



THESE GO TO ELEVEN

I have used this quote before but I'm going to recycle it as it is truly one of the all time great movie quotes. The movie, *This is Spinal Tap*, is a 1984 "rockumentary" (more like a mockumentary) about the world's loudest band, Spinal Tap. It mocks the intelligence and logic of the stereotypical rock band member. In the scene referenced above, the lead guitar player of the band Spinal Tap, Nigel, shows the interviewer his power amplifier. After showing him the volume goes to eleven, as opposed to the normal maximum ten he says, "if we need that extra push over the cliff, you know what we do?" The answer is obviously "put it up to eleven." But then the interviewer asks why not just recalibrate ten to make it louder? After a long delay as he thought about the question Nigel answers "These go to eleven." Clearly, he was totally unable to comprehend the question. This quote is always useful to throw out when somebody says something that makes no sense.

While my previous piece, [Willful Blindness](#), focused on narratives that the market gives us that, to be nice, may not be quite right, we will focus here on more broad-based public narratives that are similarly "not quite right," i.e., they go to eleven. While we at Kopernik always frame discussions around the fact that we are bottom-up stock pickers, I like to look at the big picture (macro) scenario to frame the risk profile. It is from this point of view that I consider the macro picture. That said, this is increasingly treacherous with the ever expanding role of the government, to which I include the Federal Reserve. Even though it is independent, the government exerts meaningful control over it. This reminds me of the great Ronald Reagan quote about the nine most terrifying words in the English language "I'm from the government, and I'm here to help."

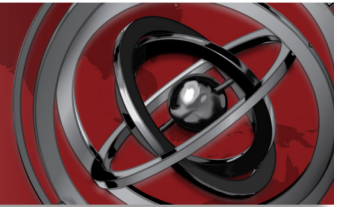
I can't speak for all value investors, but anecdotally I find that as a group they tend to question the common narrative more than others. I mean this in investing and in life. With this said it won't be a surprise to share my generally cynical nature. To quote from the truly great HBO comedy, *Silicon Valley*, one of the computer programmers, Gilfoyle, tells another "I don't trust anyone. It's a huge part of my belief system." I'm not that extreme, but I do default to a healthy dose of skepticism and cynicism given that most people seem to be biased in some way and have some kind of angle or underlying political agenda.

Moving on to public narratives, it is interesting to see different concepts go from crazy to fringe to maybe to accepted to how dare you disagree. In the mid-1990s Joe Overton, who worked at a think tank in Michigan, created the term the "Overton Window." It specifically refers to a range of ideas that are at any given time tolerated in public discussion. Overton theorized that politicians can only voice opinions that will be politically acceptable. Any politician who voices an opinion outside this range of acceptable opinions will see their career come to an abrupt end and be ostracized. Proponents of policies outside the window dance around the fringes of certain ideas in an attempt to move and/or expand the Overton Window (i.e., slowly persuade the public that the idea is acceptable). More specifically, in 2006, ex-George W. Bush speech writer [Joshua Treviño](#) postulated that the degrees of acceptance of public ideas follow a predictable pattern of 1) Unthinkable, 2) Radical, 3) Acceptable, 4) Sensible, 5) Popular and 6) Policy.

For example, for the "older" readers, could you have imagined years ago that assorted governments, I mean independent Central Banks, having negative interest rates, or printing money and buying government debt, or other assets including public stocks, etc.? But here we are and it has gone on long enough that it is starting to seem normal. Or at least that is the narrative.

To advance the discussion let's quickly recap Quantitative Easing ("QE"). It used to be that in a weaker economic environment the central bank would rely on cutting key short-term interest rates to bring down borrowing costs and incentivize borrowing and thus, create instant economic activity. After the Great Financial Crisis, circa 2007, that was deemed inadequate and the world's central bankers rolled out negative rates and Quantitative Easing. QE, as is generally defined, allowed the World's Central Banks to essentially create more of their sovereign currency and then use it to buy assets. In the US, it was US Government debt and mortgage bonds. In Europe it was the same, other than Switzerland who bought lots of global stocks, and in Japan they bought and continue to buy "all" financial assets. Make no mistake, this was a concerted global central bank effort. As opposed to the details of how it works, the key narrative needed to be that this was no big deal. Thankfully the governments have the media to sell that narrative on their behalf.

To quote from the classic 1978 movie, *Animal House*, in the final scene the fraternity created a riot during the festive annual town parade in order to get even with the school dean who expelled them all. The ROTC security officer (Kevin Bacon in his first movie role) says, "Remain calm. All is well." as a frenzy of panic is all around him and ultimately steam rolls him into the ground, literally. This is akin to the media/government/central bank today.



