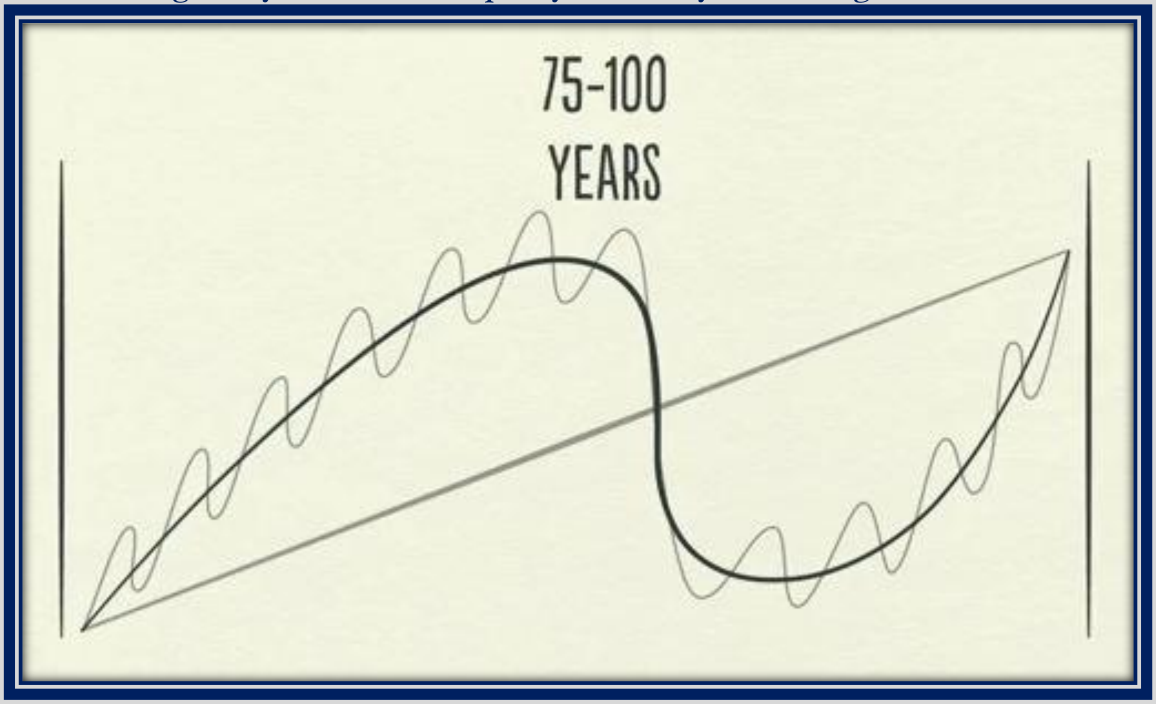
Could Oil End the Global Super Cycle?

Super cycles are made up of multiple business cycles or short term debt cycles – the kind we as investors have to deal with once or twice per decade. Super cycles, or long term debt cycles run more like 75-100 years and thus – most investors never invest during the end of a super cycle – and never more than one. We may have the misfortunate of investing in the end of a super cycle in the coming years. The end of super cycles is difficult to pinpoint and predict. We know what the general conditions look like at the end of a super cycle – namely interest rates at zero and money printing schemes – but those conditions can last years, if not decades.

Each cycle inside of the super cycle ratchets rates a bit lower and debt a bit higher until central banks run out of room to ease policy and stimulate a recovery without causing much more harm than good. Debt reaches a level that is no longer sustainable if rates rise - as interest cost increases cannot be paid. It takes a secular shift in inflation or a cyclical shock in inflation to push rates to a level that break the super cycle.

