Cuffelinks
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This Week's Top Articles

GFC lessons 10 years on: can it happen again?

Shane Oliver

It seems momentous things happen in years ending in seven. Starting with the 'summer of love' in 1967 and the introduction of the Chevrolet Camaro. After that, it was downhill with Elvis leaving the building in 1977, the 1987 share market crash, the Asian crisis of 1997 and the GFC in 2007. While Lehman Brothers didn't go bankrupt until September 2008, the GFC's initial tremors occurred in 2007, with shares taking a hit in August before rebounding to new highs in the US and Australia in October and November 2007 ahead of a roughly 55% decline into March 2009. What are the main lessons for investors from the GFC and can it happen again?

What drove the GFC?

The GFC was the worst financial crisis since the Great Depression. It saw the freezing up of lending between banks, multiple financial institutions needing to be rescued, 50% plus share market falls and the worst post-war global economic contraction. Too many loans to US homebuyers set off a housing boom that went bust when interest rates rose and supply surged. No big deal – it happens all the time! But it was what went on around it that ultimately saw it turn into a global crisis.

- A massive proportion of the loans (40% or so) went to people who had no ability to service them, such as sub-prime and low doc borrowers. Remember NINJA loans – loans to people who had no income, no job and no assets! And many were non-recourse loans, so borrowers could just hand over the house if its value fell below the debt owed and that was the end of their liability. Recall – jingle mail!
- This was encouraged by public policy aimed at boosting home ownership and ending discrimination in lending.
- It was made possible by a massive easing in lending standards facilitated by financial innovation that packaged up the sub-prime loans into securities, which were then given AAA ratings on the basis that while a small proportion of loans may default the risk will be offset by the broad exposure. But the trouble was that with the sub-prime loans moved out of the banks, there was no 'bank manager' looking after them.
- This all came as banks globally were sourcing an increasing amount of the money they were lending from global money markets – which had freed them up from relying on expensive bank deposits via bricks and mortar branches.

The music stopped in 2006

Poor affordability, an oversupply of homes and 17 interest rates hikes from the Fed over two years saw US house prices peak and then start to slide. This made it harder for sub-prime borrowers to refinance their loans at their initial 'teaser' rates. The problem caught the attention of global investors in August 2007 after BNP froze redemptions from three of its funds because it couldn't value the Collateralised Debt Obligations (CDOs), which in turn set in train a credit crunch. The global economy fell into recession, mortgage defaults escalated and multiple banks failed.

The crisis went global as losses mounted, magnified by gearing, which forced investment banks and hedge funds to liquidate sound positions to meet redemptions thereby spreading the crisis to other assets. The distribution of securities globally led to a wide range of exposed investors and hence greater worries about who was at risk, which all affected confidence and economic activity.

Fault lay with home borrowers, the US Government, lenders, ratings agencies, regulators, and investors and financial organisations for taking on too much risk.

It came to an end in 2009 after significant monetary easing and fiscal stimulus helped restore the normal operation of money markets, confidence and growth. That said, aftershocks continued with sub-par global growth and very low inflation.

Lessons from the GFC and its aftermath

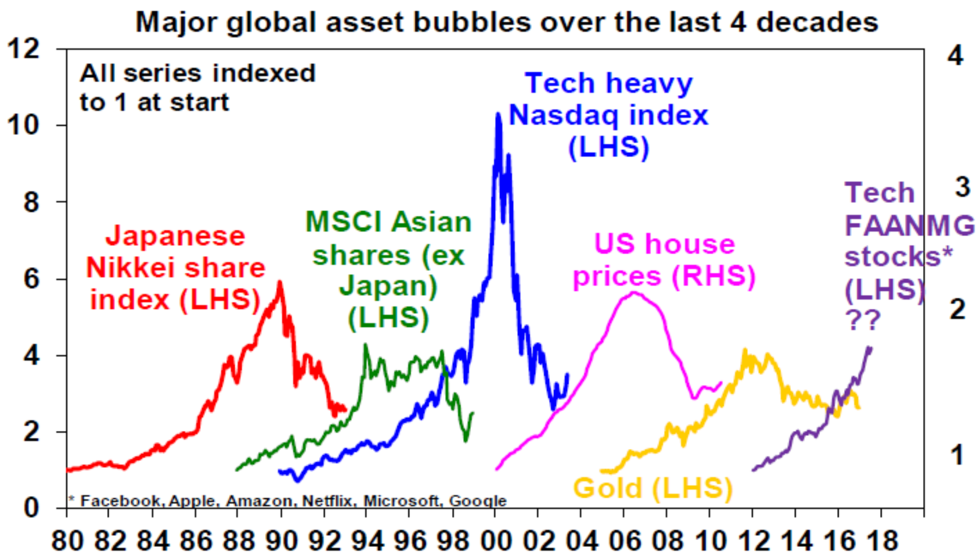
The GFC highlighted several lessons for investors:

- **The economic and investment cycle is alive and well**. Talk of a 'great moderation' was all the rage prior to the GFC but the GFC reminded us yet again that periods of great returns are invariably followed by a fall back. If returns are too good to be true they probably are.
- **High returns come with higher risk**. While risk is often dormant for years, it usually returns with a vengeance as was apparent in the GFC. Backward-looking measures of volatility are no better than attempting to drive focussed only on the rear-view mirror.
- **While each boom bust cycle is different, markets are pushed to extremes of valuation and sentiment**. The low in 2009 was characterised by ultra-cheap shares and credit investments with investors highly pessimistic.
- **Be sceptical of financial engineering or hard-to-understand products**. The biggest losses for investors in the GFC were generally in products that relied heavily on financial engineering purporting to turn junk into AAA investments that were impossible to understand.
- **Avoid too much gearing or gearing of the wrong sort**. Gearing is fine when all is going well. But it will magnify losses when things reverse and can force the closure of positions at a big loss when the lenders lose their confidence or when margin calls force investors to sell their position just at the time they should be adding to it.
- **The importance of true diversification**. While listed property trusts and hedge funds were popular alternatives to low-yielding government bonds prior to the GFC, through the crisis they ran into big trouble (in fact Australian Real Estate Investment Trusts (REITs) fell 79%), whereas government bonds were the star performers. REITs have since cut their gearing and returned to their knitting.
- **Fiscal and monetary policy work**. There is a role for government in putting free market economies back on track when they get into a downward spiral. While some have argued that easy money just benefitted the rich (who invest in shares), doing nothing would have likely ended with 20% plus unemployment and worse inequality.
- **The return to normal from major financial crises can take time**, as the blow to confidence depresses lending and borrowing and hence consumer spending and investment for years afterwards. This muscle memory eventually fades but the impact can be seen for a decade or so.
- **The importance of asset allocation**. What really matters for your investment performance is your asset mix – ie your allocation to shares, bonds, cash, property, etc. Exposure to individual shares or fund managers is second order.

- **Finally, 'stuff happens'**. While after each economic crisis there is a desire to 'make sure it never happens again', history tells us that manias, panics and crashes are part and parcel of the process of 'creative destruction' that has led to an exponential increase in material prosperity in capitalist countries. The trick is to ensure that the regulation of financial markets minimises the economic fallout that can occur when free markets go astray but doesn't stop the dynamism necessary for economic prosperity.