Throughout US history political leaders have frequently restricted the media from questioning the narrative or simply telling the truth. Yes, even in America. If this seems controversial, it can't be shocking to think that the government gives better access to those reporters that "play ball" with them. As an example, while many would regard ex-US President Abraham Lincoln as one of the best ever, were you aware that during the American civil war 300 newspapers were shut down and countless journalists were arrested, primarily those who had the audacity to contradict his statements to the public? (source link: http://wiki.lincolntelegams.com/index.php?title=Lincoln_and_Press_Suppression)

Maybe it's as simple as the great Warren Buffett quote, "Nothing sedates rationality like large doses of effortless money."

There have been 3 massive QE operations around the world (I'm excluding the smaller ones that pale in comparison and I'm excluding the broader view of QE, meaning deficit spending which virtually all countries do to some extent, and a huge extent in others like China.)

Japan

They have been in QE for so long they don't even talk about ending it, nor does anyone think they will. Given Japan is the most levered government in the world it is instructive to look at how things have gone for them.

Many people think that one reason for their problems is population decline. However, the population didn't start declining until 2015. They started some form of QE twenty years ago so population decline isn't their main problem. QE began in earnest in Japan in the aftermath of the country's twin equity and real estate bubbles when, in 1999, the Bank of Japan's (BoJ) overnight call rate hit zero. I won't bore you with the details but suffice it to say they have tried everything. Yet, after 20 years they are buying back crazy amounts of assets (more below) and they still have negative interest rates and have committed to keeping their 10 year bond rate at roughly 0% by buying as many bonds as they have to.

Over the past 6 years the BOJ has gone from owning 12% of all outstanding Japanese government debt to 43% today, and growing, given they buy more than 100% of the new issuance. They are squeezing the Japanese banks out as the banks used to own 43% of all government debt and are down to 17% today. Further the BOJ is closing in on owning 5% of the entire Japanese stock market via ETFs. Yet inflation remains virtually non-existent, which seems to violate all economic theory. With this massive increase in Yen printed and negative rates, expectations were for the following:

- The Yen would weaken dramatically (it has weakened but not as dramatically as expected - it slumped from 75 to the dollar in 2011 to 125 in 2015 but has since bounced back to 110).
- The economy would strengthen dramatically (it hasn't)
- Inflation would rise fairly dramatically (it has gone up marginally)
- Wages would grow with inflation (again, marginal gains)

This truly is a fascinating case study and I don't have a great answer on why the negative consequences of the QE has been so benign so far given that it has gone on so long. In the 1700s a Scottish philosopher named David Hume was credited with creating "Hume's Law" which states that many people make long-term erroneous claims about what ought to be based on what is currently occurring. Maybe the better way to think about these situations is just because a certain thing has happened, doesn't mean it always will when it defies logic.

If you want to see where the US is headed, look no further than Japan. We are on the exact same path, lagged by two decades.

I have written before that it is hard to imagine at some point the government/central banks of the developed world won't find a mechanism to wipe away the debt and reset the bar. The Japanese Overton Window has widened to include the current trial balloon discussions of the potential to transfer the BOJ's equity holdings to the Government Pension Investment Fund (GPIF) to make it solvent. Money created out of thin air is buying assets and potentially moving them to the government pension fund, and the assumption is there will be no adverse consequences. It makes no sense, but the narrative is like Hume's law; since that is what is happening it ought to continue and there will be no adverse consequences.

The EU

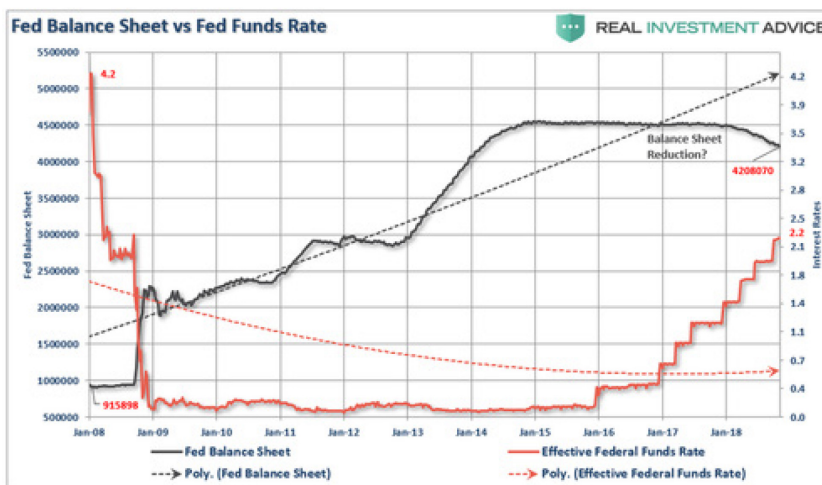
I won't spend much time on Europe but to summarize, they started QE in early 2015 buying government bonds and in early 2018 they started buying a smaller amount every month. In less than a year they are now saying the lower level of QE may have to reverse and they



are discussing stopping the bond roll off “for now.” Granted Germany, Italy, Sweden and a couple others have put up negative GDP quarters recently, but let’s all remember that this is all uncharted territory for central banks.

