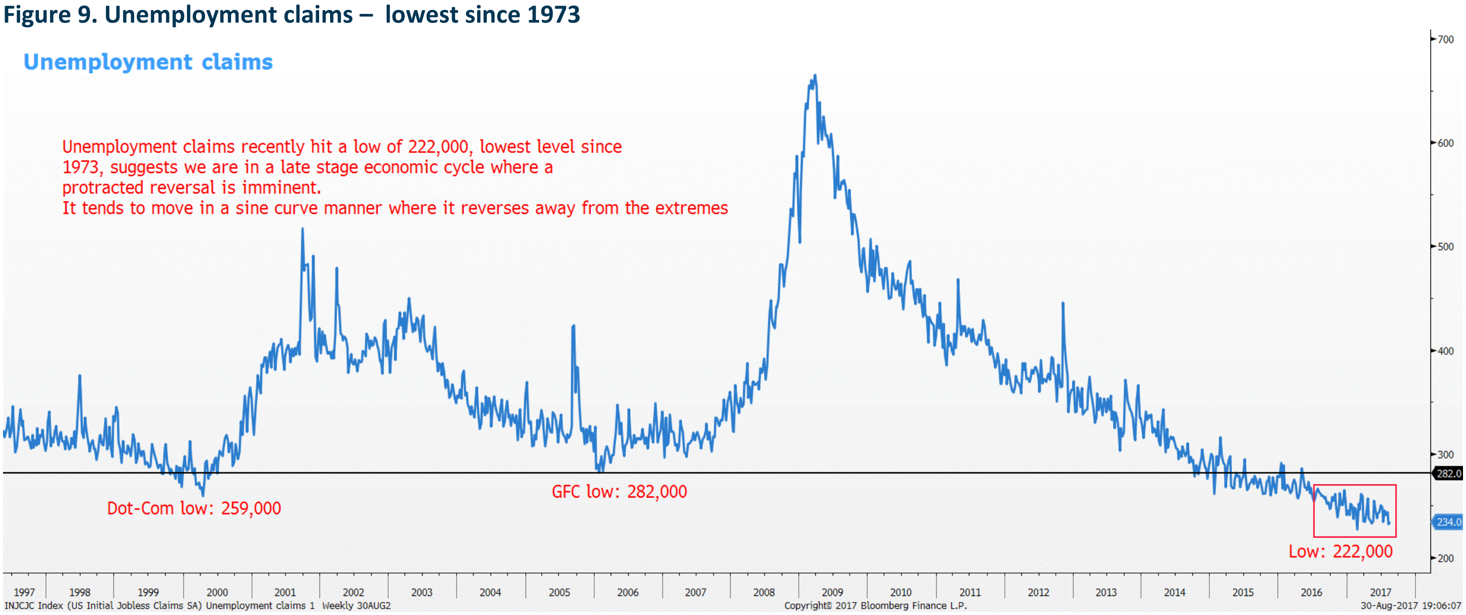


Figure 8. Unemployment rate – recent low of 4.4%, last seen in 2001

Figure 9. Unemployment claims – lowest since 1973



Source: Bloomberg, PSR

Figure 10. Margin Debt – at an all-time high of $550B, 44% above GFC peak

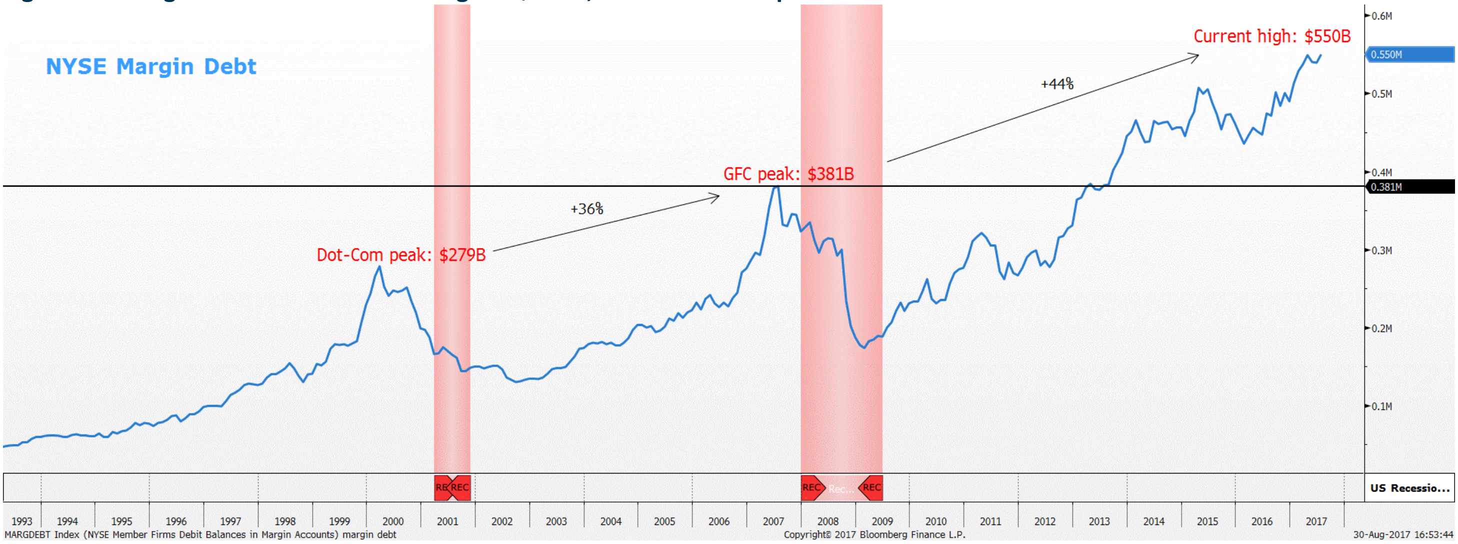
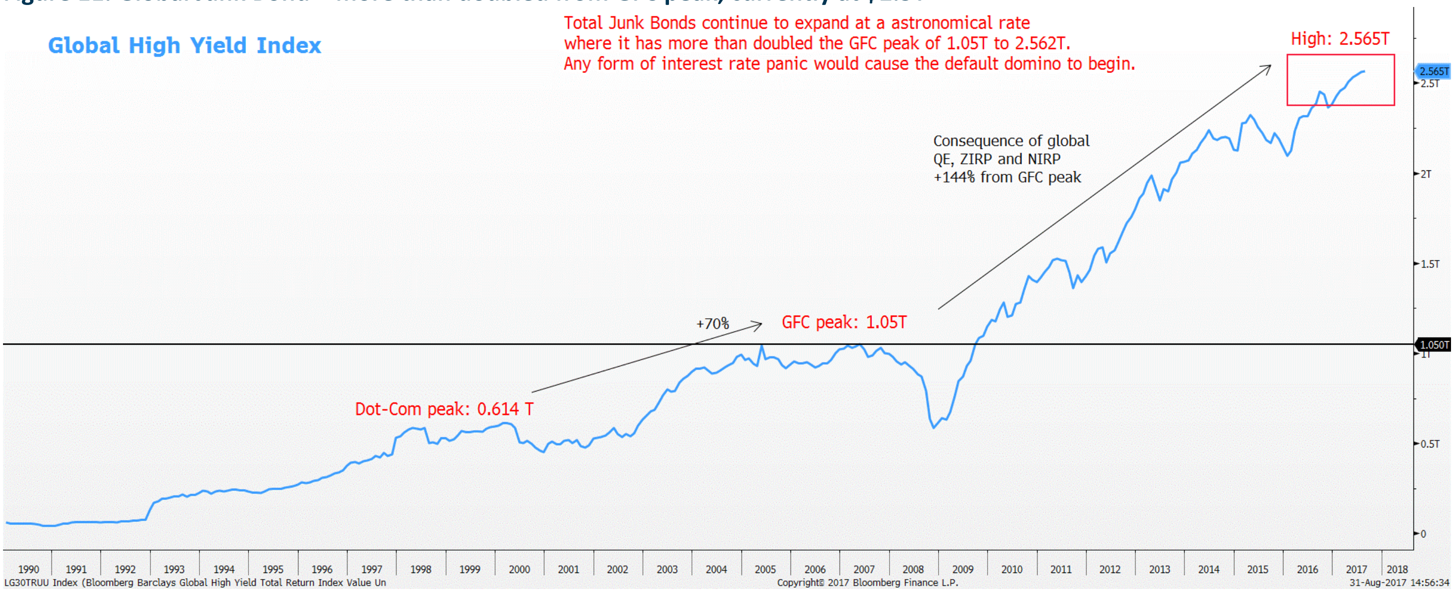