Image of cycles within a super cycle via Ray Dalio's *Big Debt Crises*

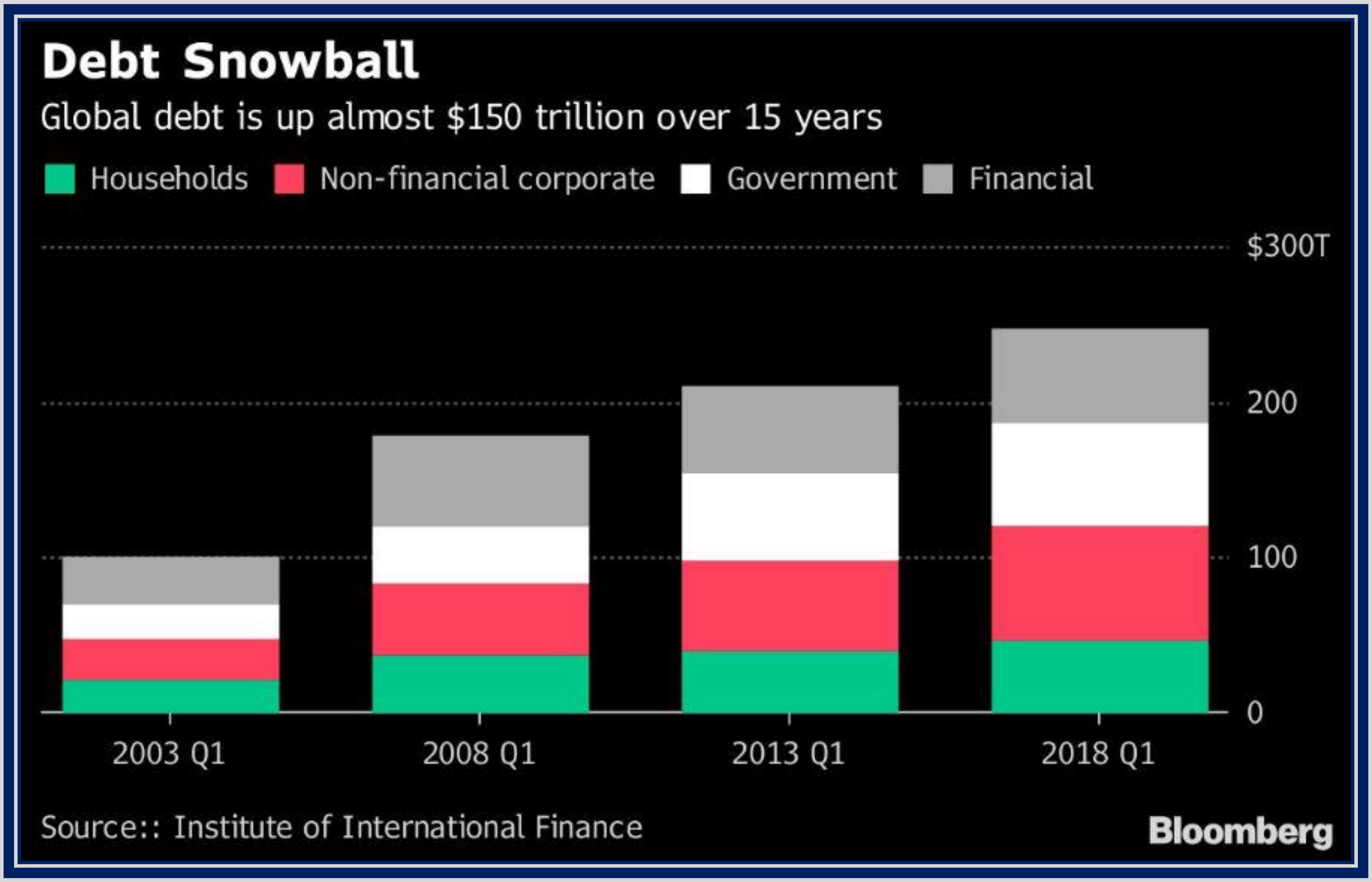


Oil prices have ended many cycles and I wrote this Special Report in order to warn that oil prices could end our super cycle in the next cycle or two.