The US

Officially the US Federal Reserve has two missions: target steady inflation (around 2%/year - more on this later) and maintain “full” employment. Yet it seems clear that there is a third mandate: don’t let the stock market fall. The “Fed put” has been discussed on and off for decades but in its current iteration it has been active for 10 years now almost explicitly. However, given that in just a couple of months of poor US stock performance (Q4 2018) we have gone from steadily raising rates and “autopilot” for letting bonds run off the portfolio to no rate increases and rethinking Quantitative Tightening (QT), this third unspoken mandate is clear.



Ex-Federal Reserve Chairman Bernanke told us that the point of QE was to create a wealth effect in the economy by lowering interest rates and lifting the stock markets, so how is it surprising that a small amount of QT would have a negative effect on the markets? Now we will slow/end QT at the first sign of economic weakness. Wait, we haven’t really seen economic weakness yet so they are really saying they are willing to end QT on the first sign of stock market weakness. Given this is the longest economic up-cycle in history it will end soon enough, and then QE will start again. Great news, right? It worked for the past 10 years or so. And yet creating money out of thin air and then using it to buy back the government’s debt has had no ill effects, hence the Hume’s Law narrative.

The US now has \$22 trillion in debt. That is almost \$67,500 per person. No big deal? This hasn’t been a big deal because of the thirty five year cycle of lower interest rates. In 1988 the US had gross debt of \$2.6 trillion and interest expense of \$152 billion (simple average = 5.8%). In 2018 we had gross debt of \$21.5 trillion and interest expense of \$371 billion (1.7%). So over the past 30 years US government debt is up by 727% and interest expense is only up by 144%. If you apply the 5.8% to today’s debt you get an interest expense of \$1.25 trillion. Clearly not doable. If you aren’t willing to admit that our current deficits are spiraling out of control, you would have to concede the fact assuming historically average interest rates.

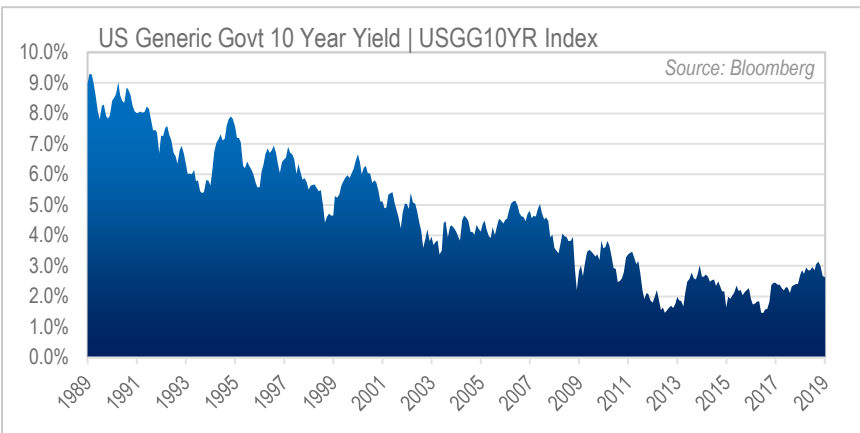
What is amazing about the above numbers is that the total debt rises much faster than the stated annual deficits. For the just ended 2018 fiscal year the official reported deficit was \$800 billion dollars. However, the national debt increased by \$1.3 trillion dollars. The discrepancy can include things like national disaster relief and other things that are considered one-time items. Somehow the fact that we borrow more to help Social Security and other like-programs doesn’t count in the deficit either. Since 2000 the budget deficits have added up to a negative \$10.5 trillion but the national debt has gone up by \$15.8 trillion. I have spoken before about the farce that is the US corporate gaap/non-gaap differential, but here it is rearing its ugly head within our government.

This can’t go on. Right?

I have previously mentioned Stein’s Law which says that if something can’t go on forever, it will stop. Maybe we need a government version that says if something NEEDS to go on forever, the government will find a way for it to do so. Today, that means manipulate rates lower and most likely negative. Not convinced it could happen in the US? In a February, 2019 research paper by the Federal Reserve of San Francisco it was said “Allowing the federal funds rate to drop below zero may have reduced the depth of the recession and enabled the economy to return more quickly to its full potential. It also may have allowed inflation to rise faster toward the Fed’s 2% target. In other words, negative interest rates may be a useful tool to promote the Fed’s dual mandate.” Not to be outdone, the President of the SF Fed, Mary Daly, was recently quoted as saying, “US central bankers are currently debating whether it should confine its controversial tool of bond buying to purely emergency situations or if it should turn to that tool more regularly.” Again, this is the Overton Window shifting/widening.