Figure 11. Global Junk Bond – more than doubled from GFC peak, currently at $2.5T



Source: Bloomberg, PSR

As the end of the expansionary cycle is in sight, we did a study to display some indicators to warn about the upcoming top in the US equity market. The indicators can be divided into four main categories, namely;

1) Interest rate related

2) Sentiment base

1) FED related

1) Price action related

We believe the voluntary or involuntary spike in interest rate will ultimately be the cause for the next crisis with the consequence of global Quantitative Easing and the ongoing excessive debt binge the world has taken on due to the extended zero interest rate and negative interest rate policy around the world. Especially, when the debt level has already exceeded the pre-crisis level. It will be a similar replay of what happened during the subprime panic, but this time on a way bigger scale as the adjustment of the teaser interest rate resulted in the mass default of subprime holders and ultimately causing a carnage.

TED Spread = 3 month LIBOR rate – 3 month T-bill interest rate

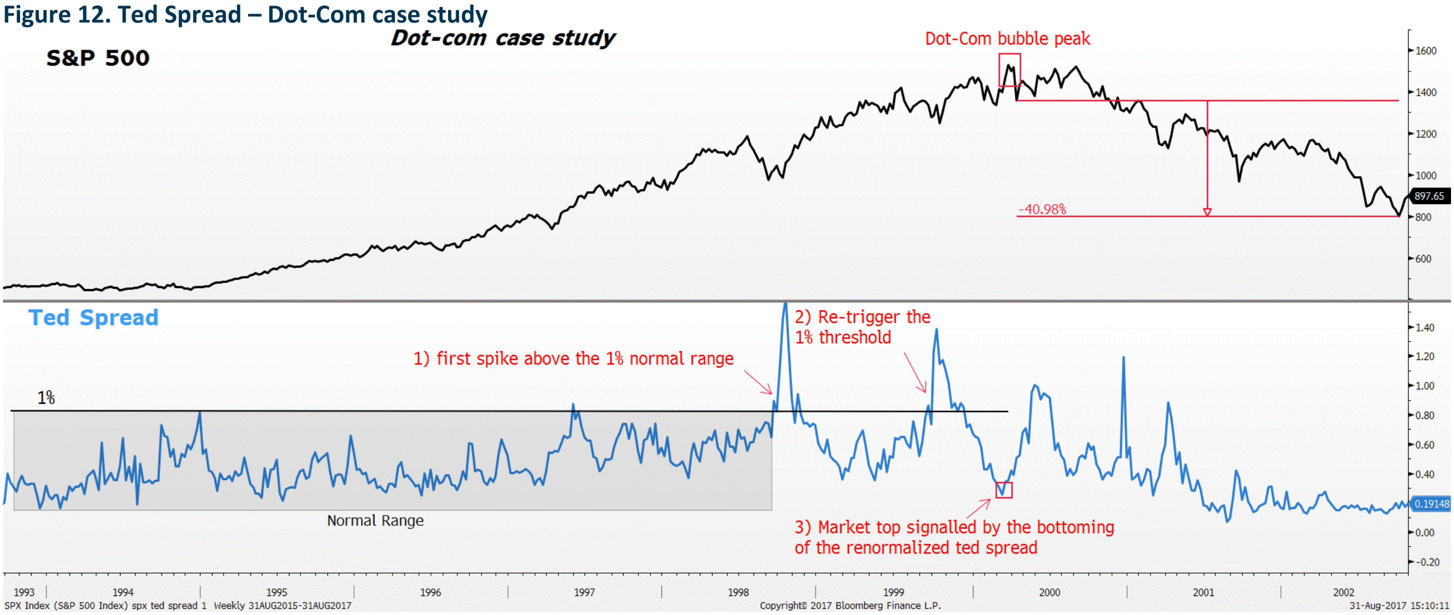
One good indicator to spot for troubles within the debt market is the TED Spread as it shows availability of liquidly at the interbank level. TED Spread is the difference between 3 Month Libor and 3 Month Treasury yield and signs of trouble are highlighted by a rising TED Spread.

