



November 18, 2017

Dear Investors,

US large cap stocks are the most overvalued in history, higher than prior speculative mania market peaks in 1929 and 2000. We prove it conclusively across six comprehensive dimensions:

1. Price to Sales
2. Price to Book
3. Enterprise Value to Sales
4. Enterprise Value to EBITDA
5. Price to Earnings
6. Enterprise Value to Free Cash Flow

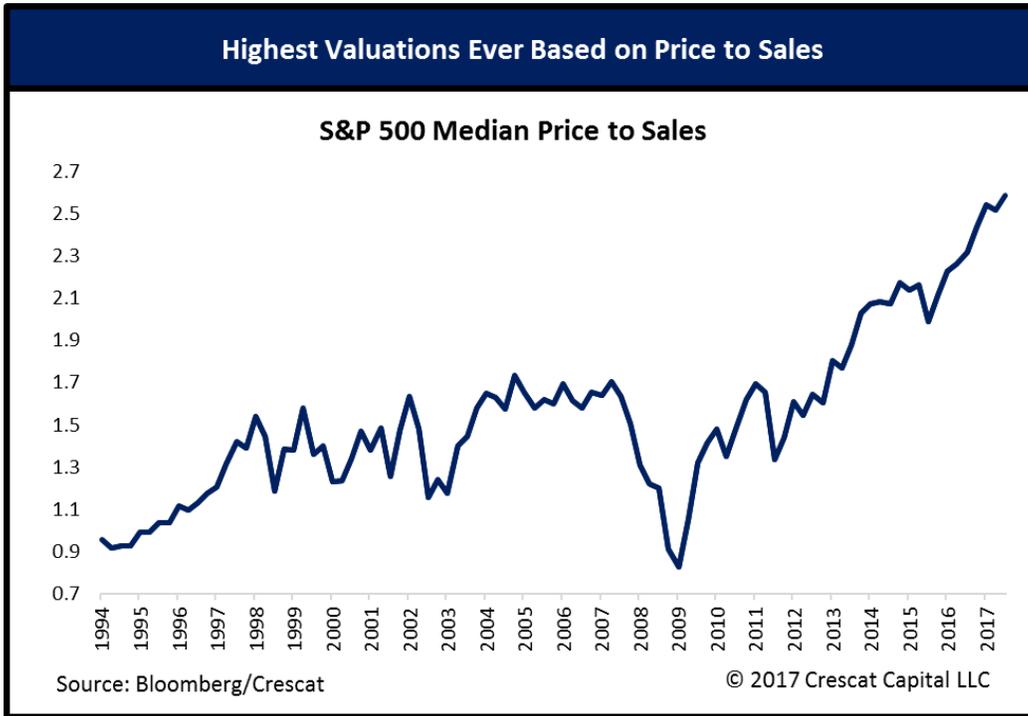
Brutal bear markets and recessions have historically followed from record valuations like we have today, and this time will almost certainly be no different. Not even positive macro factors like low interest rates, low inflation, or recently improving earnings growth can justify today's extreme valuation levels. As we show herein, that was the same backdrop that we had in 1929, the setup to the biggest market crash in history and the Great Depression. Optimism over "new-era" technologies are not justification for high multiples today; they are hallmarks of market tops. Artificial intelligence and crypto-currencies feature prominently in current investor enthusiasm, a climate akin to the tech bubble peak. Also, excitement over new pro-business and pro-economic growth policies coming from Washington are poor grounds to rationalize today's valuations. Again, this is a hallmark of a market top. History has proven that market plunges routinely follow first-year Republican presidents where ebullience over business-friendly government policy runs rampant and only sets the market up for failure. Witness the market meltdowns that followed Hoover (1929), Eisenhower (1953), Nixon (1969), Reagan (1981), and Bush (2001) in their first years. Any real economic boost from Republican tax cuts now before Congress, if such legislation passes, is already more than priced into the market.

There are many catalysts that are likely to send stocks into a bear market in the near term. A likely bursting of the China credit bubble is first and foremost among them. Our data and analysis show that China today is the biggest credit bubble of any country in history. We believe its bursting will be globally contagious for equities, real estate, and credit markets. The US and China bubbles are part of a larger, global debt-to-GDP bubble, which is also historic in scale, and the product of excessive, lingering central bank easy monetary policies in the wake of the now long-passed 2008 Global Financial Crisis. These policies failed to resolve the debt-to-GDP imbalances that preceded the last crisis. Now, easy money policies have created even bigger debt-to-GDP imbalances and asset bubbles that will precipitate the next one.

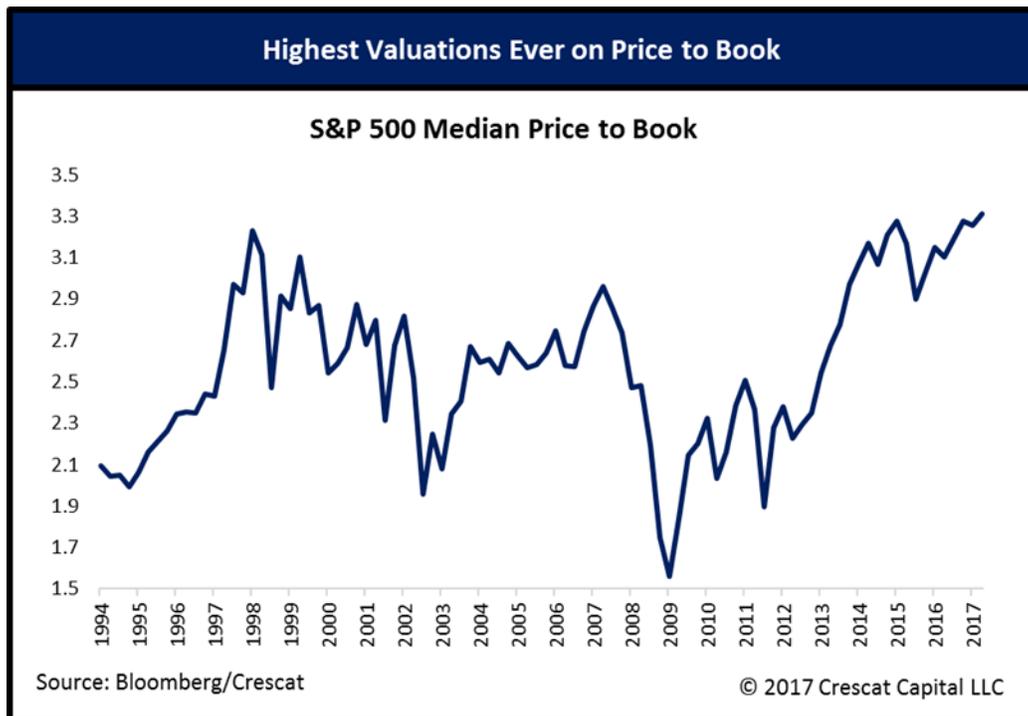
We are in the very late stages of a global economic and business expansion cycle with investor sentiment reflecting record optimism typical at market peaks, a sign of capitulation at the end of a bull market. Crescat is positioned to profit from the coming broad, global cyclical market and economic downturn that we foresee. We strongly believe that our global equity net short positioning in our hedge funds will be validated soon.

Proof of the Most Overvalued US Stock Market in History

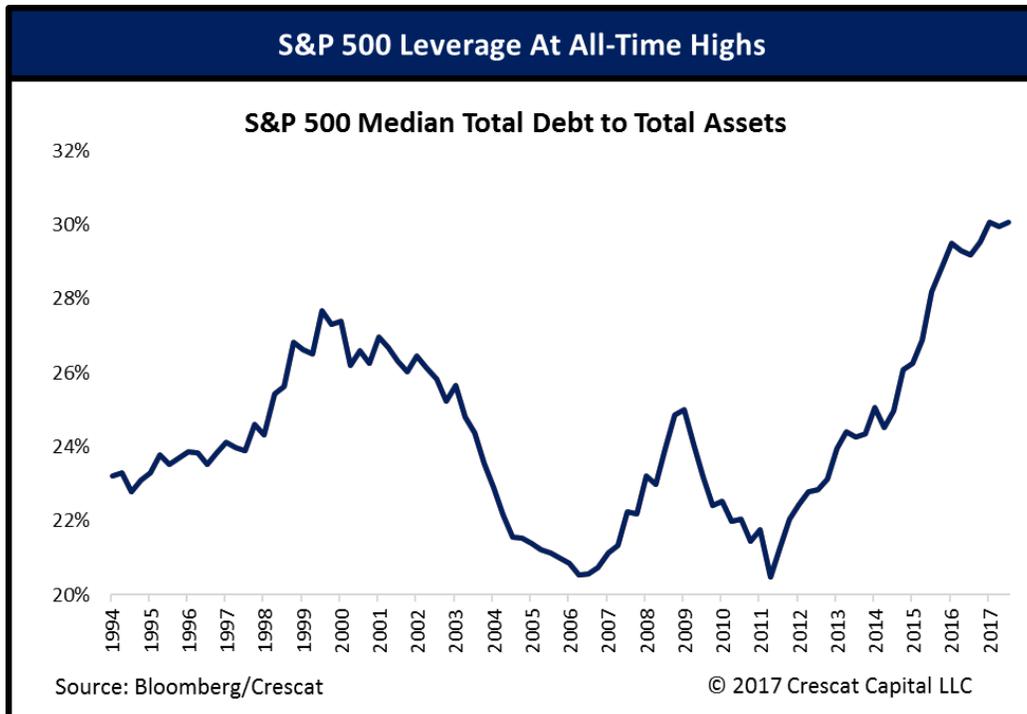
Below, we show that the median price-to-sales ratio for the S&P 500 today is the highest ever by a wide margin, more than 60% greater than the tech bubble peak.