We are moving toward a very different world from 1798 when Alexander Hamilton said “The creation of debt should always be accompanied with the means of extinguishment.” How quaint. In 1972 when the US exited the gold standard the French economist, Jacques Rueff, said America can now have “deficits without tears.” While the Republicans like to hold themselves out to be the fiscal conservative party, it was ex-Vice President Dick Cheney who was overheard saying after the 2002 midterm elections “Reagan proved deficits don’t matter.” So how do we keep financing these deficits?



In 1947 Abba Lerner, a Russian-born, British economist, wrote an article entitled “Money as a Creature of the State” in which he proposed an economic theory named “functional finance.” The premise was that the principal economic objective of the government should be to ensure a prosperous economy. Fiscal policy should be directed solely based on its impact on the economy, and the budget is somewhat irrelevant, that is, ‘balancing revenue and spending’ is not important; prosperity is important. The amount and pace of government spending should be set in light of the desired level of activity, and taxes should be levied for their economic impact, rather than to raise revenue. (We will leave this for another time but I’m pretty sure that almost exactly describes modern day China.) Principles of ‘sound finance’ don’t apply to national governments. They make sense for individuals, households, businesses, and non-sovereign governments (such as cities and individual US states) but do not apply to the governments of sovereign countries, capable of issuing their own currency. Needless to say, this wasn’t done in an Overton Window so it garnered no media attention and you have probably never heard of it nor Mr. Lerner.

In 1969 the economist Milton Friedman published “The Optimum Quantity of Money” where he said, “Let us suppose now that one day a helicopter flies over this community and drops an additional \$1,000 in bills from the sky, which is, of course, hastily collected by members of the community. Let us suppose further that everyone is convinced that this is a unique event which will never be repeated.” Of course Friedman said this would be very positive without saying where the \$1,000 came from. Jumping to 2002, Ben Bernanke, ex Federal Reserve Chairman, gave his famous speech where he said “The U.S. has a technology, called a printing press (or, today, its electronic equivalent), that allows it to produce as many U.S. dollars as it wishes at essentially no cost” and the existence of this technology means that “sufficient injections of money will ultimately always reverse a deflation” and that using this technology to finance government spending is “essentially equivalent to Milton Friedman’s famous ‘helicopter drop’ of money quote.” “In particular, it has the attractive feature that it should work even when more conventional monetary policies are ineffective and the initial level of government debt is high.” This whole idea was crazy enough that it mockingly earned Bernanke the nickname “Helicopter Ben” and was soundly refuted. This was only 17 years ago. Again, this was outside the Overton Window at the time.

A couple things to note here. The assumptions, as stated, are that this is a one-time event and would be to counter deflation. We will leave aside if it would/could counter deflation. What is more interesting is that this idea has now taken root (the Overton Window is open) as a “new” economics theory that is being talked about everywhere called Modern Monetary Theory (“MMT”). Further, it has evolved to have nothing to do with deflation nor a one-time event. Further again, is this not just adding a name to what the US has been doing for decades, i.e., deficit spending? Maybe the “new” part simply means to be much more aggressive?

As the MMT theory goes, the government simply prints/creates new money to pay its bills, thus deficits (and total debt and interest on that debt) don’t matter. As long as you can create more currency you can NEVER default. The only constraint on spending under MMT is that this could potentially result in high inflation (Hume’s Law – except since we haven’t seen this it won’t happen). As long as inflation remains low, as it is now, deficits are no problem. Consider this quote from Olivier Blanchard, former International Monetary Fund (IMF) chief economist, “Put bluntly, public debt may have no fiscal cost.” However, applying basic logic, this sounds like magic. Spend any amount on anything you want with an endless supply of money and there are no negative consequences.

Suppose the government decides to pile up infinite amounts of debt. What bad things could happen? Debt-service costs increase, but instead of raising taxes to pay the interest, the government could simply borrow more in order to cover those interest payments. Further, the Federal Reserve could also lower interest rates to zero, or negative, thus eliminating interest costs. This is the case for most of Europe and Japan right now.



Here is a fun little interview with Stephanie Kenton, a professor at Stony Brook University and Bernie Sanders chief economist in 2016, *"Few people understand what the national debt is, and most people tend to conflate government deficits with the national debt. So let's start by clarifying these terms. The national debt is nothing more than a historical record of all the dollars that were spent by government but not taxed back. When the government spends more than it collects in the form of taxes (and other payments), we label it "deficit spending." But that's only part of the story. To complete the picture, suppose the government spends \$100 into the economy but only taxes \$90 back out. The result is a surplus equal to \$10 that shows up somewhere in the non-government part of the economy. In other words, the government's "red ink" becomes our "black ink." Their deficits are our financial surpluses. So where does the "debt" come into play? Whenever the government runs a deficit, it sells government bonds called U.S. Treasuries. This is usually referred to as "borrowing," but that's actually misleading. What's really happening is that the government is allowing people to trade in their dollars for a bond that pays some interest. A pretty good deal if you happen to be lucky enough to hold some. Finally, the national debt is nothing to fear."*

WOW. In the MMT world not only is government debt not a negative; it is a huge positive. This stuff is seriously gaining steam in America.