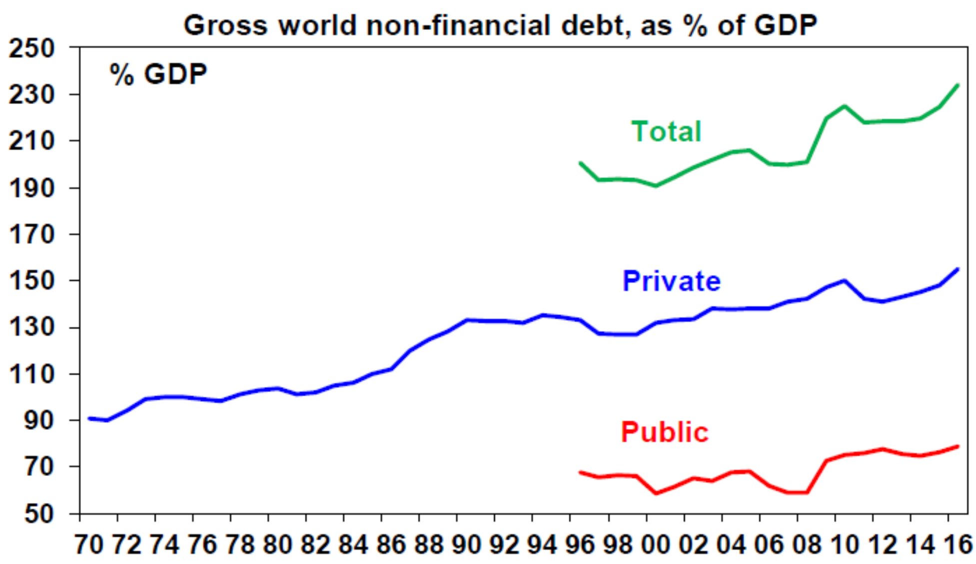
Will it happen again?

Of course, there will be another boom and bust but the specifics will be different next time. History is replete with bubbles and crashes and tells us it's inevitable as each generation forgets and must relearn the lessons of the past. Often the seeds for each new bubble are sown in the ashes of the former. Fortunately, in the post-GFC environment seen so far there has been an absence of broad-based bubbles on the scale of the tech boom or US housing/credit boom. E-commerce stocks like Facebook and Amazon are candidates but they have seen nowhere near the gains or infinite PEs seen in the late 1990s tech boom.



Source: Thomson Reuters, Bloomberg, AMP Capital

On the global debt front, a concern is that after a post-GFC pull back, it has grown to an all-time high relative to global GDP.



Source: IMF, Haver Analytics, BIS, Ned Davis Research, AMP Capital

However, just because global debt has grown to a new high doesn't mean a crisis is upon us. It has been trending up for decades, much of the growth in debt in developed countries post the GFC has been in public debt and debt interest burdens are low thanks to low interest rates.

Furthermore, the other signs of excess that normally set the scene for recessions and associated deep bear markets in shares like that seen in the GFC are not present on a widespread basis just now. Inflation is low, monetary policy globally has barely tightened, there has been no widespread overinvestment in technology (as preceded the tech wreck) or housing (as preceded the GFC in the US) and bank lending standards have not been relaxed to the same degree as seen prior to the GFC. Moreover, financial regulations have tightened significantly with banks required to have higher capital ratios and source a greater proportion of funds from their depositors.

While another boom bust cycle is inevitable at some point, many of the signs of excess that normally precede deep bear markets are still absent.

Dr Shane Oliver is Head of Investment Strategy and Chief Economist at AMP Capital*. This article is general information and does not consider the circumstances of any investor.*

To zig or to zag?

Roger Montgomery

Reporting season has, as is often the case, delivered a mixed set of results which has again failed to move the dial in either direction for the broad market. As investors move on from local company annual reports, what are the big picture issues that could drive either downside volatility or justification for optimism? There is a plethora.

Some notable underperformers

Disappointments during reporting included Dominos (ASX:DMP) which achieved same store sales growth well below guidance in Australia, Japan and Europe and missed its own previous guidance for profit. It reported NPAT of $118.5m which was 3.7% below consensus and lowered guidance for FY18 to 12% below consensus. The company's PE has now 'de-rated' by more than 60% since its 2016 calendar year peak. In the past, the company was trading on lower multiples (mid teens) and generating greater than 30% growth.

Elsewhere, Bluescope increased underlying profits by 102% but the result missed expectations thanks to surging energy costs (see my Cuffelinks article on plunging clean energy prices here). Bluescope also revealed the unanticipated departure of its Chief Executive of over 10 years, and to complete the trifecta, the ACCC is investigating potential cartel behaviour in steel in 2013-14.

And Telstra, that darling of yield huggers over the age of 55, not only delivered another entirely predictable year of impotent sales and earnings growth but, also predictably, announced a cut to its dividends, which was the raison d'être for the stock being owned by almost every baby boomer with an SMSF.

With the majority of the largest companies paying the bulk of their earnings out as dividends, rather than reinvesting for growth, and with bank loan volume growth flattening, listed builders at peak levels of activity, retailers of homewares likely peaking and an end to asset revaluations for REITs, it is no wonder the S&P/ASX200 is still at the same level as at the beginning of the year. The price index is well below its level of 1 September 2007, a full decade ago. So much for the joys of investing for the long term in an Australian index fund.

All that's in the past, what about the future?

The end of reporting season may be a blessed relief to many equity investors but are they out of the woods? A temporary lull in the influence of idiosyncratic factors on equity prices is not the end of potential increases in volatility for investor returns.

Bullish investors are betting on an acceleration in global economic growth evidenced by higher resource prices including copper and iron ore. These global 'reflationists' are also looking to recent hawkish comments by central bankers to support their case. Across the world we have:

- Australia's RBA Governor Phillip Lowe in February 2017 effectively ruled out further rate cuts, voicing concerns about, "how much extra fragility [it would] create in the economy" by encouraging further growth in household debt.
- More recently, US Fed Chair Janet Yellen in June noted, "We do have a strengthening economy with policy accommodative, all that we're doing in raising rates is removing a bit of accommodation heading toward a neutral pace."
- And in Europe, ECB President Mario Draghi said that reflationary pressures have replaced deflationary ones as the Eurozone's recovery progresses.
- Meanwhile, Bank of Canada Governor Stephen Poloz observed, "It does look as though those cuts have done their job."
- And finally, Bank of England Chief Economist Clive Haldane admitted he believed "that the balance of risks associated with tightening too early, on the one hand, and too late, on the other, has swung materially towards the latter in the past six to nine months" adding, "Certainly, I think a tightening is likely to be needed well ahead of current market expectations."

In the bearish camp sit some of the world's most lauded hedge fund managers who believe stretched equity valuations, record low levels of volatility, the concentration of funds flowing into a narrowing group of tech stocks and speculative fervour in non-income-producing collectibles are all signs that raised cash levels are sensible.

What the big global investors are saying

Ray Dalio, founder of Bridgewater Associates LP, the world's largest hedge fund with more than $150 billion under management, believes the magnitude of the next downturn will be epic. He said recently:

"We fear that whatever the magnitude of the downturn that eventually comes, whenever it eventually comes, it will likely produce much greater social and political conflict than currently exists."

Bill Gross, founder of PIMCO LLC and now Portfolio Manager at Janus Henderson, cites the highest risk levels since 2008: "Investors are paying a high price for the chances they're taking."

'Bond King' and CEO of DoubleLine Capital Jeff Gundlach advised, "Moving toward the exits", telling Bloomberg, "If you're waiting for the catalyst to show itself, you're going to be selling at lower prices."

Oaktree Capital's founder Howard Marks, in his latest letter to investors, summarised present circumstances thus:

"The uncertainties are unusual in terms of number, scale and insolubility in areas including secular economic growth; the impact of central banks; interest rates and inflation; political dysfunction; geopolitical trouble spots; and the long-term impact of technology."

"In the vast majority of asset classes, prospective returns are just about the lowest they've ever been."

"Asset prices are high across the board. Almost nothing can be bought below its intrinsic value, and there are few bargains. In general, the best we can do is look for things that are less over-priced than others."