The rationale behind the rising TED spread and increasing panic is explained by the growing uncertainty between banks that lead to a spike in Libor while at the same time, safe haven bid into near term Treasury bill leads to the 3 month treasury yield to fall. The net effect will reflect a rising TED spread suggesting a rise in panic and credit risk.

Things to look out for in TED Spread:

1) Ted Spread spiking above normal range
2) Ted Spread re-trigger the 1% threshold
3) The renormalisation of the Ted Spread off the peak to a new low will be the time when the market forms the cyclical top

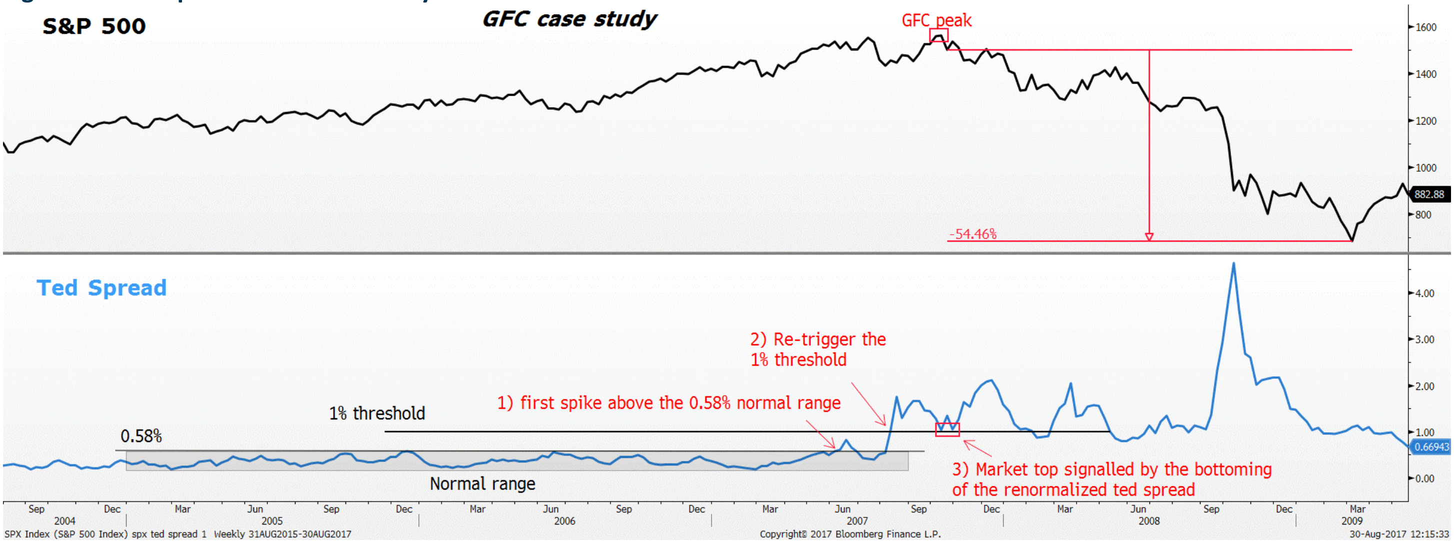
Figure 12. Ted Spread – Dot-Com case study



Source: Bloomberg, PSR

Our study has shown the danger threshold on the Ted spread is the 1% mark. In the 1990s decade, the 1% mark was first triggered in September 1998 giving out the first warning shot without having a negative impact on the equity market. Only when the second trigger happened did the market got affected drastically. The second trigger above the 1% mark happened in September 1999 where the Ted spread hit a high of 1.38%. The market's all-time high only appeared a few months later after the Ted spread renormalised to a low, which happened in March 2000.