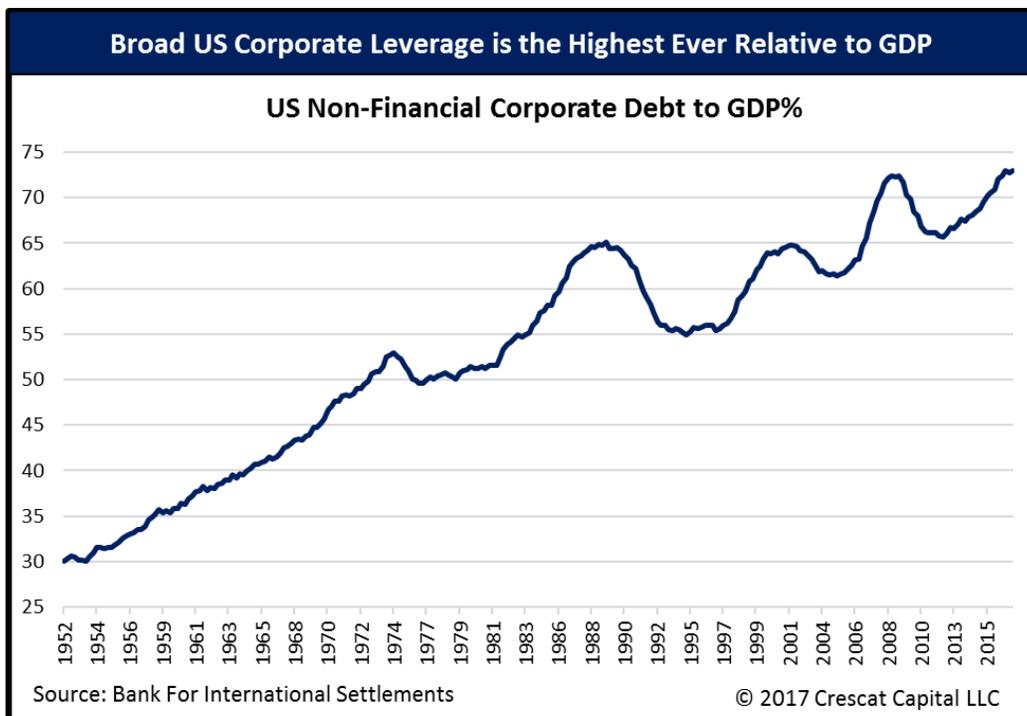
The median price-to-book value for the S&P 500 is also at the highest valuation ever.



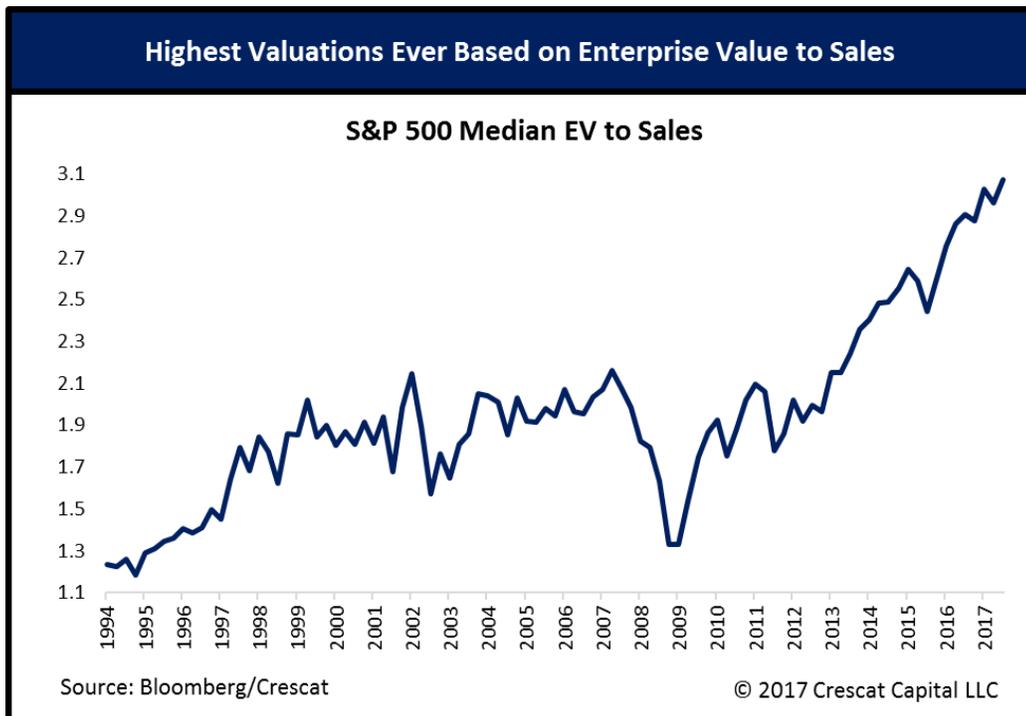
Adding to risk in the markets today, we show that S&P 500 companies are more leveraged than ever before.



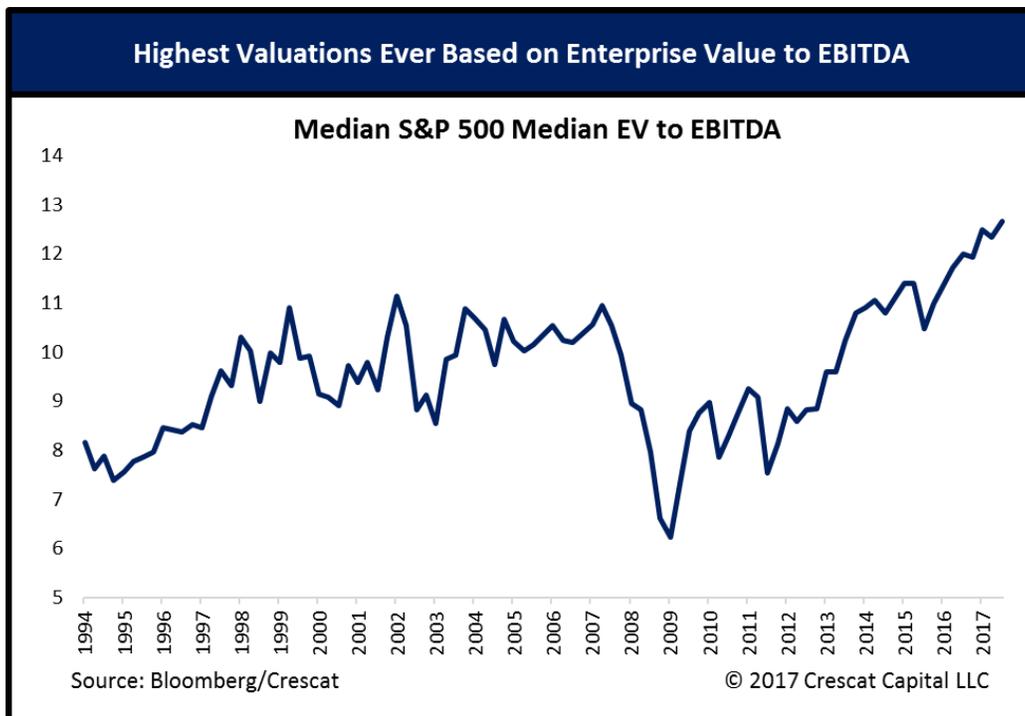
We also show that corporate leverage for the whole US economy, not just the S&P 500, is at all-time highs relative to GDP.



Now that we have looked at leverage, we look at enterprise value (EV), the market value of a firm that incorporates net corporate leverage to get the total value of a company's capital structure. Based on the median EV-to-sales multiples for the S&P 500, the market is at record valuation levels.