"Pro-risk [behaviour] is commonplace, as the majority of investors embrace increased risk as the route to the returns they want or need."

Finally, Appaloosa Management's David Tepper recently warned investors to stockpile some cash and says he's "on guard."

Choosing your cognitive biases

The above collection of comments from fund managers and central bankers is evidence that investors can easily amass a collection of views that reflect their own. This is the stuff cognitive biases are made off.

With the end of reporting season fast approaching there is no doubt investors will turn their attention to more disparate considerations.

Irrespective of what camp Montgomery believes, our process isn't revealing large amounts of value among the quality names we like. As a result, cash is the safest alternative and our largest position by far, varying between the Montgomery Fund with 27% cash to the Montgomery [Private] Fund at 43% cash. The Australian market is 17% weighted to materials (compared with 2.9% in the US) and it will snub its nose at our apparent conservatism and make our process look dumb. As Howard Marks noted, 'Currently, the optimists are winning'.

So which camp are you in? I'd be delighted to hear your thoughts in the comments section.

Roger Montgomery is Chairman and Chief Investment Officer at [Montgomery Investment Management](). This article is for general information only and does not consider the circumstances of any individual.

What is the Shiller PE ratio telling us?

David Bassanese

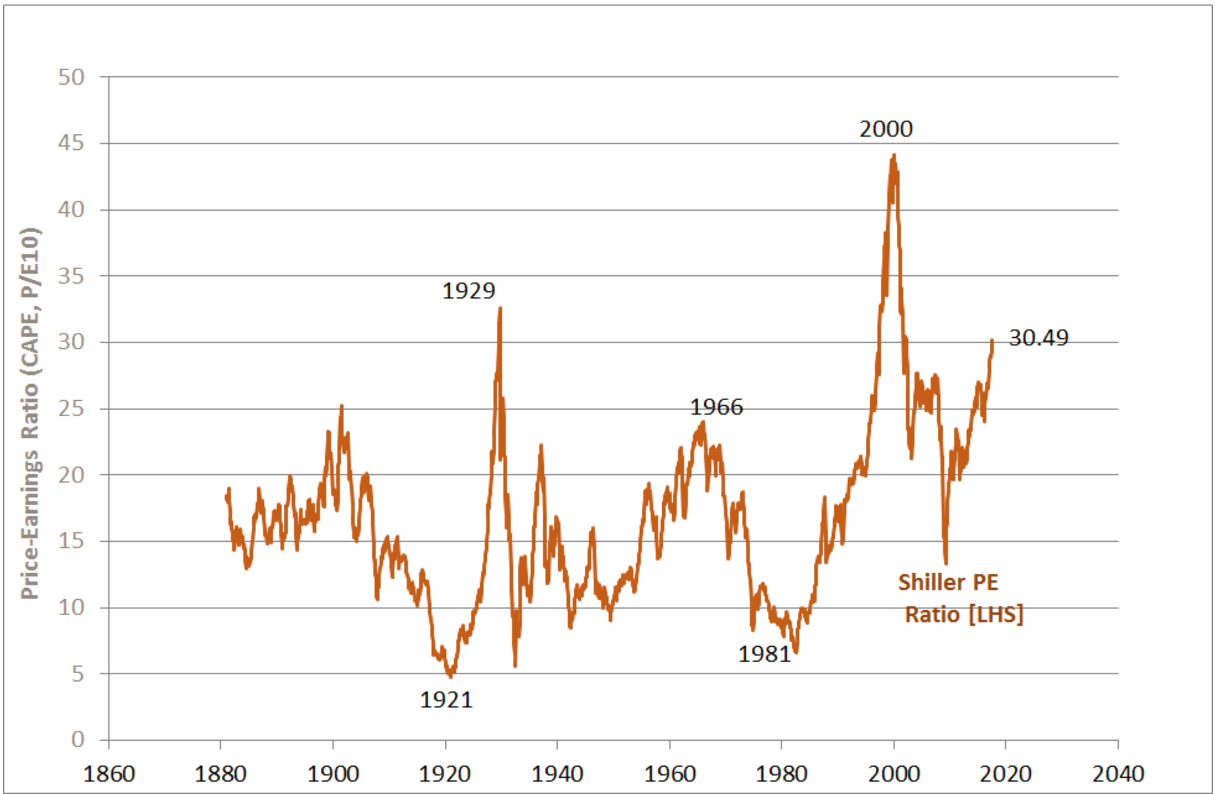
The rise in global equity prices in recent years has led to concerns over valuation levels. One indicator that appears to cause endless nervousness is the so-called 'Shiller' PE ratio. While the Shiller PE ratio is a poor short-run market timing tool, it has proven to be a reasonable guide for likely longer-run returns in the past. However, allowance today needs to be made for the large structural decline in interest rates.

The Shiller PE ratio is high

Made famous by Nobel-prize winning economics professor Robert Shiller, the Shiller or 'cyclically adjusted' PE ratio (SPER) compares the level of US share prices to the 10-year moving average level of earnings. The indicator became popular after Shiller used the analysis during the dotcom bubble to suggest the market was overvalued and lower returns could be expected over coming years, and he was eventually proven right!

As seen in the chart below, the current level of the SPER is around 30, which is above its average since the 1880s of 16.7. The SPER is higher than during the peak of the late-1960s bull market, and close to the level in 1929 (32.5), but still well below the peak of 44.2 in 1999.