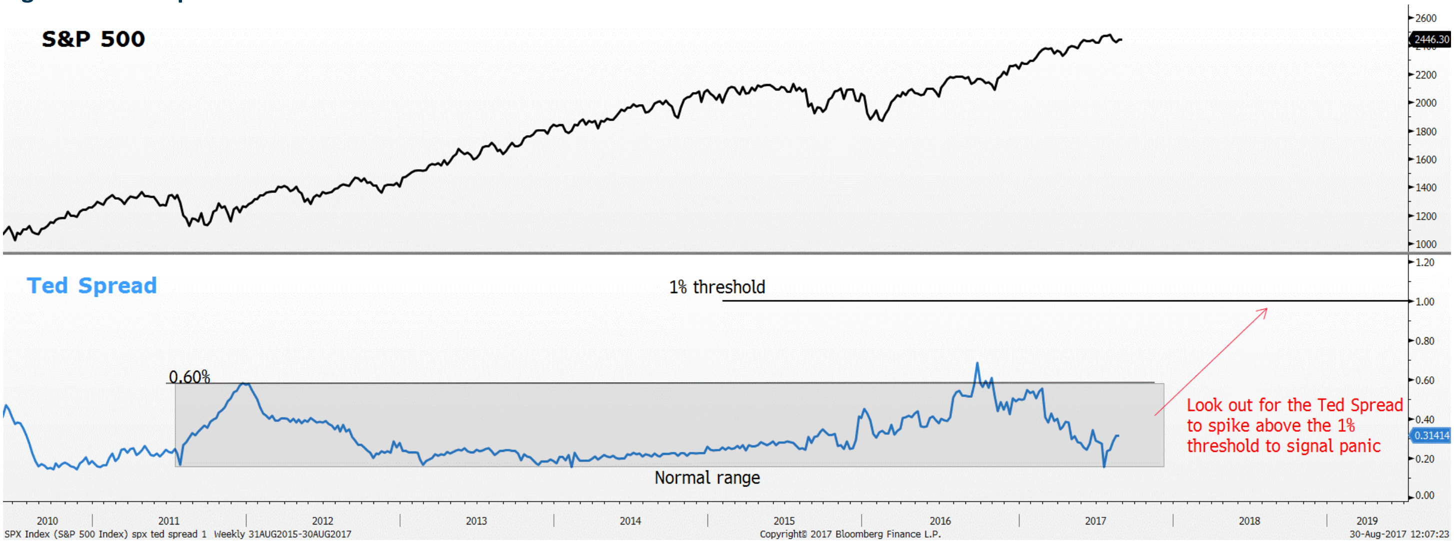
Figure 13. Ted Spread – GFC case study



Source: Bloomberg, PSR

A similar warning pattern happened during 2006 – 2007 when the TED spread first broke out of its normal range of 0.58% in June 2017. The second warning shot happened later in August 2007 when the Ted spread spiked violently above the 1% threshold. At the same time, the S&P 500 continued to rally nonetheless, but the GFC high was eventually signalled by the renormalised Ted spread low of 1% in October 2017 where the S&P 500 went into a 50% nosedive thereafter.

Figure 14. Ted Spread – current



Source: Bloomberg, PSR

Fast forward to current time, the TED spread has recently bottomed out from a low of 0.14% in July 2017, but no alarm bells are ringing yet. The first thing to look out for in the Ted spread space would be to look for the first warning spike above the 0.60% current upper range. Once that is achieved, the TED spread would need to spike erratically above the 1% threshold to signal extreme panic. Lastly, wait for the Ted spread to renormalised back to a normal range to spot the low where the cyclical high in the market forms.

2s10s Spread = 10 year treasury yield – 2 year treasury yield

Another reliable interest rate related indicator to watch is the yield spread between the long end, 10 year treasury yield and short end, 2 year treasury yield. The 2s10s spread is representative of the yield curve and the noteworthy part is the flattening or inversion pattern. Historically, once the 2s10s spread dips below the 0 level, into negative territory, that is the danger zone signalling impending recession.

Figure 15. 2s10s Spread – flattening but still a far distance away from negative

Source: Bloomberg, PSR

For example, in January 1989, the 2s10s spread fell into negative territory. A recession followed after that in July 1990. A more relatable example happened in February 2000 where the 2s10s spread provided ample warning of the dot-com bubble when it first fell below the 0% mark. The dot-com bubble eventually popped, followed by a recession in March 2001.

The GFC was also perfectly forecasted by the negative 2s10s spread way before all hell broke loose. The 2s10s spread entered into negative territory as early as December 2015 as the recession followed on two years later in December 2017.

Currently, the 2s10s spread is still a far distance away from the negative territory as it trades at 81 basis points. However, the downtrend within the 2s10s spread remains firm and appears on track to take out the 73bps, 52 weeks low. If that happens, the yield curve will continue to flatten as the warning siren warms up. Ultimately, watch closely for the 2s10s spread to invert for further confirmation of a recession which can easily take a few more months to materialise if the downtrend continues.

The unwillingness of banks to make loans thus resulting in a shortage of liquidity is the main reason how a flattening and inversion of the 2s10s spread warns about an impending recession, market correction. Banks borrow short while lending long leads to a major problem when the 2s10s spread inverts and goes negative. When the 2s10s spread is negative, it is telling us that the borrowing cost on the short end of the curve is rising and more importantly higher than the interest revenue of the long end of the curve. Thus resulting in the unwillingness to lend from the banks perspective as they stand to lose under such condition if they are raising capital at a higher rate on the short end while earning a lower rate on the long end of the curve. Hence, in an inverted yield curve environment, liquidity is scarce which exacerbates the recession.

Sentiment Indicators

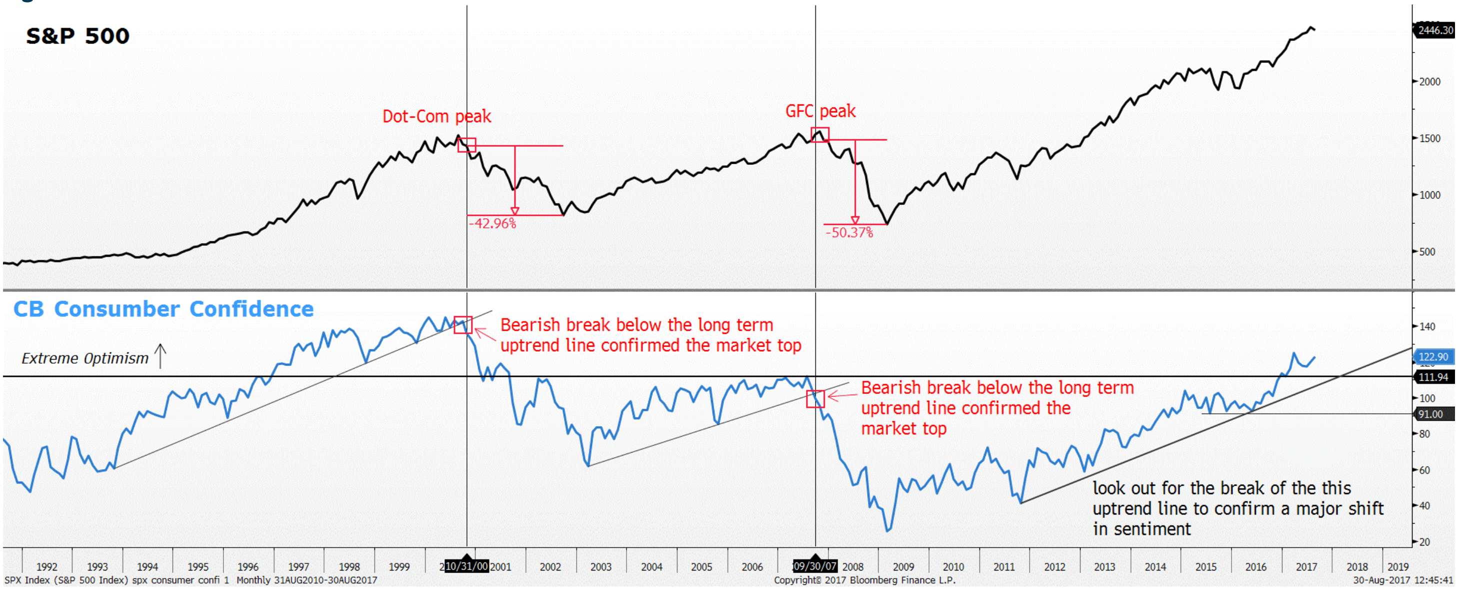
Sentiments are very important in driving the broader market as the herd mentality pushes price to the extreme from time to time. The Conference Board consumer confidence index, University of Michigan consumer sentiment index and Bloomberg consumer comfort index have a strong positive correlation to the S&P 500. In other words, sentiment moves the market, and when we have healthy and roaring sentiment, equity market tends to rise along with it. On the other hand, when sentiment is sluggish, the equity market falls along with it.