While economics is as much art as science as it relates to specific outcomes, the directional ideas are generally right on. In this case, an unending supply of a currency would of course have an effect on its price (i.e., value), so while Kopernik wouldn't predict if this is going to happen or when, we have to be aware of it and consider the risk. This is a BIG, long-term risk to the value of money but in the short run the government keeps reminding us that they plan on taking 2% of our money every year via purchasing power losses from inflation. Further, the drumbeat of higher than 2% inflation continues (again the Overton Window is open for this). In 2016 John Williams, President of the Federal Reserve Bank of New York, spoke in support of a return to the 3% and 4% inflation rates prevailing in the decade up to the early 1990s. Late last year Chicago Fed President Charles Evans said inflation "near 2.5% wouldn't be unsettling." This is coming.

As I mentioned, the stated risk of MMT is that hyperinflation would result from the aggressive money printing. Some of MMT's narrative creators, I mean more strenuous academic advocates, wave away the possibility of hyperinflation in a country as politically stable and economically developed as the U.S. Indeed, low interest rates and large levels of quantitative easing haven't led to much inflation, either in the U.S., Japan or Europe, as inflation hawks had warned it would. Again with Hume's Law.

Today politicians know they can't cut the government debt and balance the budget, so they start talking about MMT. It is the only way out. The short-term proof is that QE, which is similar, has had no immediate adverse consequences so they can now fund all their projects and buy those votes via MMT. What could go wrong?

Maybe Jim Carrey said it best as Ace Ventura in the 1994 movie when he said *"Fiction can be fun! But I find the reference section much more enlightening."* In this instance Kopernik would be with Alan Greenspan, the ex-Federal Reserve Chairman, who said *"Deficit spending is simply a scheme for the confiscation of wealth. Gold stands in the way of this insidious process."* Kopernik is sometimes referred to as a gold bug, but really we are simply cognizant that governments will do anything to solve their fiscal problems especially by weakening their currencies. Further, gold and other precious metals are the only form of money that is not simultaneously someone else's liability.

Another way the US Government helps itself financially is to report inflation far lower than it really is. By printing a lower CPI number Social Security and all other programs that have cost of living adjustments automatically built in would increase slower than true inflation, which chips away at the outstanding debt. Think about the oft-cited Charlie Munger quote, *"Show me the incentive and I will show you the outcome."*

Based on these incentives CPI has ceased serving as a "financial tool" to be utilized by investors, and has instead become a "policy tool" used by central bankers to justify their hyper-accommodative monetary policy. For some reason many people still use CPI as fact and it ripples through numerous parts of economics and investing. Despite the various sub-indexes published by the Bureau of Labor Statistics ("BLS") to give readers more clarity as to where pricing pressures are showing up in the economy, the methods used remain surprisingly opaque.

To give a little detail and based on the web site, www.shadowstats.com, in the last 30 years, a growing gap has occurred between the government reporting of inflation, as measured by the consumer price index (CPI), and the actual price increases seen in every day life. The growing difference is due to changes made over decades as to how the CPI is calculated and defined by the government. Specifically, changes made to the definition of the CPI and related methodology in recent decades have reflected theoretical constructs offered by academia that have little relevance to the real-world use of the CPI by the general public.

Measurement of consumer inflation used to reflect the cost of maintaining a constant standard of living, as measured by a fixed basket of goods. Tracking changes in the cost of a fixed basket of goods was the approach to estimating inflation, going back to at least the 1700s. Prior to 1945, the fixed-basket CPI tracked by the U.S. government was actually known as the Cost of Living Index. Throughout the 1900s,



though, the notion of a constant standard of living evolved in academia, as a “true cost of living” concept. The general argument was that changing relative costs of goods would result in consumer substitution of less-expensive goods for more-expensive goods. Allowing for a substitution of goods within the formerly fixed basket, the maximization of the “utility” of money held by consumers would allow attainment of “constant level of satisfaction” for the consumer.

In 1980 and again in the early 1990s, the US officially moved to change the calculation of the CPI. The contention was that the CPI overstated inflation (it did not allow substitution of less-expensive hamburger for more-expensive steak). The government and their media cronies all touted the benefits of a “more-accurate” CPI, one that would allow the substitution of goods and services. The BLS calls these *hedonic quality adjustments*. Clearly the unstated goal was to reduce cost of living adjustments for government payments to Social Security recipients, etc. The cuts in reported inflation were an effort to reduce the federal deficit without anyone in Congress having to do the politically impossible: to vote against Social Security. The inflation-calculation changes had the further benefit to government fiscal conditions of pushing taxpayers artificially into higher tax brackets, thus increasing tax revenues. Few in the public paid any attention.