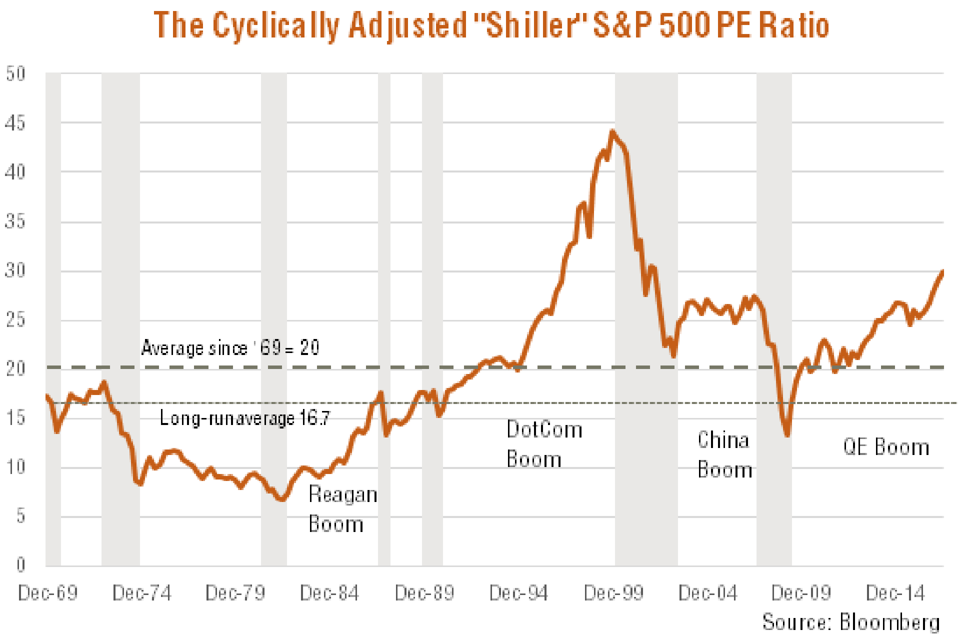
Shiller PE Ratio: 1880 to 2017



Source: Prof. Shiller, Yale University

It's not a great market timing tool

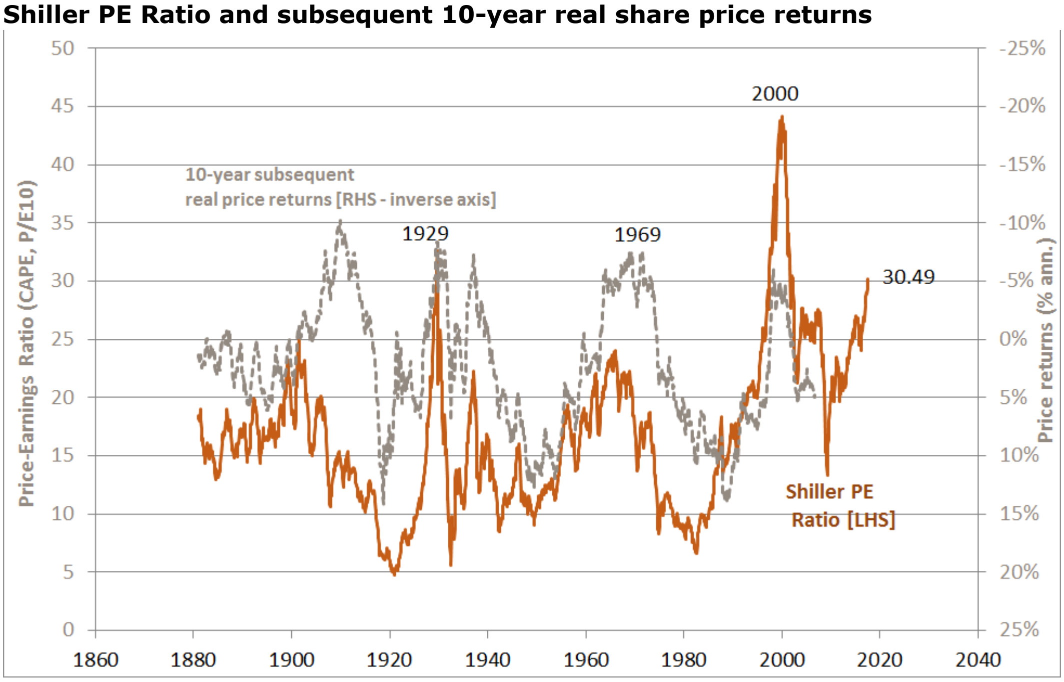
Does this mean the market is about to crash? As seen in the chart below, the SPER has tended to be above average for the much of the past two decades. Indeed, it continued to rise for an extended period through the late 1990s bull market, and hovered above 25 for most of the commodity-driven bull market prior to the financial crisis. As a short-run market timing tool, the SPER has not been much help!



The longer-run outlook for stocks is *potentially* more sobering

The SPER has had better success as an indicator of longer-run likely returns. As seen in the chart below, relatively high levels of the SPER have tended to be associated with relatively low real share price returns over the **following 10-year period**. Indeed, the last three times the SPER hit 30 (back in the late 1920s and again twice during the dotcom bust), subsequent 10-year real share prices returns were negative. That does not bode well for likely US share price returns over the coming decade!

Shiller PE Ratio and subsequent 10-year real share price returns

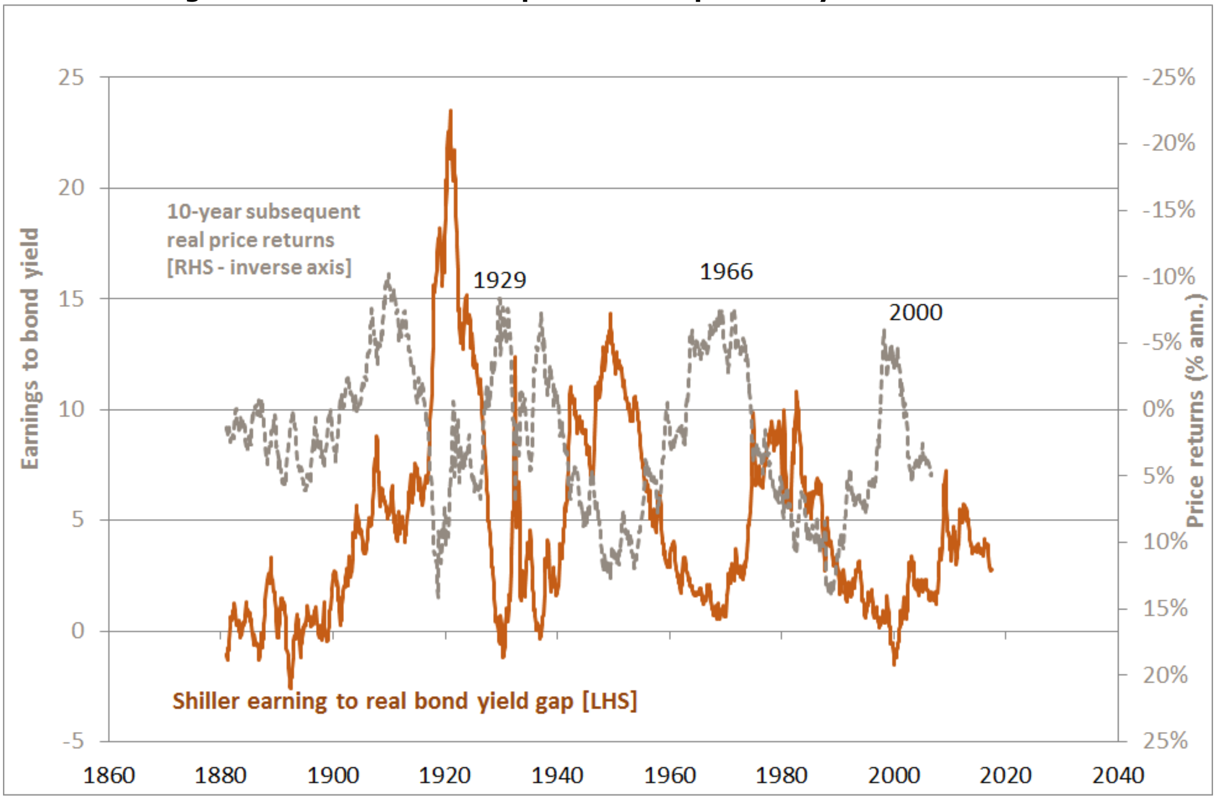


Source: Prof. Shiller, Yale University

A complicating factor in extrapolating historical patterns is the huge cycle of rising then falling interest rates over the past 50 years. Equity markets faced the headwind of rising rates from the 1960s to the early 1980s, then enjoyed the tailwind of falling rates for the past 35 years.

As seen in the chart below, if we invert the SPER to generate a 'Shiller earnings yield' and compare this to real bond yields, current equity market valuations appear less troublesome. The Shiller earnings-to-bond yield gap is currently around 2.7% compared with a long-run average of 4.7%, but past periods of weak 10-year real share returns (in 1929, 1966 and 2000) were associated with earnings to bond yield gaps closer to zero.

Shiller Earnings to Real-Bond-Yield Gap and Subsequent 10-year Real Share Price Returns



Source: Prof. Shiller, Yale University

Compared with 1929, 1966 and 2000, this method of stock market valuation is not flashing red.

David Bassanese is Chief Economist at BetaShares. BetaShares is a sponsor of Cuffelinks, and offers risk-managed Exchange-Traded Funds listed on the ASX. This article contains general information only and does not consider the investment circumstances of any individual.

The potential for a value revival

Peter Wilmshurst

The Danish philosopher Søren Kierkegaard observed that, "Life can only be understood backward, but it must be lived forward." With the benefit of hindsight, events of the past often seem rational, even inevitable, yet the present is always fraught with uncertainty. This could also be said about investing.

Today's investment climate could be summed up as cautious and noticeably bereft of conviction. While global equity markets have more than doubled from GFC lows, investors remain concerned about central bank policies, currencies and commodities, among other issues.

Even so, our company's conviction in value investing is strengthening as we try to "understand the market backwards".