The above sentiment indexes are responses collected from surveys that provide a forward-looking view of the economy on business conditions, consumer attitudes and buying intentions.

CB consumer confidence index, Umich consumer sentiment index provides a longer term view on the sentiment as its reported on a monthly basis while Bloomberg Consumer Comfort index provides a more up to date sensing of the consensus as for it's reported on a weekly basis.

More certainty about a gloomy picture will be confirmed once the three indexes converge to the downside simultaneously.

Figure 16. CB Consumer Confidence

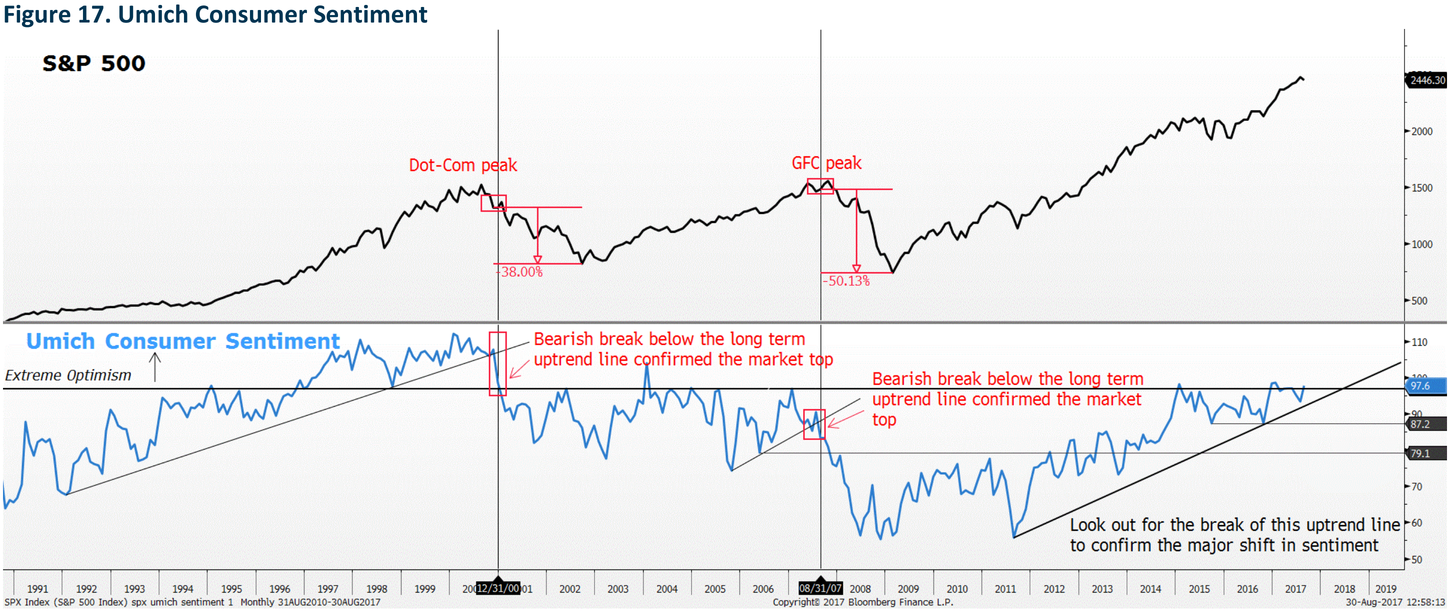


Source: Bloomberg, PSR

CB Consumer confidence has never been at such a high level since the Dot-com euphoria era. Historically, a reading above 112 shows extreme optimism. Whenever the CB consumer confidence exceeds 112, S&P 500 index tends to fall hard when the bullish trend in consumer confidence reverses.

Both the dot com and GFC high was signalled perfectly by the consumer confidence when the existing uptrend line breaks to the downside, confirming the end of the raging sentiment. Hence, for the current time, the first sign of weakness will appear when CB consumer confidence top out and fall back below the 112 extreme optimism level. Further confirmation of the trend change will happen once the CB consumer confidence breaks below the long term uptrend line from 2011.