A New York Times article summarized a discussion between Federal Reserve Chairman Alan Greenspan and Michael Boskin, then chairman of the Council of Economic Advisors, as they were very clear as to how “correcting” the CPI calculations would help to reduce the deficit. Greenspan said “Speaker Newt Gingrich, Republican of Georgia, suggested this week that fixing the CPI index, with its implications for lower spending (i.e., Social Security, etc.) and higher revenue (i.e., tax bracket adjustments), would provide maneuvering room for budget negotiators ...” The drive here was to get a lower inflation reading, irrespective of whether the data were “more-accurate.” He continued, “we can guarantee cash benefits as far out and at whatever size you like, but we cannot guarantee their purchasing power.” Perfectly said and very different from perhaps Greenspan’s greatest quote, “If I’ve made myself clear, I’ve misspoken.”

The other unstated benefit is how we calculate economic growth. Let’s start by saying that calculating GDP accurately is impossible, but currently we start with nominal GDP growth (i.e., with inflation), then we reduce it by inflation (CPI) to get to the “real” GDP that we all hear about. Thus, if our “improved” CPI understates actual inflation, it also improves our stated real GDP. We can all feel better about that. For all the discussion about how China manipulates its economic data why does nobody ever talk about this?

A quick dive into some of the perversions in the CPI calculations is probably worthwhile. Here are the categories of CPI and the average increase since 2000 according to the Bureau of Labor Statistics (BLS).

Category	2017 Weighting	Avg CPI since 2000
Housing	41.77%	2.37%
Transportation	16.54%	1.81%
Food & Beverages	14.36%	2.43%
Medical Care	8.67%	3.72%
Education & Communication	6.70%	1.64%
Recreation	5.74%	0.92%
Other Goods & Services	3.20%	2.96%
Apparel	3.02%	-0.28%
Total weighted avg CPI	100%	2.21%

Leaving aside that the % weightings would vary depending on your income, do the average rates of increases seem right to you? 42% of the current CPI is housing. Not housing prices, but rather ‘homeowners equivalent rent of residences.’ Umm, what? Instead of reflecting some measure of home prices, as was the case before 1983, the BLS estimates the cost of housing based on what homeowners theoretically would pay in order to rent their own homes from themselves. The BLS then estimates how much homeowners raise the rent on themselves each month. Starting in 1989, the BLS “improved” these estimates by beginning to adjust that imaginary series for hedonic quality adjustments. If steak prices are going up and consumers could switch to ground beef and to the esteemed people of the BLS that means there is no inflation, I would love to know what hedonic adjustments they make to housing. We could substitute a smaller house or be in a worse neighborhood and be just as well off?



According to the Case-Shiller Home Price Index since 2000 the US national average house is up 114%, or 4.32% annually compared to 2.37% according to the government.

Further, here are some specific cities and their annual increase since 2000 according to Case-Shiller:

Boston	4.2%	Dallas	3.4%	Denver	4.2%
Los Angeles	5.7%	New York	3.8%	San Diego	5.1%
San Francisco	5.4%	Seattle	4.9%	Tampa	4.1%

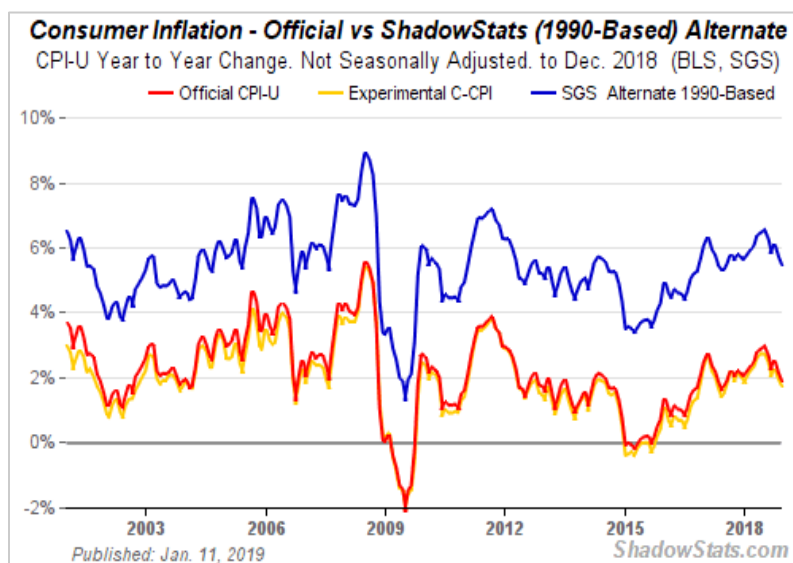
To be clear these are prices of homes sold whereas the CPI measures some form of rent so maybe rent compared to sales prices have gotten cheaper relative to the housing prices? Cap rates have gone down since 2000 (from 8.5% to 5.3% now) so this is true, but the magnitude of the rental increases lagging the house price increases isn't even close to what the BLS shows in CPI.