What is value investing?

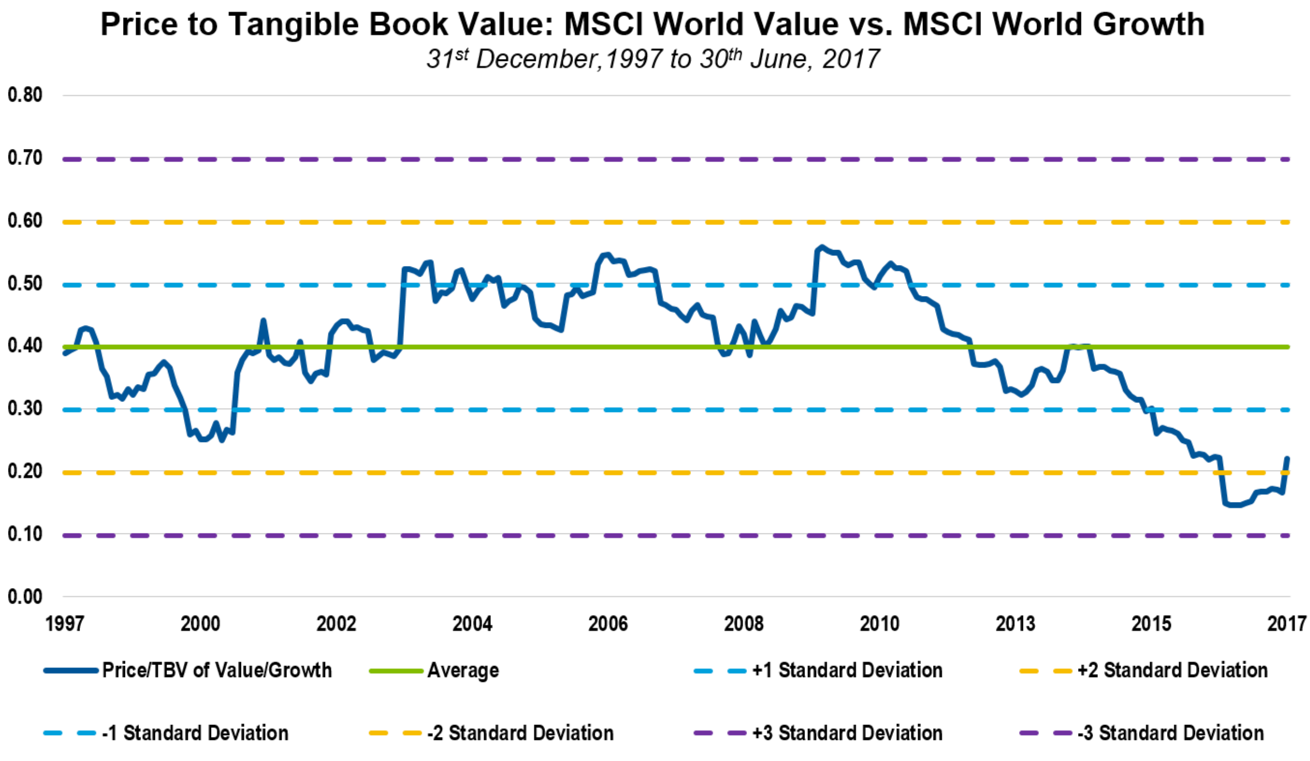
What is value investing?

Value investing is a strategy where stocks are selected that trade for less than their intrinsic values. Value investors seek out stocks they believe the market has undervalued. These differ from growth stocks, which are companies whose earnings are expected to grow at an above-average rate relative to the market.

Value investors believe the market overreacts to good and bad news, resulting in stock price movements that do not correspond with a company's long-term fundamentals, giving an opportunity to profit when the price is deflated.

Valuation gap is extreme

Value stocks remain historically cheap relative to growth stocks. In fact, the valuation gap between value and growth stocks on a Price to Book value (P/BV) is at an extreme not seen for some time (see chart below).



Source: Bloomberg.

Investors would have to go back to the height of the 'dotcom bubble' in 2000 to find such extremes. Back then, interest in tech stocks was enormous, based on their perceived growth potential. Today, it is the consumer staples sector that is attracting market focus as investors look for growth stocks that offer the perception of safety and stability in an uncertain environment.

Value on the rebound

One of the stronger catalysts for a value revival is rising interest rates. In the past, value cycles have occurred when rising interest rates have corresponded with a strengthening economy, although some argue it is the stronger economy and inflationary pressures that were the real drivers of the value revival. Today, however, global economic growth is moderate and deflationary pressures persist.

While value can be pro-cyclically correlated to the economy, this isn't always the case. For example, investors waiting for an improving economic cycle would have missed the value upturn in 2000. Investors fleeing value in anticipation of economic weakness would have missed value's outperformance during the recession of 1981-82. In each of these instances, we believe stocks simply became too cheap and a reversion to the mean prompted a value rally.

Rather than economic growth, we consider valuation of stocks a far more accurate predictor of future returns and a value recovery. When it comes to value, today's valuation starting point is distinctly compelling.

Value moving beyond 'the usual suspects'

Since the GFC, value stocks have been primarily concentrated in either the resource sectors such as energy and materials or rate-sensitive sectors such as financials. For many, being a value investor has therefore meant taking on commodity risk or interest rate risk.

Recently, however, value has proliferated beyond just a few deep cyclical sectors to across the broad market. For example, value is just as cheap today within pharmaceuticals and biotechs as it is within financials and energy, as shown in the chart below.

Major World Pharmaceuticals: Forward P/E[1]

31st January, 1985 to 31st March, 2017

Source: [1]FactSet Market Indicies

The long-term trends for pharma and biotechs are encouraging given the ageing world population and increased wealth in emerging markets. Regulatory reform and drug pricing are clouds hanging over the industry but will not impact all companies in the same way. The best way to deal with a tough price environment is to innovate. We are invested in companies working on drugs for immune-oncology, gene therapy and Alzheimer's which have huge potential. Current concern and uncertainty is allowing us to buy new stocks at what we believe to be a discount, and this is where the advantage of having a long-term horizon and patience comes in.

Long term view helps pick a bargain

Uncertainty is a fact of life and the road ahead is rarely obvious. One way to deal with uncertainty is taking a longer-term investment horizon. Many of the macro and political variables that drive markets in the short term are unforecastable with any reliable degree of certainty. However, long term valuations move reliably through cycles, as do economic variables like commodity prices and interest rates. Quantifying the potential impact of different scenarios on each of our holdings' prospects and earnings and contrasting them with the company's valuation allows us to judge whether we have identified a value bargain.

Peter Wilmshurst is Portfolio Manager of [Templeton Global Growth Fund Ltd] (ASX:TGG) plus a number of Templeton Global Equity Group's global portfolios. This article is general information and does not consider the needs of any individual.

Five ways to avoid the 'value trap'

Robert Miller

Investors with a predisposition to high conviction value investing often need value to be combined with an element of growth. Let's call it 'growth-value'. Our approach is not to look for 'cigar butts' but we do seek turnaround or under-researched ideas where there are profits and growth is likely to continue.

Finding a 'value trap' investment is easy, but finding growth-value in an investment is hard. Everyone loves a bargain but it is important to look deep below the surface.

Looking beyond the value trap

A value trap is a company whose shares look cheap because they are trading at low multiples of earnings, cash flow or book value. For example, a low price to earnings (P/E) ratio or low value to earnings (or EV/EBITDA) ratio may be caused by a good reason, a value trap.

Mistakes can be minimised by considering:

1. Consistent ROE and ROA

Management is key to any small company but it is especially vital when looking for growth-value. In our view, return on equity (ROE) provides a mechanism to measure management's track record delivering growth using the money shareholders have provided to the company. Value traps might have delivered strong ROE numerous years ago but a value-growth business will have consistent, and at a minimum, double digit ROE.