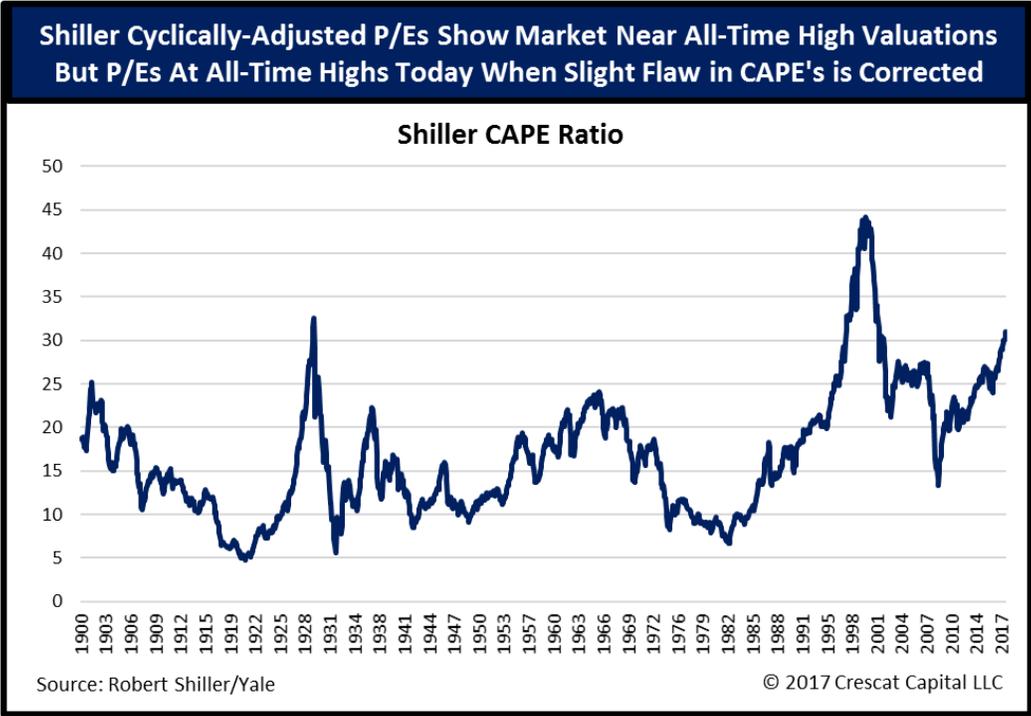
EBITDA (earnings before interest, taxes, depreciation, and amortization) is a popular valuation measure among investment bankers. We show below that based on median EV to EBITDA, the S&P 500 is at its highest-ever valuation.



Bear with us now as we dig into the necessary nuances of the price-to-earnings (P/E) ratio. It is critical to use cyclical smoothing to accurately gauge market valuations in their current and historical context when using P/E.

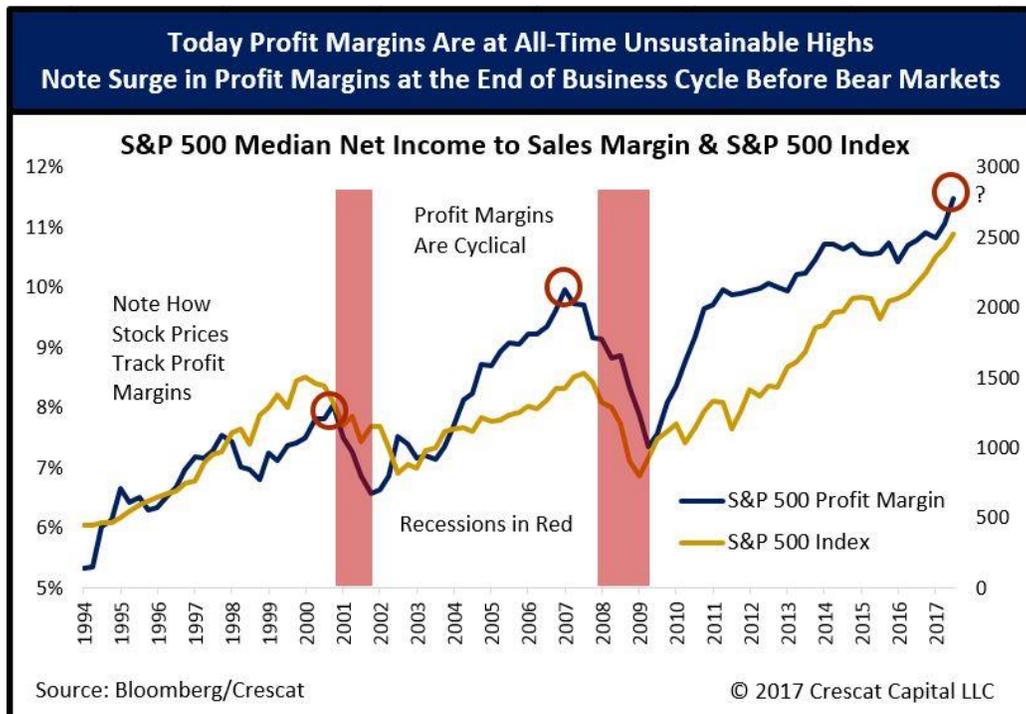
Yale economics professor, Robert Shiller, received a Nobel Prize in 2013 for proving this fact so we hope you will believe it. The problem with just looking at trailing 12-month P/E ratios to determine valuation is that it produces sometimes-false readings due to large cyclical swings in earnings at peaks and valleys of the business cycle. For example, in the middle of the recession in 2001, P/Es looked artificially high due to a broad earnings plunge. P/Es can also look artificially low at the peak of a short-term business cycle, which can produce what is known as a “value trap”, such as in 2007 during the US housing bubble and such as we believe is the case today in China, Australia, and Canada.

Shiller showed a method for cyclically-adjusting P/Es using a 10-year moving average of real earnings in the denominator of the P/E. Shiller’s Cyclically-Adjusted P/E, called CAPE multiples have been better predictors of future full-business-cycle stock market returns than raw 12-month trailing P/Es. Shiller showed that markets with historically high CAPEs lead to low long-term returns for long-only index investors. Shiller CAPEs are fantastic, but they can be improved by including an adjustment for corporate profit margins which makes them even better predictors of future stock price performance and therefore even better measures of cyclically-adjusted P/E for valuation purposes. Below we show Shiller’s CAPE prior to adjusting for the cyclicity of profit margins.



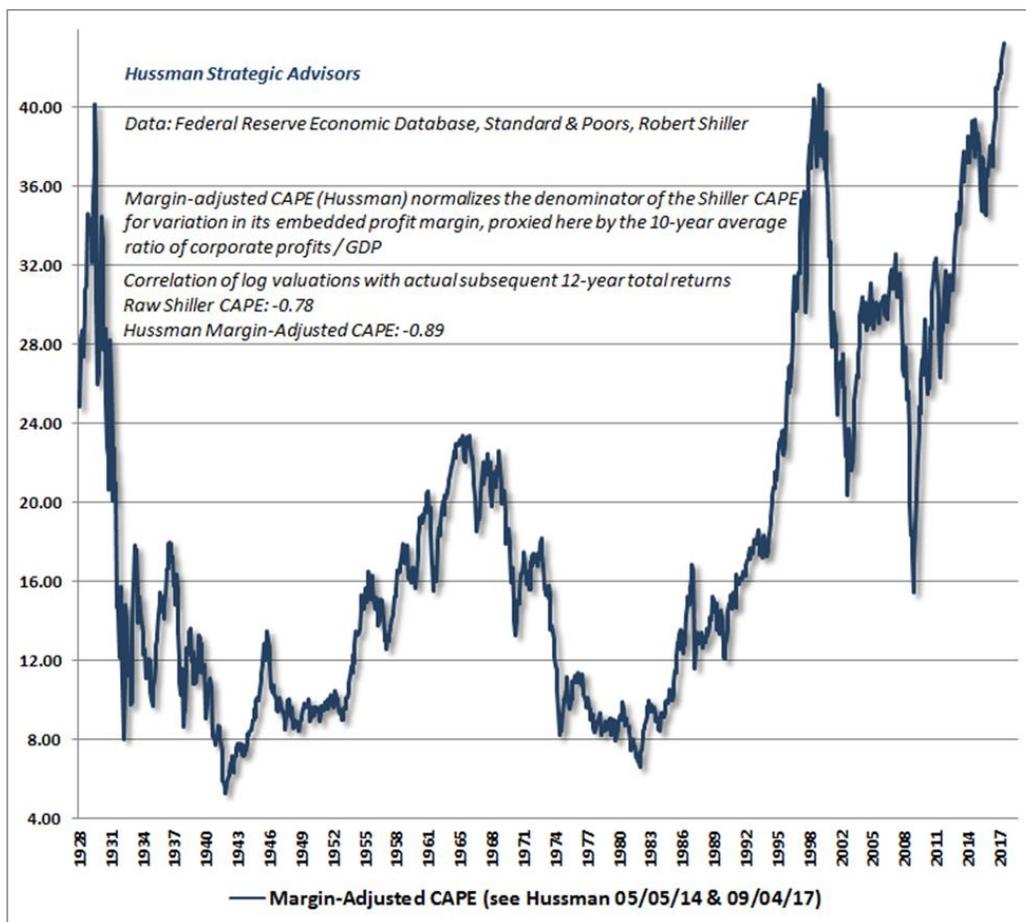
The Shiller CAPE of 31 today is in the same vicinity as it was at its peak in 1929 which it reached before the market crashed and sent the economy into the Great Depression. In Shiller’s view, the 1999 Shiller CAPE sets the record for the highest ever P/E at 44. That fact that Shiller’s CAPEs do not reconcile more precisely with our four prior valuation measures points to a slight flaw in CAPE.

Shiller’s CAPEs simply need an adjustment for profit margins because margins are a key element of earnings cyclicity. We can understand this by looking at median S&P 500 profit margins in the chart below. For example, even though profit margins were cyclically and historically high during the tech bubble, they are even higher today. In the same spirit of Shiller’s attempt to cyclically adjust earnings to determine a useful P/E, CAPEs need to be adjusted for cyclical swings in profit margins.