Figure 17. Umich Consumer Sentiment

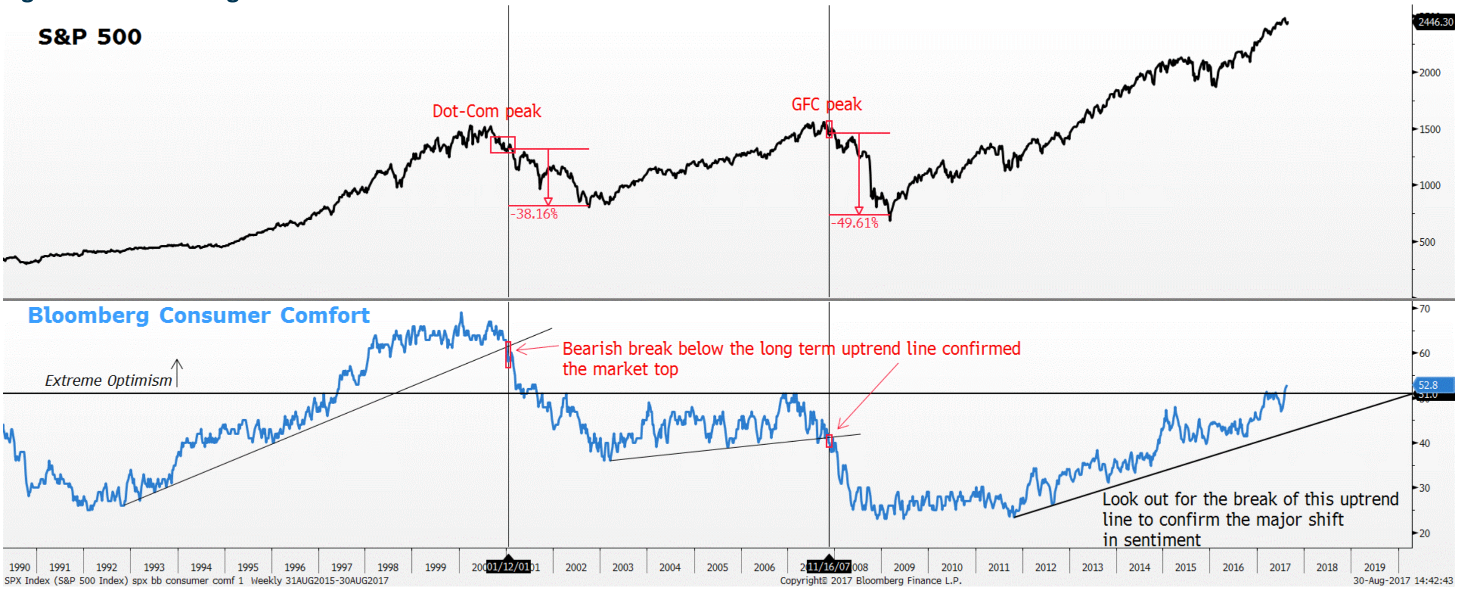


Source: Bloomberg, PSR

The analysis on the Umich consumer sentiment is similar to the one in CB Consumer confidence where the break of the long term uptrend line results in a major shift in sentiment. The dot-com bubble and GFC were forewarned in a similar fashion when the consumer sentiment breaks below the multi-year uptrend line.

Thus, for the Umich consumer sentiment, watch the indicator to break below the long term uptrend line from 2011 and for a more exact reading, a deterioration below the 87.2 low for the confirmation of a trend reversal.

Figure 18. Bloomberg Consumer Comfort



Source: Bloomberg, PSR

The Bloomberg consumer comfort is also showing the same euphoria picture as it recently just exceeded the 52.8 GFC high. That implies we are reaching the end of the expansionary cycle as the herd dives in. The threshold to look out here would be for the long term uptrend line since 2011 to be broken to the downside. Some early sign of weakness from the Bloomberg consumer comfort can be observed from the bearish break below the 51 July low.

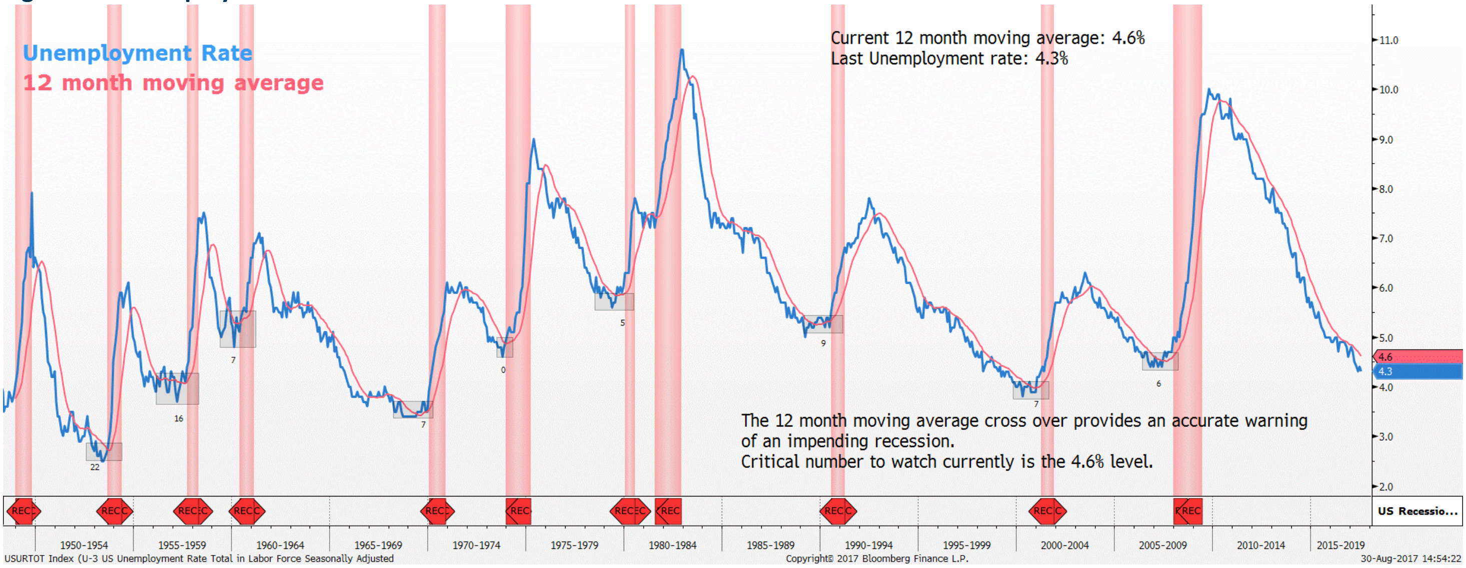
Ultimately, what we want to see is a major trend reversal off the extreme highs, preferably sharp drop in all three sentiment indicator simultaneously to break below their key respective uptrend line to signal a major reversal in sentiment.

Employment data

Employment data is part of the Fed's dual mandate and plays a large part in setting Fed's monetary policy. Both the Unemployment rate as well as the Weekly Unemployment claims continue to strengthen, but it is also showing late economic cycle symptoms. Once the employment data turns from late stage expansionary phase, the deterioration happens fast in an unexpected manner like in 2007.

Things to look out for in the unemployment rate to signal a recession is to watch for it to cross above the 12-month moving average. The unemployment rate does provide one of the more accurate signals for an impending recession.