Should a company have debt, return on assets (ROA) needs to be taken into consideration. ROA accounts for the effectiveness of the company using that debt. Essentially, this provides a score of management's ability to generate returns across all sources of funding, both debt and equity. Different industries have differing levels of what is considered a healthy amount of debt so looking for consistency rather than volatility in an ROA figure is key.

ROE and ROA are two vital checks that provide a level of confidence around how efficiently management's ideas are being executed.

2. Balance sheet safety

For unloved small companies with debt, look at the interest cover ratio (EBIT relative to interest payments) as a proxy for business health. How many years' worth of interest payments can the current earnings sustain? Anything less than a multiple of two would be a concern and ideally this should be a lot higher.

The ratio of short-term receivables to payables is also a factor to consider. Regardless of the industry, consistency in this ratio indicates good management of working capital.

3. More than the basic valuation metrics

It is easy to get distracted and focus solely on a low P/E or EV/EBITDA and assume this translates to a high margin of safety. On their own these metrics tell nothing about growth prospects. In finding value-growth, the obvious growth factors such as revenue and EPS growth are looked for but also for EBITDA margin growth, free cash to enterprise valuation yield and the historical consistency of EBITDA to cash conversion. Together these provide a better understanding of the true margin of safety. It is a good sign if all these factors are inversely related to a low P/E or EV/EBITDA. If that is not the case then the company is probably on a low P/E or EV/EBITDA for a very good reason: it is a value trap.

We have made errors along the way by mistaking value traps for value-growth.

Investing is about maximising winners and minimising losers. Despite the perceived idea of minimal losses in value investing you still have to weigh up the likelihood of easily exiting an investment and the opportunity cost of that capital.

We like to think we are constantly learning from our mistakes, the following two case studies have helped to refine our investment approach.

4. Do not ignore industry thematics

We are fundamentally stock pickers, meaning our analysis is bottom up rather than looking at top down or macro and industry events and their potential impact on stock valuations. Regardless, it is a mistake to ignore the current and future industry environment in which a particular business operates. We have seen the speed and scale of technological disruption that is already impacting many industries. If tailwinds exist then growth is a lot easier to obtain, if headwinds are present then conviction on management's ability to adapt is needed.

5. Have a timeframe and stick to it

Always think about your opportunity cost of capital. Progress for small companies can take much longer than expected. Before making any value investment, have a timeframe in place. Within that timeframe, if benchmarks are not hit or are not explained in a logical manner, then it is time to reassess the investment.

To summarise, stick to what is known, look below the surface to assess business growth and management track record and always remember the opportunity cost of the invested dollar. Watch the investment rule that: "You don’t have to make money back the same way you lost it."

Robert Miller is a Portfolio Manager at [NAOS Asset Management Limited](). *This article has been prepared for general information purposes only. It does not consider the circumstances of any individual and must not be construed as investment advice.*

Protecting from downturns using options

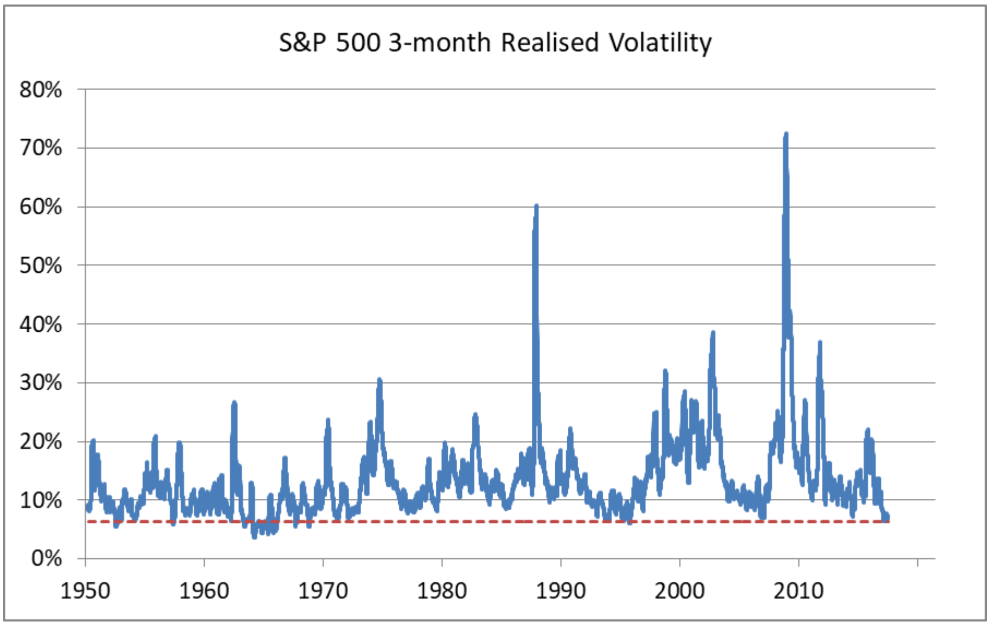
Simon Ho

As the bull market in shares enters its ninth year (for the US at least), there is increasing need for investors to protect the value of their equity portfolio. Market valuations are near record highs, interest rates are starting to rise and geopolitical risks around the globe are causing concern.

One way to protect against market movements is options. Put options give the buyer the right but not the obligation to sell the underlying asset at the strike price, but there are some important factors to consider.

Lack of volatility suggests lack of fear

As the bull market continued in the first half of 2017, market volatility was all but non-existent. The S&P 500 index is rarely calmer than it has been in the past few months, with the daily return in the index no more than 0.25% either side of zero.

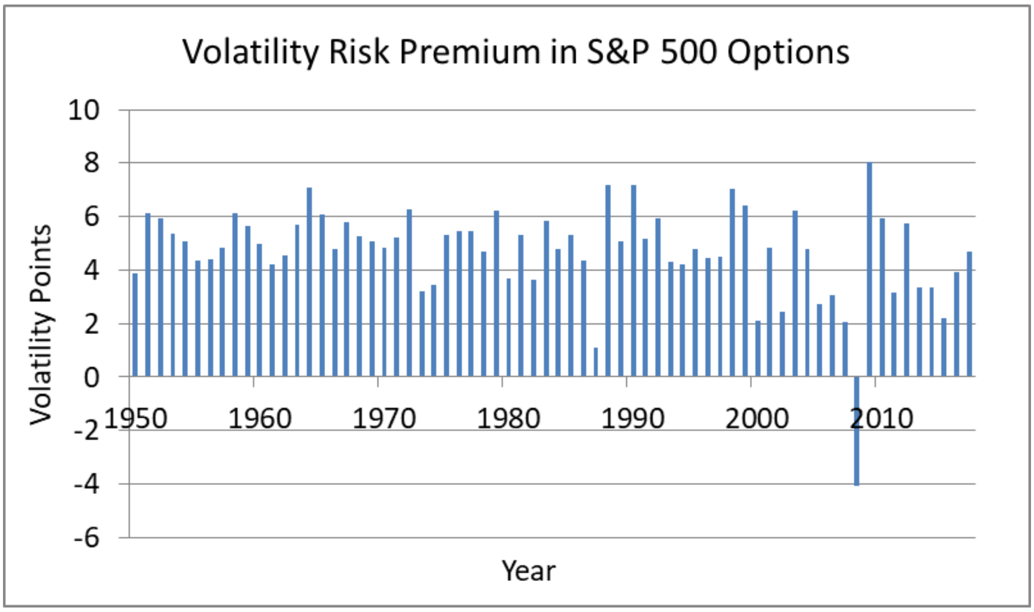


This ultra-low volatility also carried over into the options market, as demonstrated by the 'fear gauge' VIX index, which measures expected future volatility in the share market using S&P 500 option prices. It has plunged to historical low levels and has been bumping along at those levels for some time. In other words, there is no fear in the market. As a result, options are cheap. At face value, this would seem to mean that it is relatively cheap and easy to use options to protect from market downturns. But there are other considerations.