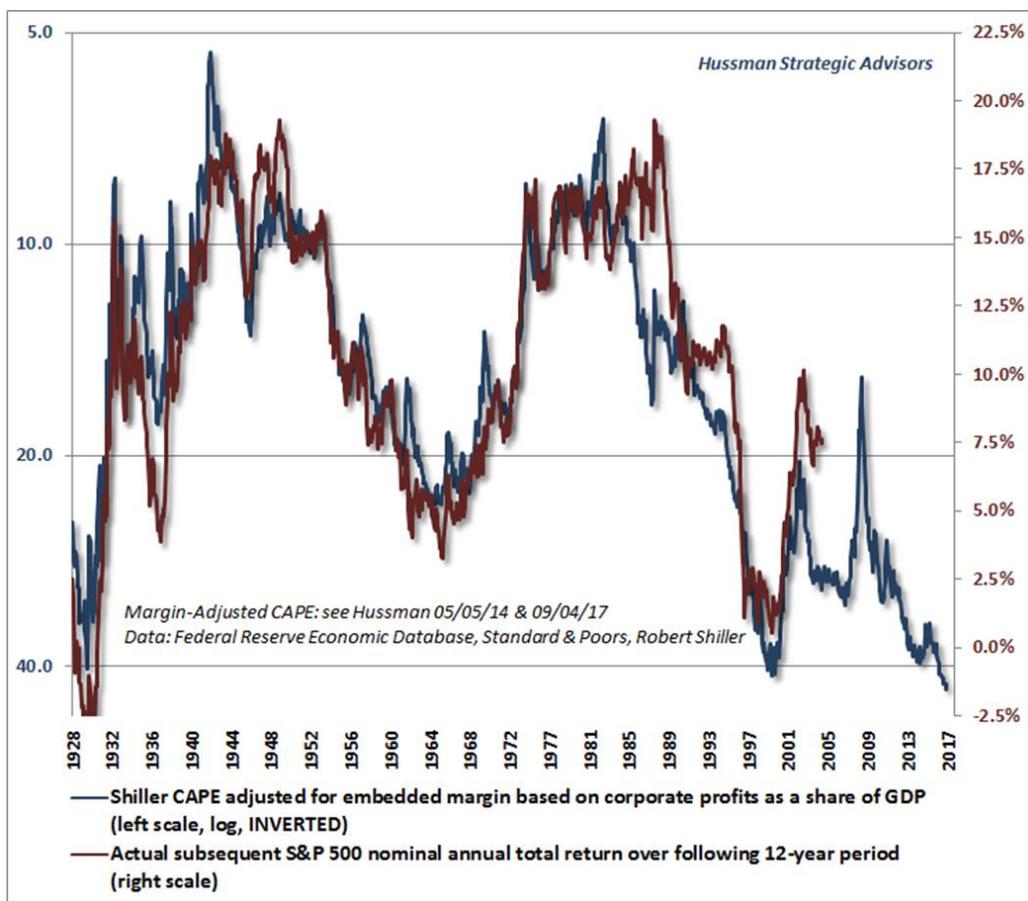
When we multiply Shiller CAPEs by a cyclical adjustment factor for profit margins (10-year trailing profit margins divided by long term profit margin), we get a margin-adjusted CAPE that is not only theoretically valid but empirically valid as it proves to be an even better predictor of future returns than Shiller's CAPE! Credit goes to John P. Hussman, Ph.D. for the idea and method to adjust Shiller CAPEs for swings in profit margins.

As we can see in the Hussman chart below, margin-adjusted CAPE, shows that today's P/E ratio for comparative historical purposes is 43, the highest ever! The 1999 peak P/E was 41 and the 1929 P/E was 40. Once again, we can see that today we have the highest valuation multiples ever for US stocks, higher than 1929 and higher than 1999 and 2000!



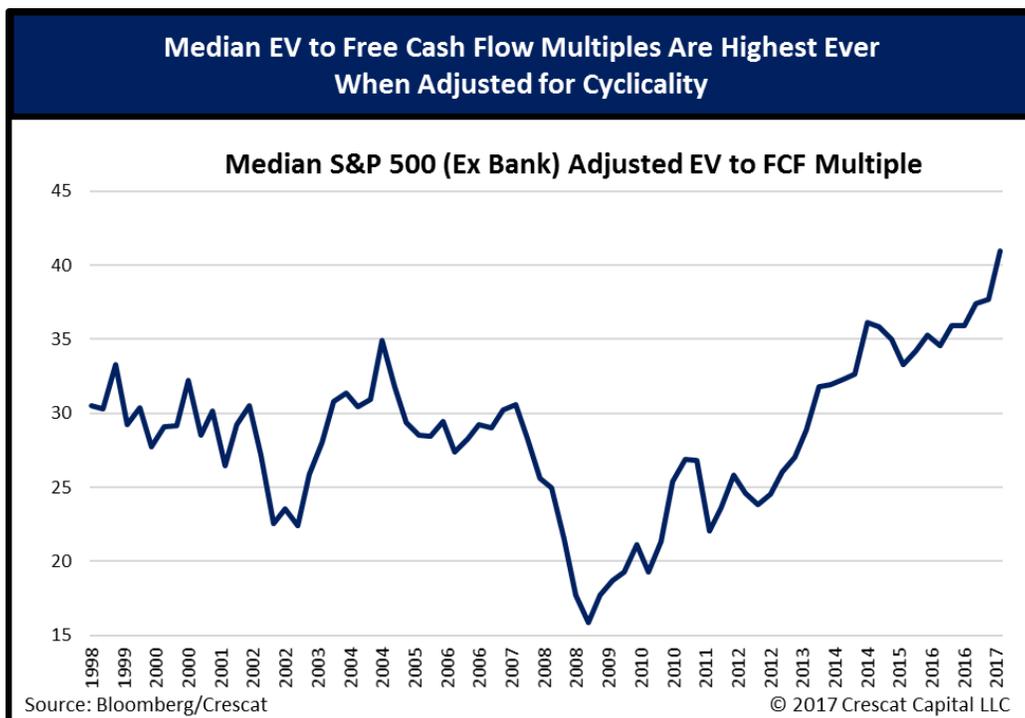
Source: Hussman Strategic Advisors

Note there is an improved correlation with future returns (-0.89 versus -0.78 as shown in the chart above) of margin-adjusted CAPE compared to Shiller CAPE. The strength of margin-adjusted CAPE in predicting future returns is further illustrated in the chart below. Note the tightness of fit. Note also that the market is so overvalued today that margin-adjusted CAPE is predicting **negative average returns** for the **next twelve years!** This should prove terrible news for buy-and-hold index fund investors fully invested today. Index investing has never been more popular and crowded. The biggest part of the future possible 12-year negative returns for the market should come within just the next one to three years, the first part of the typical bear market which often includes a crash. We are not perma-bears for the long-term, we are cyclical bears for the next one to three years.



Source: Hussman Strategic Advisors

We need just one more valuation metric to thoroughly prove our case that the stock market today is the most over-valued market ever. We have saved the best for last, enterprise value to free cash flow. EV to FCF is a Crescat favorite that features prominently in our fundamental equity model. Here it is also critical to perform Shiller/Hussman-style cyclical smoothing. We use 3-year smoothing for real FCF and margins. This is sufficient-enough time to iron out outlier cyclical years given that we are working with a more limited 22-year look-back (compared to Shiller's 100+ years) for reliable free cash flow data. This period is long enough for statistical significance because it includes three business cycles. We propose that 3-year smoothing is better than 10-year anyway for active investors trying to time short-term business cycles. Shiller and Hussman seem to be focused on very long-term cycles. We also exclude banks from our universe where free cash flow and EV are less relevant. The result as we show below is that median cyclically-adjusted EV to FCF for non-banks in the S&P 500 today is at an insanely-high 41 times!

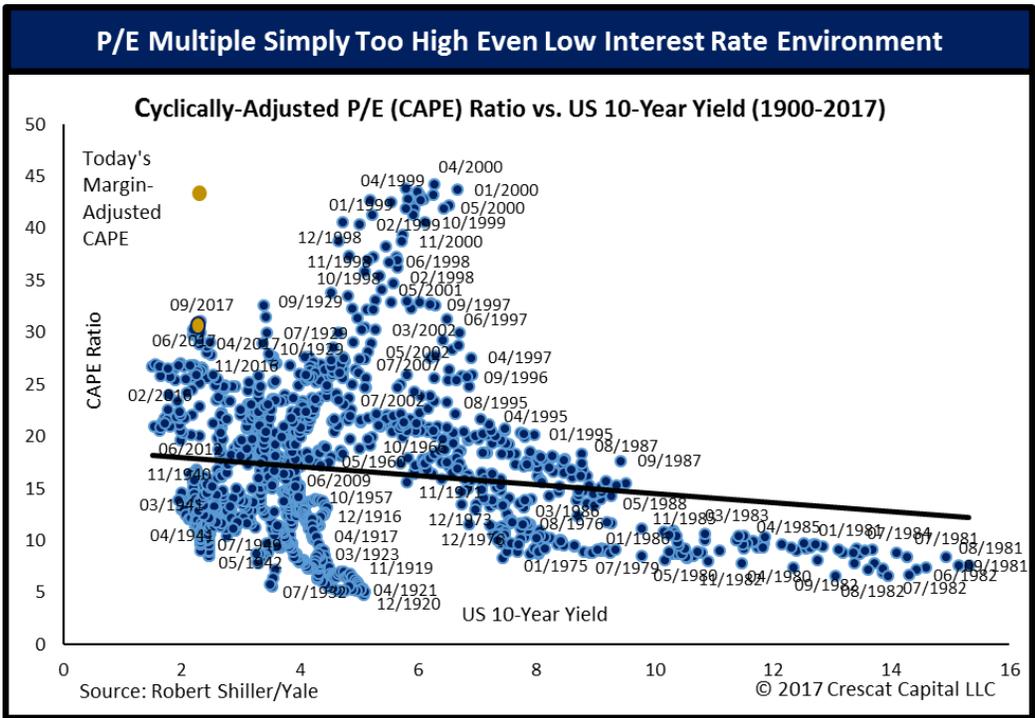


So, we have obtained the same result for every valuation multiple that we have studied. With each and in combination, we have proven that the US stock market is at all-time high valuations. We have shown it across six completely different measures that consider the totality of the corporate income statement, balance sheet, and cash flow statement.