Global Debt & US Debt

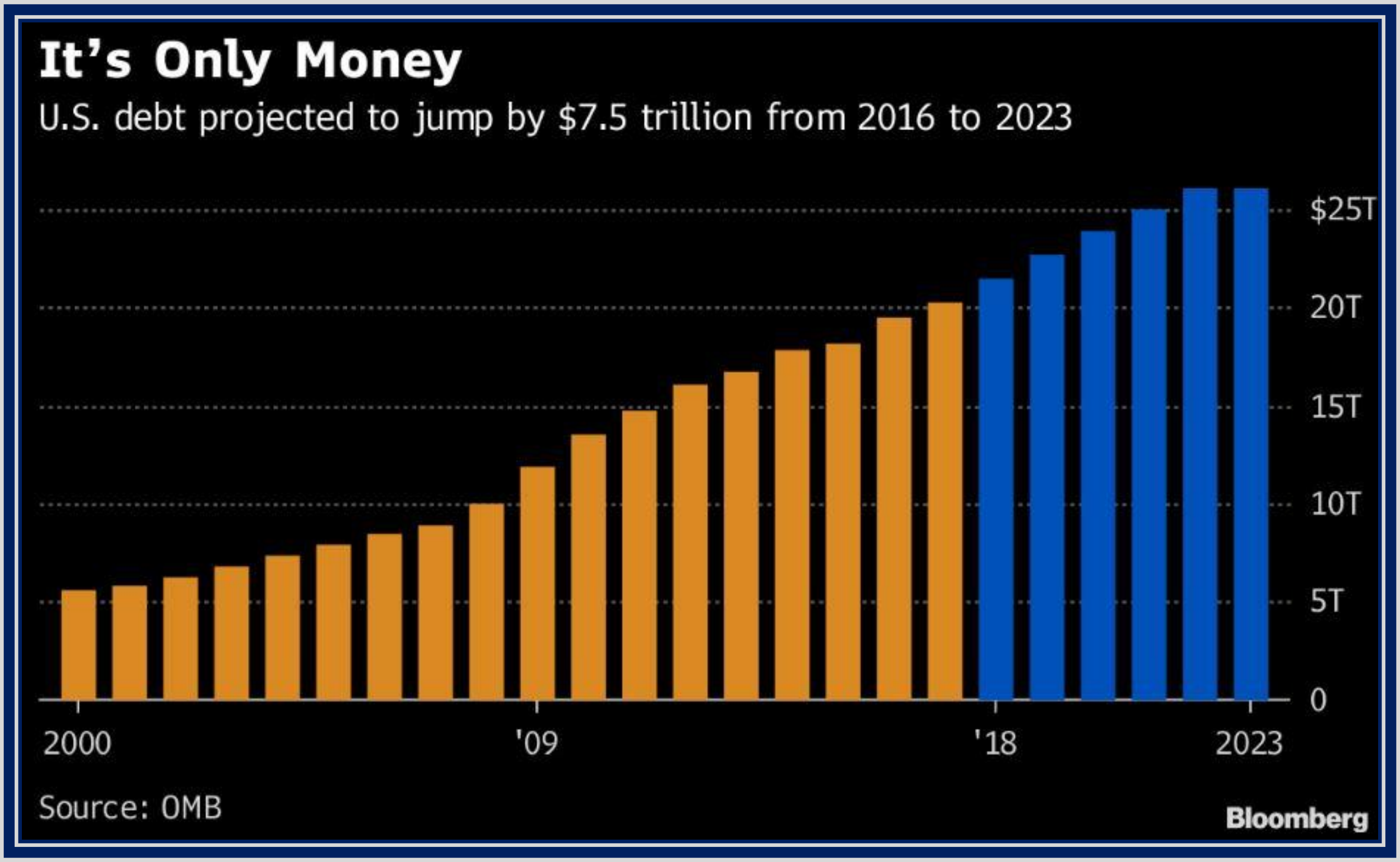
Global Debt

At the turn of the century global debt was about $84T. That number moved higher to about $170T during the Great Financial Crisis of 2008. We now stand at about $250T. The global debt to GDP level has moved higher by about 35% since 2008 and that has been in a global growth environment. Global growth is about to be tested by a slowdown led by US dollar liquidity being removed and by a slowdown in China, engineered in part by a de-risking mostly via a crackdown on shadow lending. I believe the Chinese slowdown will be more intense than most expect.



US Debt

The US national debt is currently at $21.9T and counting for a debt to GDP of 105% and total debt in the US is about $70T (but has been lower as a % of GDP since the GFC thanks to private debt levels receding).



Debt explosions late in a cycle are fine until rates rise via central bank tightening caused by an increase in inflation.

The US has a sovereign debt issue - the US is running near $1T deficits despite a healthy economy. Add to this nearly $400B in interest costs per annum despite historically low interest rates and you can easily see how debt levels are near terminal levels, where a super cycle gets stressed.

Timing the Super Cycle

As long as central banks have bullets to fire to kick the debt can down the road, the cycle still lives. As it stands today, global central banks have been able to keep rates ratcheting lower (even negative) and debt ratcheting higher – especially sovereign and corporate debt. The US and the world were able to do this without any "real" inflation threats. What makes the end of the cycle near is the fact that the government's debt is at a level where interest costs are set to become debilitating in the VERY near future if rates rise due to an inflationary shock. Rates and inflation have fallen on growth fears the past couple of months, but rates have still doubled from their low in 2016 to now. From trough to peak rates increased by nearly 200bps on the 10yr bond. That increase, which is very small historically, caused stress on the US budget and the US economy. This occurred with rather tame inflation as the backdrop for rate increases.

How Oil Could End the Super Cycle

As I write this, global asset prices are falling and global bond markets are rallying. US rates have fallen by 40-50 bps across the curve. The Japanese 10yr just retested the 0% level and rates across Europe are plummeting despite the ending of QE. The German 10yr is at 0.2% despite inflation rates that have been over 2% for 7 months in a row! Rates in China fell by nearly 100bps in 2018.