Vagaries of option pricing

In the absolute sense, options are cheap, as the VIX index stayed below 10 on a daily closing basis for more days this year than it had before over the previous 27 years combined. To provide some context, the VIX hit highs of close to 80 during 2008, and it rarely falls below 10 historically. While the VIX remains low and stable compared to movements in its underlying asset, the S&P 500, there's more to the story.

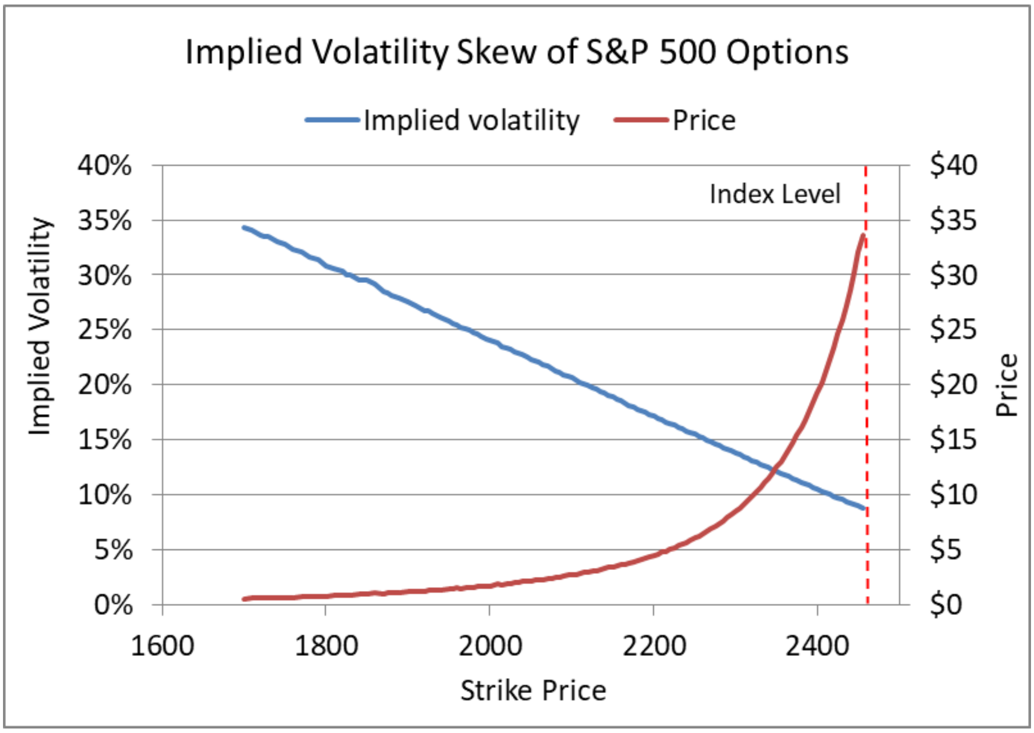
Actual volatility in the S&P index has been stuck in the 6-7% range for months. This is a whopping 4-5% lower than the average VIX index level. But we need market volatility to almost double for most long volatility options trades to be worthwhile. This is because options typically trade at a premium to their real worth, measured by comparing their implied volatility to the actual volatility of the underlying asset. This is often termed the 'volatility risk premium' which is persistently positive most of the time – indeed, close to 90% of the time for the S&P 500. This is partially due to the structural imbalance between those investors that demand options and those who are willing to supply them and thus bear the risk of unlimited downside losses associated with short option positions.



Most investors that purchase put options consider them to be an **insurance policy**. They know that they are on the back foot most of the time when they consider buying options to protect their stock portfolio. But just like buying insurance to cover other aspects of our lives, buying options is still an important exercise with significant potential benefits if applied in a cost-efficient manner.

A second, equally important, consideration relates to which options to buy. One key aspect is the strike price. This is the price at which the option kicks in. For instance, if the market was sitting at 6000, an investor might buy a put option with a strike price of 5000. It would only kick in if the market falls to and below that level. Different strike prices cost different amounts, and consideration needs to be given to which ones allow the most value for money. Each option has its own implied volatility 'price tag'.

The chart below shows the implied volatility skew of 2-month S&P 500 put options on 14 July 2017 when the stock index was at all-time highs and the VIX was near record low levels. While 'near-the-money' options contracts – which are those that have a strike that is close to the index - have historical low implied volatilities below 10%, the far 'out-of-the-money' contracts – those that have a strike that is far below the index – still command implied volatilities in excess of 30%. However, they are not reflected explicitly in the VIX as they carry little weight in the index calculation due to their small premiums.



Hence looking through the lens of implied volatility, 'near-the-money' options offer the best value whereas far 'out-of-the-money' options are the most expensive. One may argue this is a biased lens as the mathematical model behind it assumes asset returns have a bell-shaped distribution. But this is actually more or less true under normal conditions as the market only deviates significantly from the bell shape at times of stress.

The selection of appropriate strike prices

Another way to select strikes is to consider how often these options become 'in play', i.e. when the stock index moves substantially closer to the strike price from its initial level. Consider the profile of historical 1-month returns for the S&P 500 since 1950.

Return Range	-20% or worse	-10 to -20%	-6 to -10%	-2 to -6%	-2 to 2%	2 to 6%	6 to 10%	10% or higher
Frequency	0.18%	1.3%	4.2%	17%	39%	31%	6.2%	1.3%

Over six decades of historical data shows that the S&P 500 experienced a 1-month return of minus 10% or worse approximately 1.5% of the time. And just over 10% of these instances were crashes of minus 20% or more. Most drawdowns were much shallower in magnitude, and they occur at much higher frequencies, accounting for more than a fifth of all monthly returns.

Therefore, there is a much higher probability of 'near-the-money' put options having a positive impact on the stock portfolio. Far 'out-of-the-money' puts, despite being very cheap in dollar terms, are severely overpriced when measured in implied volatility, and they only come to your rescue in the most dire market situations – which happen very rarely.

Why tail risk hedging may not work

Unfortunately, this exact philosophy of using far 'out-of-the-money' puts is being deployed by a popular hedging strategy called tail risk hedging. One such strategy spends 0.5% of assets per month buying 2-month index put options with a strike price that is 30% below the index level, and rolls these positions forward each month. If the index drops by minus 20% in a month, the managers claim the rise in value of these puts will more or less offset the losses in the stock portfolio.

This may well be true. But apart from this worst-case scenario, the put option is almost guaranteed to lose most of its value after a month in most other scenarios. That is a whopping 5-6% of premium burn per year, a horrendously huge drag on any investor's portfolio. Even the fund managers have realised the deficiencies and stressed the technique only outperforms when markets are deemed to be overvalued. But it goes without saying that markets can remain irrational for longer than most people expect.

One smarter way to design a hedging programme is to shift some of the focus onto the shallower drawdowns which happen 100 times more frequently. This results in a higher probability of generating positive returns and allows for more degrees of freedom in both strike selection and trade management. A simulated example is shown below.

An alternative hedging approach

When near-the-money options are involved, we may take advantage of the steep volatility skew by buying **put spreads** instead of single put options. That is, we sell a further out-of-the-money put and use the premium to partially fund the purchase of a closer-to-the-money put which requires high dollar premiums. This works especially well in a steadily rising market as most drawdowns tend to be short in duration and capped in magnitude.