Figure 19. Unemployment rate



Source: Bloomberg, PSR

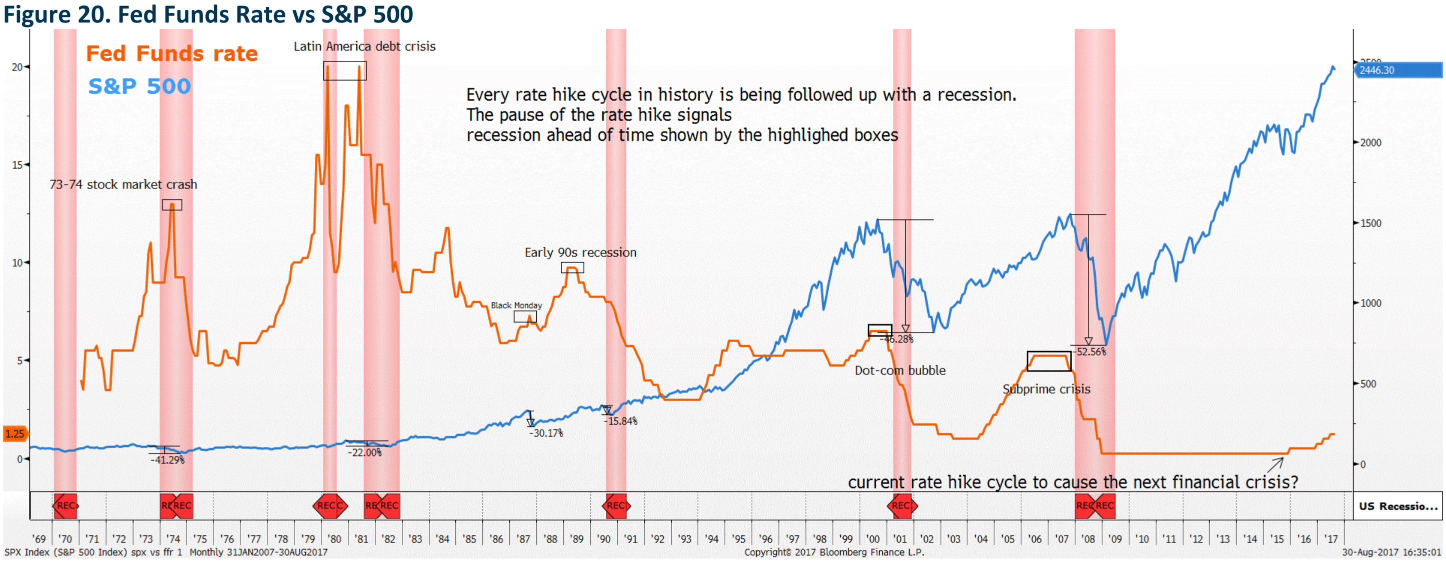
Historically, since the 1940s, there were nine occasions where the unemployment rate crossed above the 12-month moving average. Each signal provided an early indication of recession as it takes around nine months for the recession to kick in after the 12-month moving average cross over is triggered. The most recent reading of the unemployment rate is 4.4% while the 12-month moving average is 4.6%.

Moving forward, once the unemployment rate ticks above the 4.6% 12-month moving average, that might be the first signal to be prepared for the impending recession.

Fed Funds Rate

One of the more compelling indicator to watch is the Fed Fund's Rate. The Fed, with the brightest and smartest people in the room, has the best knowledge about the health of the economy and any actions from their monetary policy tell a lot. The moment when they stop hiking interest rate is the time to be wary. Every rate hike cycle in history leads to some sort of a crisis at the end of the rate hike cycle, and we believe this time will be no different.

Figure 20. Fed Funds Rate vs S&P 500



Source: Bloomberg, PSR

For example, the pause of the rate hike cycle since 2005 gave a good warning for the GFC. The FED embarked on a rate hike cycle since June 2004 where the FFR was raised from 1% to 1.25%. The rate hike cycle lasted until June 2006 where the FFR was at a high of 5.25%. Since then, the FFR was left at 5.25% for the following 14 months which meant the FED was on the defensive side knowing something is not right.

The S&P 500 eventually formed the GFC high in the later part of 2007, and the FFR reduction exacerbated the sell-off since September 2007.

The Fed began the most recent rate hike cycle back in December 2015 lifting the FFR from 0.25% to 0.50%. Since then, the market has experienced three more rate hikes, taking the FFR to 1.25% currently. Watch closely to see the upcoming FOMC meetings for more clues of worries from the Fed once they break the rate hike cycle.