Within Healthcare, PriceWaterhouseCooper, in its Health Cost Trend Report, shows the average healthcare inflation since 2000 at 8.3%. Evidently more hedonic adjustments by the BLS. Anecdotally, ask your HR Manager what the average annual increases have been to your health insurance plan and I guarantee it is higher than 3.7% reported by the government.

How about education costs? If you have kids going to college or have read anything on the topic, you certainly know this answer. To take two ends of the spectrum from 2000 to 2018 private Harvard University's tuition has increased by 4.5% annually. My alma mater's (UCLA) in-state tuition has increased by 7.0% annually. How can the BLS say education is up only 1.6% annually?

Clearly the estimates the BLS makes are ridiculous. While previous iterations would be more extreme, if you simply applied the methodology the BLS used in 1990, the 20 year average CPI increase would be 5.5%, according to ShadowStats, as opposed to the 2.2% reported with the BLS's "enhanced" methodology. This difference has profound implications on reported vs. actual standard of living, and probably explains some/much of the rapid appreciation of American consumer debt, potential reduction in perceived vs. reported quality of life, wealth inequality and many other political trends.

Here is a less well-known quote from Charlie Munger about incentives, "You must have the confidence to override people with more credentials than you whose recognition is impaired by incentive-caused bias or some similar psychological force that is obviously present."



Whatever you think the correct CPI number is I can't imagine it isn't higher than the stated CPI. If it is as ShadowStats shows above, that means that real GDP in the US has averaged -1.05% annually since 2000 vs the 2.25% as published. Nominal GDP (4.45%) less CPI (2.2%) = real GDP. Keep in mind this entire change to GDP is entirely based on the methodology change in calculating CPI, and nothing else. Sort of shocking, right?

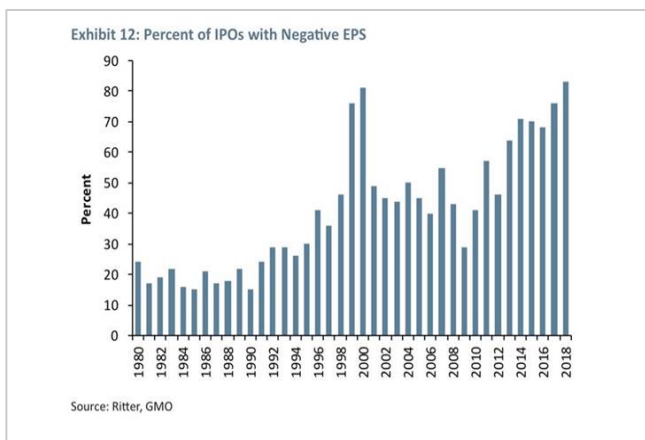
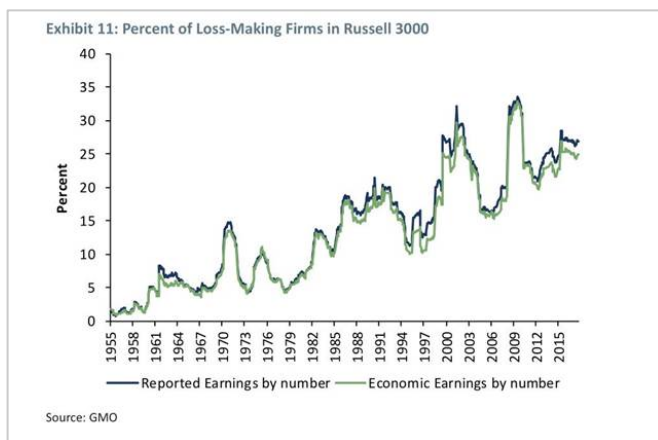
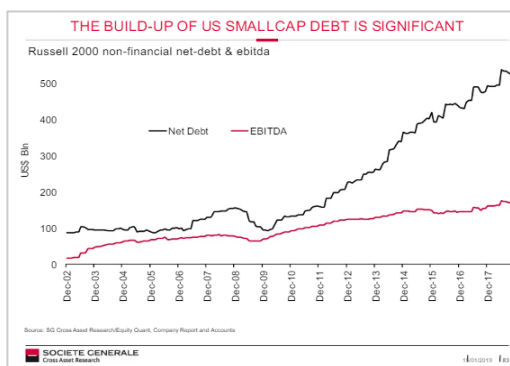
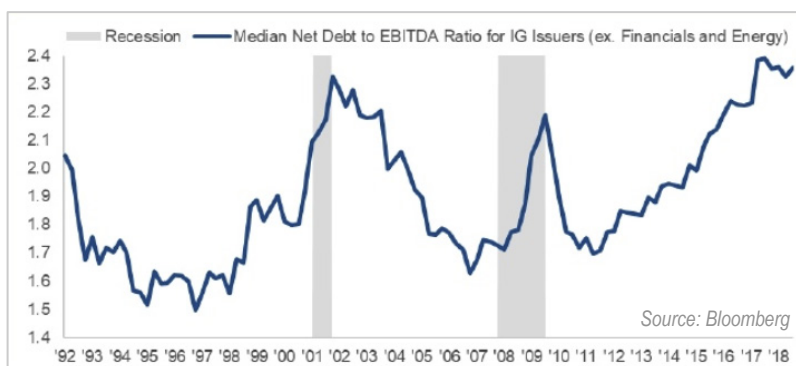
Interesting side note: Venezuela recently stopped reporting official inflation altogether to avoid rising social disorder and anger (it was 800% prior to stopping reporting it).