Macro Factors

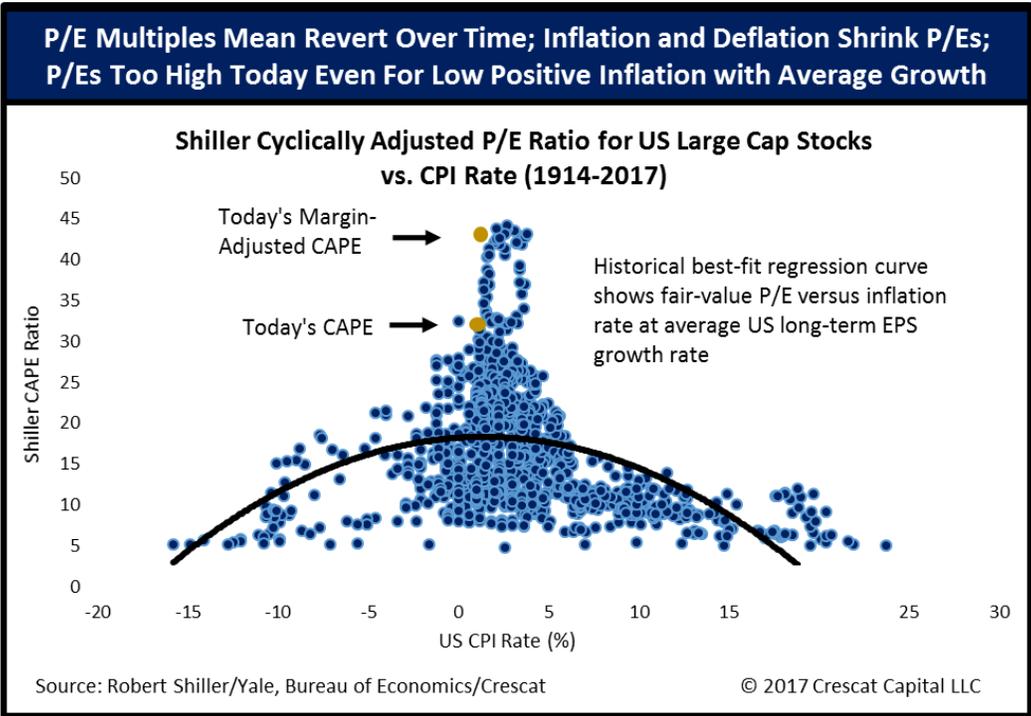
Undeterred bulls will say, OK Crescat you might have a point about record valuations today, but aren't they justified due to low interest rates, low inflation, low unemployment, and recently improving earnings growth? No. They are not! Our empirical analysis of stock market and economic history strongly proves otherwise as we will show next.

Below, we plot 10-year yields with Shiller CAPE ratios going back to 1900 along with today's margin adjusted CAPE. We do not have margin-adjusted data going that far back, so we are using CAPE which is still highly useful. The regression line shows that there is indeed a relationship between higher multiples and lower interest rates, but with a huge deviation. The problem is that we are already at the extreme end of the deviation for the current level of interest rates. As we show below, both today's CAPE and margin-adjusted CAPE are at the highest multiples ever for the current level of interest rates. In other words, a more than 50% stock market correction would be justified just to get today's margin adjusted-CAPE back to its average multiple for the 2% interest rate zone on the 10-Year Treasury Note.



What about inflation? Aren't inflation conditions just perfect today with a very low but still-positive inflation rate? As we show below with data going back to 1914, P/E multiples do indeed tend to be higher under low positive inflation, but today's multiples are again among the highest P/Es ever for the current 2% headline CPI level. Again, there is a huge variation, suggesting that we could see a 50% decline in stock prices just to get back to mean historical P/E multiples for this level of inflation. And that is just the mean. As one can see, P/E levels have gone well below the mean to mid-single-digit level even in a low, positive inflation environment.

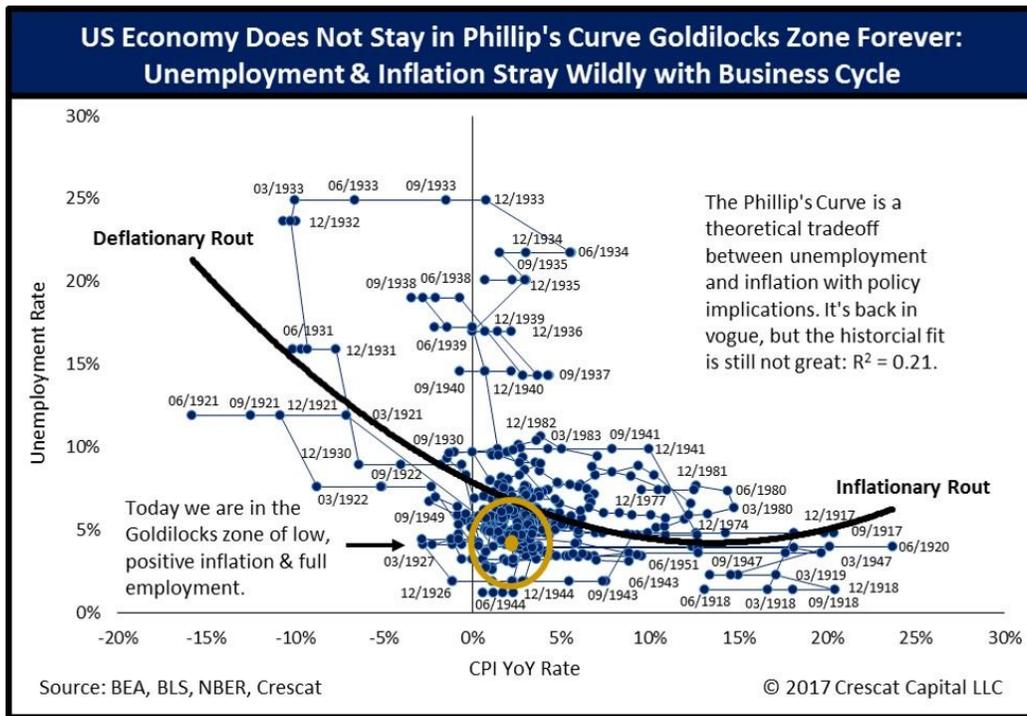
Note also from our chart below that if we move in either direction, toward deflation or inflation to any significant degree, P/E multiples shrink **dramatically**, i.e., stock prices crash when starting from record high multiple environments like today.



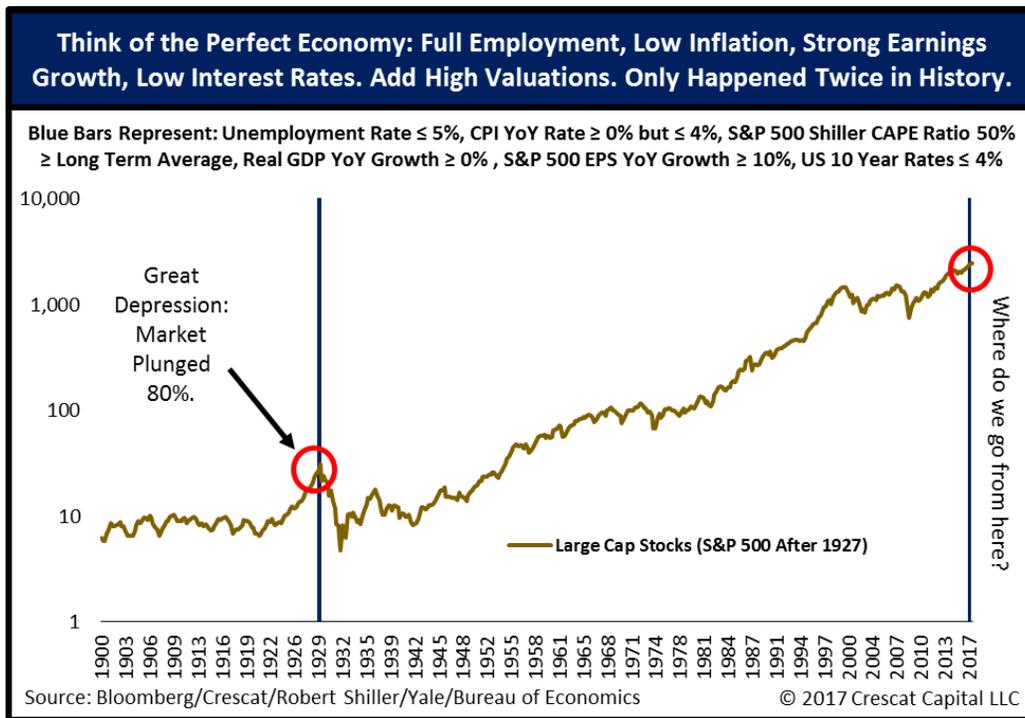
But what about earnings growth? Isn't it really starting to pick up now and doesn't that justify high multiples today? It is true that earnings growth has been picking up recently, but it is very typical for earnings growth to pick up when it is late in the business cycle before topping out and falling off a cliff. It did that in 1928-1929, in 1999-2000, and in 2006-2007. Below, using the Shiller data, we show how closely the earnings growth pattern in the last seven years matches that of the Roaring Twenties!