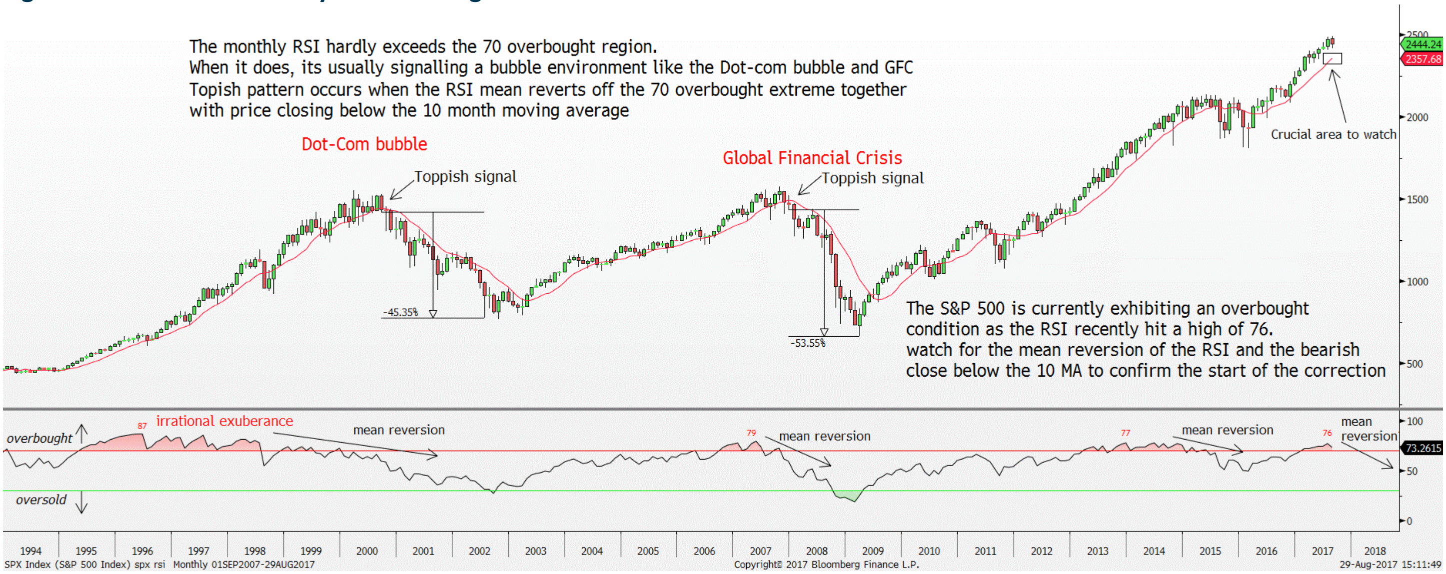
Price action

Prices of the major equity indices should be the first to warn about any impending weakness as the rest of the economic indicator follow suit.

Overbought Relative strength Index

The monthly timeframe view of the S&P 500 does provide a smooth out version of the market, which perfectly highlights the exuberance that has been building up since 2013 where the S&P 500 took out the Dot-com and Global Financial Crisis high. One way to measure the amount of exuberance is to monitor the Relative Strength Index (RSI). Reading above 70 suggests overbought condition while reading below 30 suggests oversold condition especially on the monthly timeframe. When the RSI enters into either extreme on the monthly timeframe, it is definitely worth watching as it takes months of the exuberance to build up the extreme RSI and major trend changes usually occur at the RSI extremes.

Figure 21. S&P 500 – Monthly RSI overbought



Source: Bloomberg, PSR *red line = 10 month moving average*

Historically, the RSI hardly exceeds the 70 overbought condition unless the market is near a bubble crisis high. Most of the time, the RSI ranges around the 70 and 30 level. For example, since April 1995, the RSI had exceeded above the 70 overbought region for a whopping 52 months before the Dot-Com peak was formed. The amount of irrational exuberance that has built up during the Dot-Com era was fully accounted for by the extended overbought condition since April 1995.

A similar occurrence happened in 2007 when the RSI overshot the 70 overbought region since April 2007. The subprime top was established soon after the overbought condition was met. As the RSI mean reverted away from the 76 peak back to the normal range below the 70 in July 2007, the market started correcting as the top followed on in October 2007. The overbought RSI perfectly forewarned both the Dot-com and GFC top due to the irrational exuberance.

We currently have a similar setup with the RSI crossing above the 70 overbought region since February 2017 signalling a build-up in greed. The current reading of the RSI stands at 72 with a recent peak of 76. Watch closely for the RSI to dip below the 70 overbought region in conjunction with price closing below the 10-month moving average to signal the beginning of a larger correction.

Value Line Geometric facing Multi-Decade triple top

The market might be distorted to a certain extent due to the Quantitative Easing program by the various central banks. Hence, looking at the market cap weighted index like the S&P 500 might give a false representation of the market as the big boys dictate the performance. One way to look at the general health and strength of the market is to look at the Value Line Geometric index, which shows the equally weighted index of 1675 companies from the NYSE, AMEX, NASDAQ and OTC market.

Figure 22.VLG – showing weakness off the multi-decade triple top

Source: Bloomberg, PSR

By overlaying the S&P 500 index above the VLG shows both indexes move in line with each other. Thus, further confirmation of the bearish view on the S&P 500 index can be supplemented by watching the price action in VLG. Historically, once the long term uptrend line of the VLG is broken to the downside, that more or less spelt the end of the bull market and the beginning of the bear market.

For example, the long term uptrend line from 2003 to 2007 was broken to the downside in November 2007. That bearish break successfully shifted the bullish sentiment around where the bear market took over. At the same time, the S&P 500 also fell together with the VLG and kick started the dreaded GFC sell-off.

A similar pattern occurred in the Dot-com era where the bearish break of the long term uptrend line from 1990 pin pointed the top for the Dot-Com bubble in the S&P 500. Both episodes resulted in a 50% correction in the S&P 500 over 2 to 3 years and were signalled by the bearish break of the long term uptrend line in the VLG.

Currently, some near term weakness is visible in the VLG as price recently broke below the immediate uptrend line from 2016. If the weakness were to sustain, look out for a further sell-off for the VLG to break below the long term uptrend line from March 2009. That would require a fall of 13% minimally in the VLG to achieve the bearish break.

Note that the VLG is currently facing some multi-decade resistance overhead again at the 509 pre-crisis high level that occurred during the Dot-Com and GFC era, making this a possible major turning point.

Hence, watch the VLG to break below the long term for a convincing trend change which should happen concurrently with the S&P 500 making a reversal at the top as the overbought RSI mean reverts.

In summary, none of the crucial indicators are flashing red yet but keep in mind that we are nearing the end of this current expansionary economic cycle. In other words, the broad base equity market might have further room to grow until some of the indicators get triggered.

Figure 23. Indicators bearish signal threshold

Indicator	Threshold	Last	Bearish Signal
Ted Spread	Above 1%	0.31%	Unconfirmed
2s10s Spread	Below 0%	0.81%	Unconfirmed
CB Consumer Confidence	Below uptrend line/112	122.9	Unconfirmed
Umich Consumer Sentiment	Below uptrend line/93.4	97.6	Unconfirmed
Bloomberg Consumer Comfort	Below uptrend line/47	52.8	Unconfirmed
Unemployment rate	Above 12 MA/4.6%	4.4%	Unconfirmed
Fed Funds Rate	Halting of the rate hike cycle	1.25%	Unconfirmed
S&P 500	Below 10MA/2359	2357	Unconfirmed
Value Line Geometric	Below uptrend line/444	518	Unconfirmed

Source: Bloomberg, PSR

Some near term events that might cause more uncertainties:

- The debt-ceiling deadline at the end of September
- Escalating tensions in Korean Peninsula as North Korea recently launched a missile over Hokkaido, ultimately ending up in the waters off the northern region of Hokkaido
- Possible balance sheet reduction announcement by the FED in their 20 September FOMC meeting

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