Leaving the macro for a couple speed round topics to close with

US Market risk

It is not a new thought, but there is a lot of debt out there, not just within the government, but within companies. If you borrow money at a super low interest rate to buy back your stock, officially that is accretive (i.e., makes your earnings per share go up) at virtually any price in the short run. But your debt load is a big risk factor that people don't think about much in times of complacency. Who knows when the next recession will hit, but that is when excess leverage becomes a big concern. Given that we are about to crack the longest economic expansion in the history of the US, the next recession can't be far off. Here are some scary charts on corporate debt and the number of public companies with no profits in our current boom times.



Here are more scary charts for the US stock market. US stocks are at a 70 year high versus global stocks based on P/E ratio. Further, the US P/E ratio uses non-GAAP earnings versus the rest of the world which tends to use the stated IFRS (similar to GAAP), so to like US stocks you need to assume the doctored earnings are correct and that the current all-time high US profit margins are sustainable. You know where we stand on that.

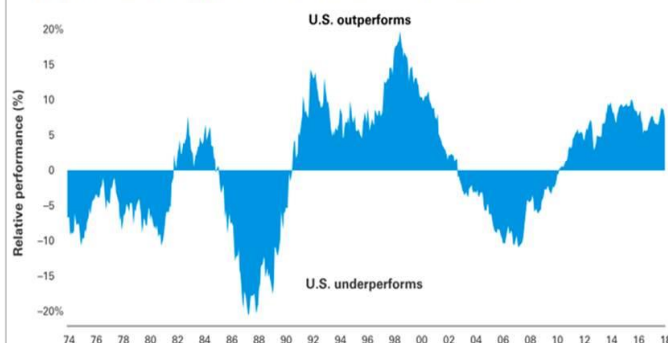


Chart 5: US stocks at 70-year highs versus global stocks



Source: BofA Merrill Lynch Global Investment Strategy, Global Financial Data

(U.S. equity vs. international equity rolling five-year returns: January 1970–December 2018)

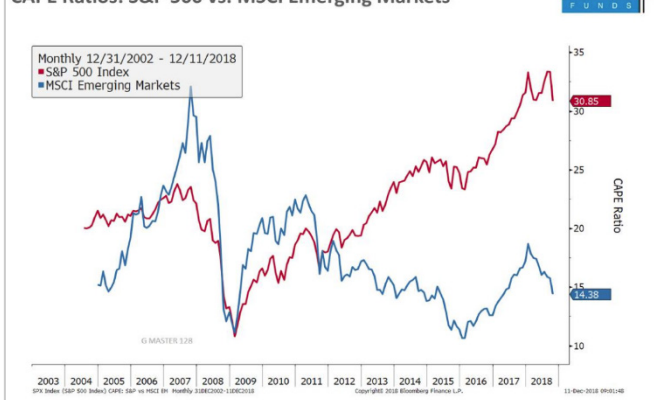


Source: Morningstar Direct, Vanguard analysis.

S&P 500 vs. MSCI EM Normalized to 1/26/18



CAPE Ratios: S&P 500 vs. MSCI Emerging Markets



Based on the above the US markets look especially expensive relative to many other global stock markets and it reminds me of a quote from the 1986 Rodney Dangerfield movie, *Back to School*. At the end of the movie Rodney Dangerfield's character gave the college graduation speech and said "It's tough out there. Stay home. Look out for #1 but don't step in #2." For Kopernik, this applies specifically to the US market as of now. One of the huge benefits of being global is that we can look everywhere, not just in one country, and because of that our opportunity set is much greater than the US focused investor, which we believe will provide more opportunity over time.

I will close by sourcing a recent Bank of America Merrill Lynch commentary that said "The prototypical professional investor is likely focused on growth and momentum, thinks financials are un-investible, is unused to volatility, and sees valuation as largely irrelevant." We respectfully disagree that thinking that valuation is irrelevant is the way to have a successful portfolio of stocks. Throughout this commentary I have given lots of big picture, long-term risks to think about but the positive is that the world is a large place and we are confident that our relentless pursuit of companies trading below their risk adjusted intrinsic value will continue to bear fruit. Our portfolios have rarely been cheaper than now and we are confident that our discipline and methodology will continue to lead us to more opportunities in the future.

Thanks again for your support.

Mark McKinney
Co-Portfolio Manager – Kopernik International Fund/Analyst Kopernik Global Investors, LLC
February 2019



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