What about the Goldilocks zone that we are in now for simultaneous low inflation and low unemployment? It's an ideal spot on the Phillips Curve, isn't it? Doesn't that justify extended valuation multiples today? Based on history, no. The problem is that there is a natural boom-and-bust business cycle. Our long-term Phillips Curve analysis below going back to 1900 shows that inflation and unemployment tends to stray wildly with the business cycle. Downturns in the business cycle are often deflationary and lead to high unemployment, but there can be inflationary routs too.



Imagine the perfect economy: full employment, low interest rates, low inflation, strong corporate earnings growth. Perhaps that would be the market that could legitimately sustain a high valuation multiple. Irving Fisher, the most well-known economist of his time, thought so. He declared just nine days before the stock market crash of 1929 that stock prices had "reached what looks like a permanently high plateau". The chart below shows the remarkable similarities between 1929 and today.

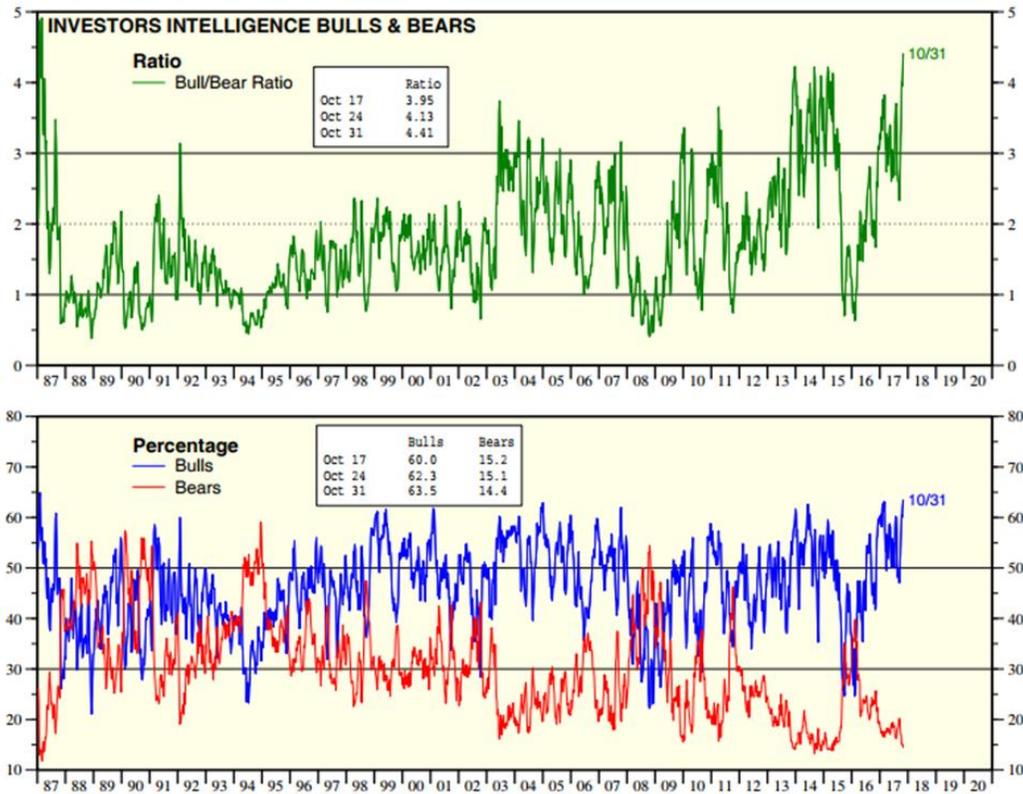


Inflation Versus Deflation

What is a bigger risk today in the US and globally as we go into the next business cycle downturn – inflation or deflation? It is indeed a paradox. Given the record debt-GDP levels, aging population, China credit bubble, housing bubbles in Australia and Canada, and the Federal Reserve tightening, the biggest risk in the short-term is deflation, which is typical when asset bubbles burst. We started to see deflation emerge in the Global Financial Crisis until central banks came to the rescue with massive quantitative easing, but not before a market crash. Similarly, we started to see deflation emerge in China in 2015 before policy makers there ramped up money and credit growth even further to make global asset bubbles in stocks, real estate, and credit even bigger today relative to underlying world GDP. The paradox is that once a true deflationary spiral gets going, central banks are forced to resort to extraordinary inflationary money printing or quantitative easing to counter it. In the face of truly massive QE, at a certain tipping point, the mindset of the world should ultimately shift to a lack of confidence in central bankers' ability to contain inflation. Only then does inflation become a self-fulfilling prophecy as investors start ratcheting up their inflation expectations. Rising inflation expectations never happened in the wake of the last crisis. Instead, the response of investors to QE was to build bigger asset bubbles. What will it take to change the mindset? Probably a bigger crisis and certainly a bigger central bank response. At that point, it is not only inflation but very possibly hyperinflation that becomes the end game. We see hyperinflation as a likely outcome to emerge first and foremost in China, but not before a deflationary crisis emerges first.

The Catalysts

The tightening of credit by the Fed in our view is the main catalyst that will burst global asset bubbles including the credit bubble in China. The chart below illustrates how the end of a US business cycle works. Whenever the Federal Reserve starts a campaign of tightening credit conditions in earnest, late in the business cycle, to temper an overheating stock market, economy, and/or inflation by raising interests, it is soon the kiss of death for the

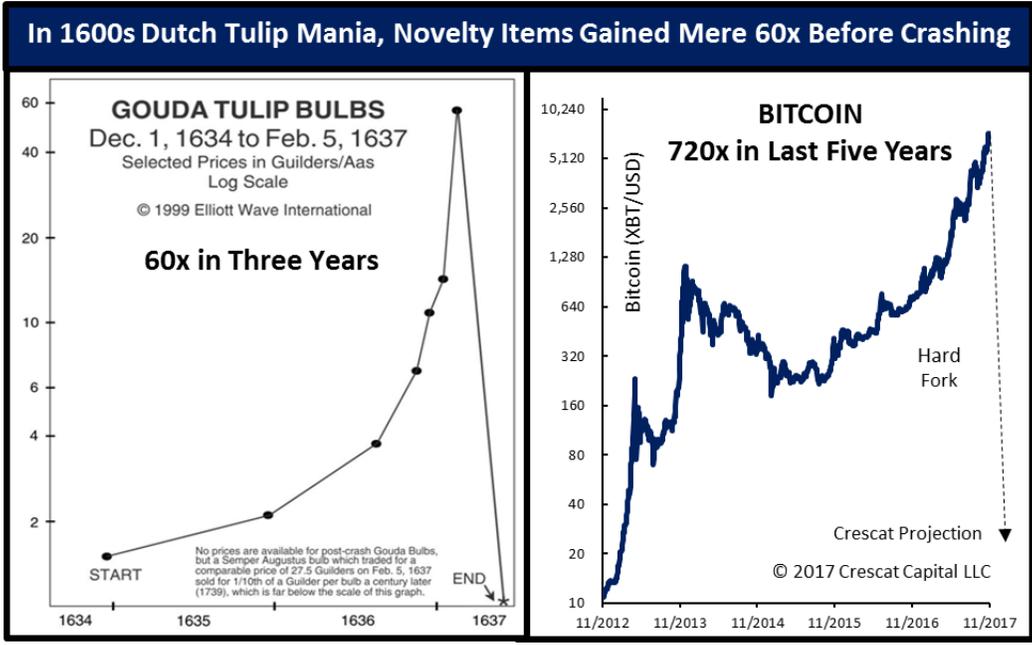


Source: Yardini Research, Inc.

Here is a recent Merrill Lynch Fund Manager Survey:



Nothing epitomizes the speculative mania in the global financial markets today better than Bitcoin. The novel crypto-token has appreciated **720-fold** in the last five years! That's **twelve times** more than tulip bulbs during the Dutch mania of the 1600s!



The problem with Bitcoin is that it is easily replicated to dilute its value by any number of competing crypto currencies. This is not the problem with gold of course. Gold has been true money that has stored value in all countries for thousands of years. However, gold and silver are significantly undervalued compared to fiat money today as we showed in our [Q2 2017 letter](#). Gold will almost certainly prove its mettle over both fiat money and Bitcoin in the coming Bitcoin bust that should go hand in hand with the coming global asset bubble meltdown.