We will also make some use of far out-of-the-money options with strikes up to 20% below the index level, because they offer higher leverage and convexity if the market does drop substantially. Furthermore, each trade has its own trigger levels and other trading rules to make sure we are taking some profits off the table during market drawdowns and losing positions are rolled in a timely fashion to reduce premium burn.

Annual results are shown in the table below for a hedging programme with a 1% annual budget.

Year	S&P500	Hedging	Year	S&P500	Hedging
1998	26.1%	-0.9%	2008	-38.5%	7.3%
1999	19.5%	-0.9%	2009	23.5%	-0.3%
2000	-10.1%	0.5%	2010	12.8%	-0.9%
2001	-13.0%	1.4%	2011	0.0%	-0.3%
2002	-23.4%	3.9%	2012	13.4%	-1.1%
2003	26.4%	-0.8%	2013	29.6%	-1.0%
2004	9.0%	-0.9%	2014	11.4%	-0.9%
2005	3.0%	-0.8%	2015	-0.7%	-0.5%
2006	13.6%	-1.0%	2016	9.5%	-0.6%
2007	3.5%	-0.2%	**Total**	**122%**	**2.5%**

For a relatively small budget, the hedging programme should provide some protection in major market disruptions such as 2008. The market was down 38.5% with hedging providing 7.3%, which while obviously not a perfect hedge (as the technique and budget do not attempt that), it is a solid platform to outperform peers. For the prolonged bear market of 2000–2002 where declines were more gradual and drawn out, the hedging programme generated modest but positive returns every year, peaking at 3.9% in the worst year. This would be difficult to achieve if only 30% out-of-the-money puts were bought.

This more dynamic strategy is an improvement over standard tail risk hedging, although it is still a drag to the stock portfolio in rising markets. Other hedging solutions can harvest some of the risk premium in more sophisticated structures, which we shall outline in follow-up articles.

Simon Ho is Executive Director, Triple3 Partners. This article is general information and does not consider the circumstances of any individual.

This time it really is different … or not

Warren Peace III

I am Warren Peace, Acting Chief Economist from Fensitter Global Bank and today I am reporting on our latest research into the perennial, perpetual and unending question of whether this time it's different or maybe it's not because the future trends in financial markets and their recent performance depend on both inflation and deflation as nobody expects rates will rise significantly and they clearly can't fall much unless they go into further negative territory and we said rates could never go negative but they did because central banks know nothing about the effect of QE as it's all an experiment in managing the economy because they have created a bubble with their easy accommodation and fat balance sheets and debt will never be repaid and certainly not in those basket case European countries but thank goodness for Germany holding it all together while every bond manager with any duration in their portfolio hopes rates won't rise and I know you Australians don't invest in bonds directly anyway so who cares but you might worry if the Fed raises rates but they won't go above 2% for many years as we have a structural decline in inflation so we will never have any more inflation until we do mainly due to the poor pricing power of companies and the rising competition from companies such as Amazon and the market will rise on PE expansion but technical change is disrupting previously powerful companies and let's face it traditional media is stuffed because all the advertising revenue is going online and with increasing unemployment there's no wage pressure which will keep standards of living and inflation low and gradually over time lead to greater inequality where the top 1% of the population own 30% of the wealth and that's simply the capitalist system so it give incentives to people to work harder and not go on welfare and there should be tax cuts for wealthy people and more incentives to save for retirement because in another 30 years there will only be 2.5 workers for every retired person and not enough taxes to fund health and education so poor people had better look after themselves because high earners will not tolerate rising taxes as they will take their manufacturing jobs offshore and stop putting money into collectibles and in any case the Fed is watching cross-elasticity and wants to stay in front of the curve because they sometimes get behind the curve and they don't like it as inflation can start to rise which might reduce the amount of government debt in nominal but not real terms seasonally adjusted which happens when you're behind the curve but it will play out over the long term and in any case, equity market valuations are stretched with record high PEs and a market at the end of a 10-year bull cycle and running out of steam although it might last two to three years longer and maybe five but I don't see a correction in the next few months and most of the gains have come from the tech stocks and the majority of companies have been buying back their own shares because they have nothing better to do with the money to keep share prices up and boost the value of executive options but a rising tide lifts all ships but if the market did fall it might represent a buying opportunity or then it might not depending on whether markets subsequently recover and if you look on the screen behind me you can see in this incredibly complicated chart that it happened before in '97 and '07 and it will happen again although I do think this time might be different due to lower interest rates and inflation which means the future cash flows are discounted by a smaller factor although there's doubt about the equity risk premium and modern portfolio theory and just about any other theory that's ever been proposed as they are not working now but as long as our fund managers continue to earn 2% fees and their incentives are lined up with performance fees especially if they have limited capacity and then the finance industry will increase its share of GDP which will help the economy and property markets especially at the premium end but don't start me on property because we are in a bubble but who knows how much illegal Chinese money is coming in although based on what I've read about CBA laundering there's a hell of a lot going out as well but when you can finance a house at low interest rates then what will happen to these people when rates rise they will not be able to afford the repayments and they will have no money left to send their children to private schools as is their right as long as the government does not cut funding and put more into public schools which would be a disgrace because there is less for swimming pools and rugby grounds but I've drifted off the subject so back on it you need a diversified portfolio which can withstand major market falls which I'm not predicting immediately but you should expect one in the next 10 years or maybe 20 years so don't buy your children a house because you might need the money if you are caught like the tech wreck of 2000 or the financial crisis if 2007 so you could allocate more defensively or do nothing so we need to focus again on China and its growing middle class who like to travel to Australia but they often work for state-owned organisations and 100 million people are moving from rural areas to cities over the next five years or is it 10 and with the increasing influence of emerging markets you should worry when they borrow in a foreign currency due to the potential for a strong US dollar leading to an emerging markets crisis although I'm not predicting that will happen even though they rely on imported capital but who are we to speak with a four trillion Fed balance sheet being reduced to $2 trillion and it's still a lot of debt but emerging markets are not one single market and they are less vulnerable based on commodity prices anyway back to whether you should go more defensive you know these days with the advent of ETFs it's easy to invest in anything and most active managers do not outperform the index because there's so much flowing into index funds that it's a trap once these flows stop especially if there is poor liquidity in the underlying securities but it's possible to identify some good managers although their styles do not outperform in all market conditions and you need to watch survivor bias and I expect active managers to outperform over the next 12 months except for those who don't and it's not only results but risk and volatility which might be a special concern when growth stocks might outperform value although that's already been the trend so watch for mean reversion when companies do not produce returns which exceed their cost of capital and they are less resilient in a changing world adding more beta risk so why even worry about alpha and don't forget delta and gamma if you can hedge them away but Buffett says hedge funds can't outperform the S&P500 over long time periods and don't you hate it when people quote Buffett although less so in recent years whereas we follow a hundred major indicators in our research which show there are no risks in the next few months but you need to protect your portfolio especially long tails on the right hand side and we also watch secondary influences in our quant model such as covenant light loans especially later in the cycle and going up the risk curve as people avoid quality assets leading to a three standard deviation event and what about correlations across asset classes when you think you're diversified and so did we in the GFC and our clients complained and we said it had never happened before so it was not our fault and how are we supposed to know to the exact day because we said the market had risks and you need to keep some dry powder and avoid complacency but you've had 25 years of economic growth yet your economy no longer produces much except for food and minerals and you import all your cars and electric goods which will be cheaper when Amazon arrives so don't worry about the currency and don't get me started on Donald Trump.

I hope that's clear. Any questions?

Warren Peace III is Acting Chief Economist at Fensitter Global Bank and he advises that all his assets are held in a bankruptcy-remote family trust in the Cayman Islands so there is no money available even if he were responsible for this article which he is not because he is only acting.