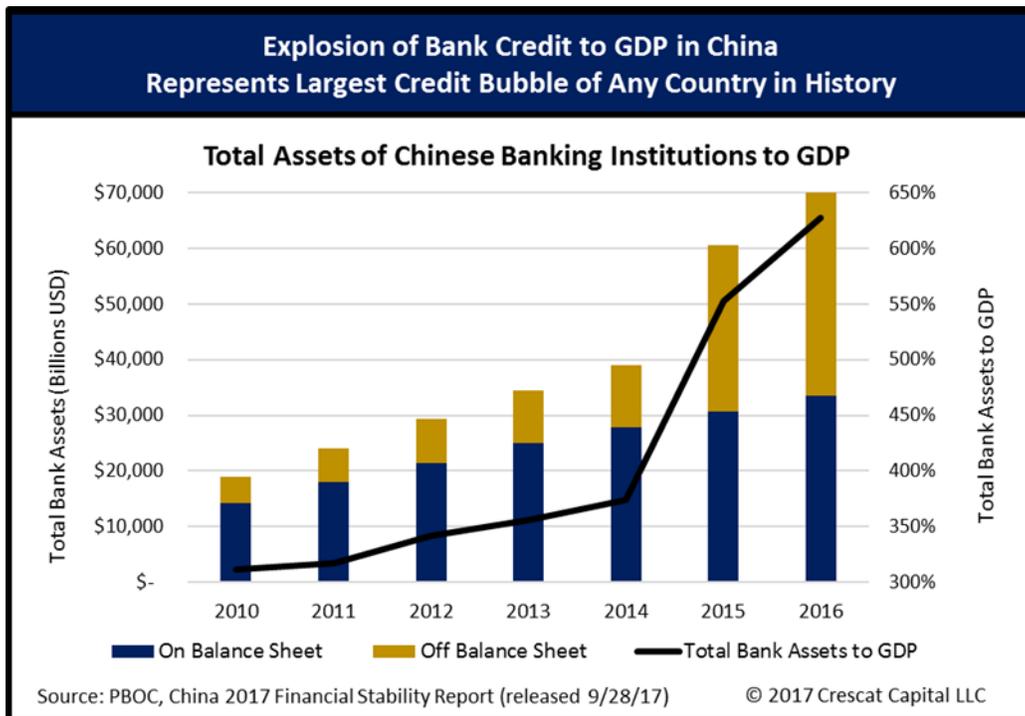
Update on Crescat’s China Currency and Credit Bubble Theme

In our Q2 2017 and prior letters, we have laid out the case for our China currency and credit bubble theme. Given that China has been about 50% of global GDP growth since 2008, we strongly believe that its credit bubble bursting will lead to global financial market contagion. We saw this start to develop in 2015, but China mounted yet another enormous but unsustainable credit surge ahead of the National Party Congress. The China credit bubble has only gotten bigger. Now that the NPC is behind us, China must attempt to rein in credit growth while still growing its economy. It is an almost impossible task. Stresses are already appearing in Chinese credit markets. The sovereign yield curve in China (10-year minus 5-year yields) has inverted twice already year, a warning sign of an impending recession.



While Fed officials remain confident in their ability to engineer their first-ever soft landing for the economy late in a business cycle, China’s soon-to-be-retiring central bank governor, Zhou Xiaochaun, appears in stark contrast. He is not celebrating victory over the economic cycle at all. Instead, he has been sounding the alarm. Last month at the National Party Congress, he warned of the possibility of a “Minsky moment” just as we did in our last quarterly letter. Zhou later elaborated on his Minsky moment comment in writing on the People’s Bank of China website (since removed) warning of “hidden, complex, sudden, contagious, and hazardous” dangers lurking in the world’s second-largest economy. A Minsky moment is a severe “debt deflation”, a stage of the long-term business/economic cycle that Irving Fisher would later define based on the 1930s Great Depression.

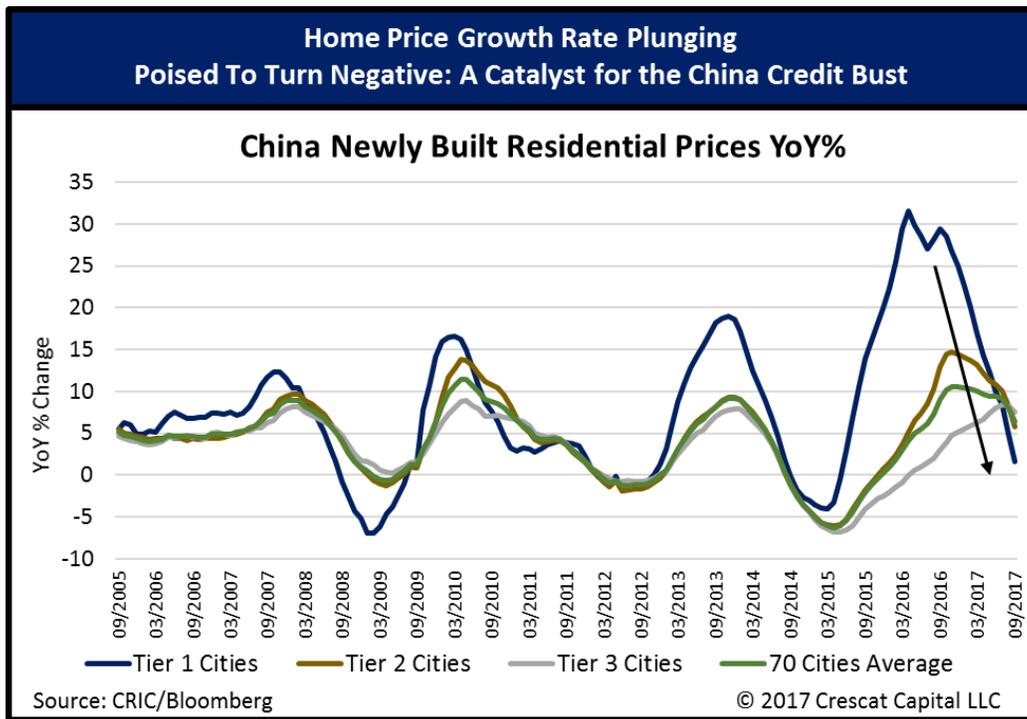
The conventional wisdom on Wall Street is that China has absolute control over its economy and multiple levers that it can pull to prevent crisis and continue to grow it. The truth is that China has had essentially only one lever and that has been more credit growth. The problem is that its central planners do not even have control over this lever as the PBOC made clear its recently released English version of the China 2017 Financial Stability Report. China now admits that the combination of on- and off-balance sheet assets among its banking institutions has exploded to 70 trillion USD equivalent as of the end of 2016 as we show in the chart below.



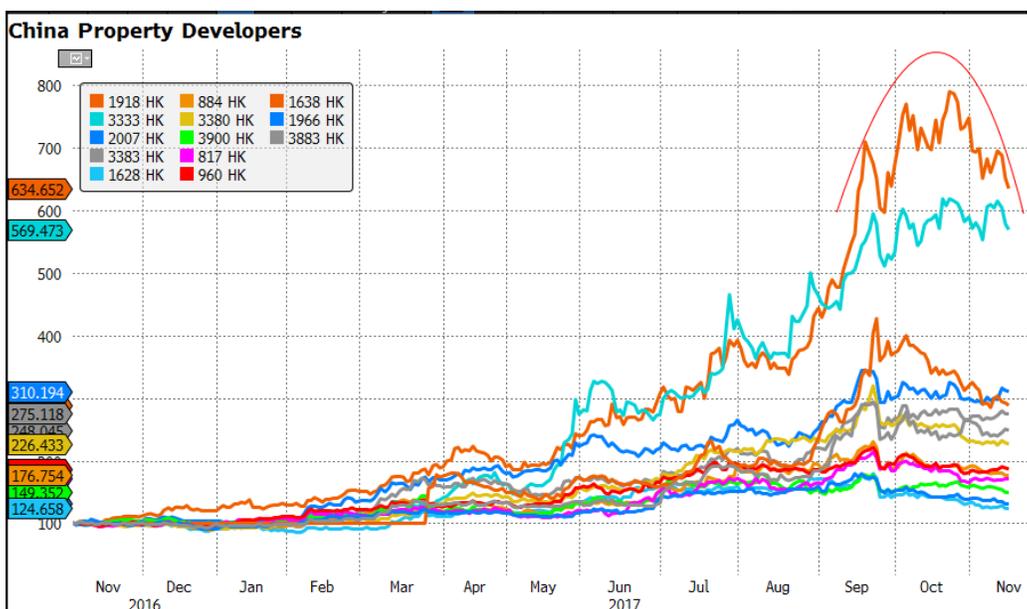
The PBOC also revised its assessment of 2015 off-balance sheet bank debt upward by about 100%. The problem in China is that shadow lending has been growing literally out of control and outside the direction of central planners. We believe this is the largest credit explosion in any major country ever relative to GDP, indicating that China's banking assets are vastly mismatched, and overstated. In our view, China has an enormous hidden non-performing loan problem that essentially renders the entire Chinese banking system insolvent, more than wiping out all its equity capital and potentially leaving more than one billion Chinese depositors to bear substantial losses. China certainly was the growth engine of the world for the last few decades, but that growth is about to come to an abrupt halt. At this stage, in our view the China credit bubble is as ripe as it gets to burst.

China is simply in the biggest credit bubble ever, and it translates to the biggest currency bubble ever given the sheer magnitude of yuan denominated credit when converted to dollars at the current exchange rate. Strangely, the global investment community remains largely oblivious to the scale of China's twin banking and currency bubbles. We believe that currency valuation is poorly taught in school. There are too many variables for most people to process, so people tend to just focus on a few. It is not as simple as just looking at the trade balance and foreign reserves. The relative valuation of the money supply and total banking system assets must be considered. Regarding China's foreign reserves, as we have shown before, in our analysis, we believe China's reserves are fully encumbered given the many years of running a pegged currency against constant capital outflow pressure. We believe pressure from capital outflows has only increased recently as evidenced by China's resorting to increased capital controls, but the latter has also been discouraging foreign capital inflows. China is trying to attract foreign capital into its credit markets, but supply is much greater than demand. Years of Minsky-style Ponzi finance have finally caught up with them. Non-performing loans cannot be refinanced with ever more massive amounts of new credit every year. The marginal contribution to real GDP growth from new credit growth has diminished to the breaking point. These are all signs of an impending credit bust and debt deflationary pressures that can only inevitably be met with a massive QE and currency crisis.

As we show below, housing prices in China are a sign, just like in the US housing bubble, that China's Minsky moment is fast approaching.



As the Shanghai and Hang Seng indices have been making new recent highs, the chart below shows the Chinese property development stocks starting to roll over much like US homebuilding stocks were the first to crack well ahead of the rest of the market in the US housing bubble.



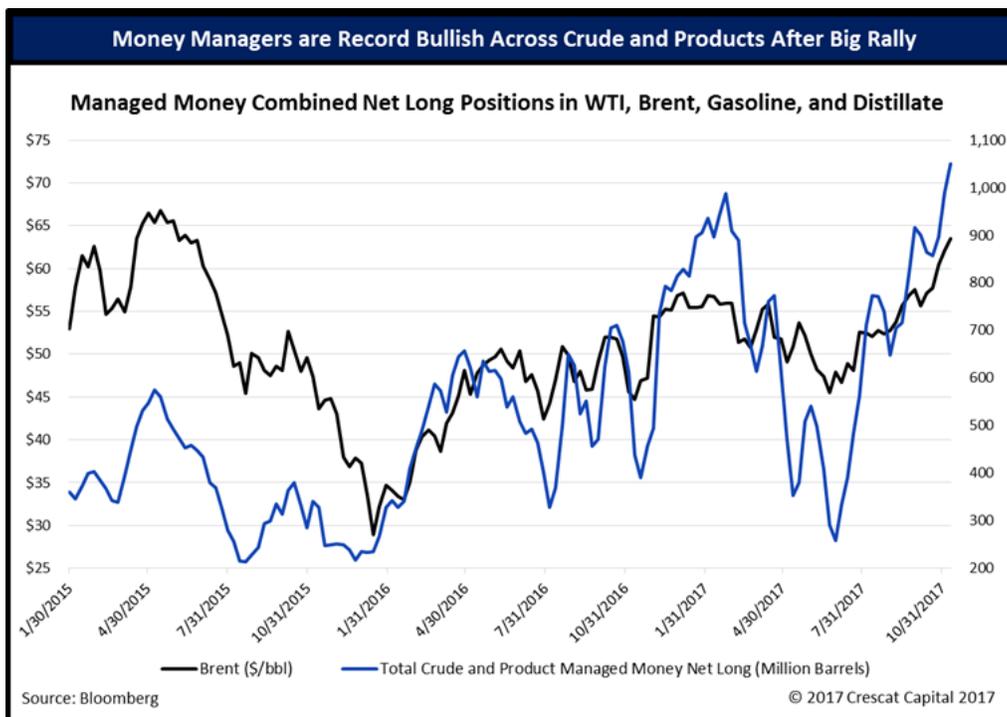
Update on our New Oil and Gas Resources theme

Since mid-2014, we have remained mostly bearish on crude oil, and that is still the case today. In 2014, the huge increase of US oil production was finally acknowledged by the market at the same time as the US dollar was strengthening considerably, a perfect recipe for an oil bear market. In 2015, all that new US production made its way into storage, and weekly large inventory builds caused another leg down in oil and related stocks. In 2016, crude was caught in the “everything rally” off the February lows. Signs of solid US demand offset by increasing domestic production have allowed WTI to rebound from the mid-20s and settle into the \$40-60 range during 2017.

Recent events in Saudi Arabia in preparation for Mohammad bin Salman’s ascension have introduced geopolitical risk back into the market. However significant reshuffling for a new king is not uncommon, and more important in our view is the Kingdom’s long-term push to diversify away from oil. The Saudis originally feared early depletion of their reserves, but that fear has been replaced by looming “peak demand.” While somewhat over-hyped in the short term, demand growth will continue to slow as electric vehicles are pushed by governments worldwide, and the significance of China as the driving force behind oil demand over the past decade cannot be overstated. The China-led downturn that we foresee will be a clear negative for oil in the short term. Secular forces should keep a lid on prices over the long term.

Today, money managers have amassed a record speculative long position across the four most liquid crude oil and products futures contracts: gasoline, distillate, WTI, and Brent. We are taking the opposite position and are currently short Brent crude and a basket of exploration and production companies that score poorly in our model, including Diamondback Energy (FANG), Pioneer Natural Resources (PXD), Resolute Energy (REN), Whiting Petroleum (WLL), and Parsley Energy (PE).

Managed money is record net long over 1 billion barrels of crude and refined product ahead of the OPEC meeting at the end of the month. An extension of supply cuts is already baked into the price in our view and selling on the news should drive prices down.



As a hedge fund manager, this is the type of market that we live for. The world is not ready for a bear market, let alone a brutal one. We strongly believe that Crescat and all our strategies are ready and that we will prudently protect and capitalize. See our [macro letter](#) that we wrote in the Fall of 2006 where Crescat predicted the US housing and financial sector busts. We successfully profited from these themes in both of our hedge funds by shorting homebuilders, mortgage companies, banks, and brokerage firms which all scored poorly in our fundamental equity model at the time. We were short both Bear Stearns and Lehman Brothers as they imploded. As a result, Crescat Global Macro Fund had its best year ever in 2007, up 79% net. The fund was also up 40% net in the first five months of 2008. This experience proved the rewards of our investment process of combining solid macro themes with a robust fundamental equity model. It also proved that it is critical to be early and ahead of the crowd, particularly with respect to shorting. We have a chance to do it again in the coming downturn in the economic cycle and are determined to persevere.

From a macro standpoint, our hedge funds are positioned to profit from the next downturn in the global equity markets, and in particular, a China led downturn. We are not perma-bears, but we strongly believe there is a major cyclical market downturn coming soon that needs to be timed with shorts to generate performance and add substantial alpha. For many good reasons, which we have elaborated on in our past quarterly letters, we adopted an equity short bias earlier this year to capitalize on this view. In hindsight, we went net short too soon to perfectly time it, and that has hurt our performance year to date. But we are following our risk controls and have thereby contained the drawdown. We strongly believe our positioning will be rewarded soon.

As expected, the drag on performance in Q3 and year to date has been short positions, largely related to our China Currency and Credit Bubble theme. US equity shorts in our Maturing Expansion theme also held back performance in the quarter.

Sincerely,

Kevin C. Smith, CFA
Chief Investment Officer

Tavi Costa
Emerging Markets Analyst

Nils Jenson
Energy and Materials Analyst

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Net Returns through 9/30/2017				
Crescat Strategy/Benchmark (Inception Date)	Q3 2017	YTD 2017	Annualized Since Inception	Cumulative Since Inception
Global Macro Hedge Fund (1/2006)	-7.3%	-14.9%	12.2%	286.7%
-Benchmark: HFRX Global Hedge Fund Index	1.8%	4.4%	0.6%	7.8%
Long/Short Hedge Fund (5/2000)	-5.0%	-8.3%	7.0%	226.3%
-Benchmark: HFRX Equity Hedge Index	3.2%	7.1%	2.4%	50.5%
Large Cap SMA (1/1999)	3.6%	8.7%	10.8%	584.8%
-Benchmark: S&P 500 Index	4.5%	14.0%	5.9%	192.2%

Crescat Global Macro Fund Q3 2017 Attribution by Theme	
Theme	Q3 Net Return Estimate
Aging Population	1.04%
Aussie Debt Crisis	-0.77%
Canadian Housing Bubble	-1.02%
China Currency & Credit Bubble	-4.88%
Global Fiat Currency Debasement	0.93%
Maturing Expansion	-2.84%
Millennial Wave	0.05%
Monetary Policy Spread	-0.36%
New Oil and Gas Resources	0.49%
Opportunistic	-0.06%
Rise of the Machines	0.28%
Rising Geopolitical Tensions	-0.08%
Security and Defense	0.55%
Twilight in Utilities	0.16%
Total	-7.27%

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