This all tells me the super cycle is still alive and will be until inflation takes the keys away from central banks. If inflation moves high enough and with enough speed and violence to force central banks to tighten into weakness – we could see a real break of the super cycle. The world economy is extremely leveraged to very low interest rates and low inflation. If (when) inflation truly spikes higher, central banks will be forced to push rates higher to kill inflation or allow the destructive forces of inflation to wreak havoc on the economy.

What tends to spike inflation higher? Energy. In the past 3 months we have seen oil free fall by over 30% taking inflation expectations with it. This is a big reason why rates have fallen and stocks have freaked out as global growth expectations slip.

This suggests that for the months and perhaps years ahead we will be facing a deflationary impulse that will keep rates low – allowing for debt levels to continue to grow to levels that become a financial stability risk.

If you look under the hood at interest costs for global debts or US debts, you realize that rates cannot rise much at current debt levels without blowing up the super cycle because it would not allow for a countercyclical policy response. So what happens if we enter a recession that creates another downdraft in rates thanks to another radical policy response from central banks? More debt of course. In my opinion, another debt binge would push debt to levels that could absolutely not handle rates higher than 1 or 2%. As it stands today a 1% increase in rates is equal to $163B in annual borrowing costs.

<u>Oil Markets</u>

The 2014 bear market in oil that took prices from $107 to $27 in less than two years wreaked havoc on capital investment in the oil patch.

Oil demand has been rising by over 1 million barrels per day for the past half century. Current oil demand projections for the next decade are still set to increase by over 1 million barells per day.

Oil projects are well…PROJECTS…they take a lot of time and resources and planning. They take permits, hundreds of people across multiple jurisdictions sometimes, and they take a lot of money. Oil projects can take many years to go from idea to producing oil field. The oil projects that are coming online today were set in motion before the 2014 bear market took hold.

Because of the anticipated demand in the future, oil investments today are vital to future price stability. The problem is – there was over $1 trillion worth of investments in future production destroyed in the recent bear market. There were 25% reductions in investments in 2015 and 2016 and increases have been tepid since (6% increase in 2018 despite the bull market).

As you can imagine the current bear market is not helping convince companies to pour vital resources into planning for producing say – a large offshore project – today while prices are at about $48 a barrel.

The International Energy Agency (IEA) concludes that over $600B is needed in exploration and production investments every year for the next 25. In the past couple of years we have been well below $500B.

As we now know, we need to add over 1 million barrels per day to meet demand increases, but we also need to add 3-4 million barrels per day to replace the wells that stop producing because of age each year. This all underscores the importance of investments in the industry to ensure no future supply shortages.

So how have we been doing lately? Well, according to Rystad Energy, we are currently at the lowest levels of oil discoveries since the 1940s and discoveries have fallen every year since 2014 (when oil collapsed). Their estimates suggest shortages in less than a decade – which is perhaps about how long central banks can stretch the next short term business cycle.

But we will be fine because of the shale "revolution" – so nothing to worry about right? Well, sorry – the problem with shale is that most companies do not make money – and that is even when oil is north of $50 – much less in the $40s. In the first half of 2018 (oil was doing well) less than one third of shale companies had positive free cash flow. Many of these shale companies actually had cash flow issues when oil was over $100. If you are familiar with breakeven number touted by the shale industry – just know that they do not include capital expenditure – which makes the numbers useless.

The US shale industry has survived and increased production on the back of adding immense levels of debt and from issuing equity – not from free cash flow. This was an approach that depended on low interest rates and a hot global economy – both have been changing lately and credit spreads have been widening in part because shale credit is rather ugly. Kallanish Energy Consultants says there is $200B in shale debt that matures by 2023. If shale companies have to attempt to roll their debt at higher (perhaps much higher) rates in the next few years – it is easy to imagine the shale industry running into issues in the next recession.

If you run the math on the production levels and oil prices needed for shale companies to pay back their debts and to roll over their debt loads at higher rates – it is not pretty for the industry – especially when considering the decline rates facing the industry.

Okay so if I am right that shale production could face serious trouble in the coming years – what does that mean for oil overall? Well the US is now the largest oil producer in the world and shale is more than half of that production. So nearly half of the production in the largest producing nation is cash flow negative for more or less the entire last decade. This was all possible because interest rates have been an inch above 0% for a long time and investors were desperate for yield. A massive industry of great domestic economic consequence as well as global geopolitical consequence is a Frankenstein living on the capital of foolish investors. Oil production has nearly tripled in the US over the past decade of low rates and zero recessions – and shale has produced a number of large producers who cannot make money. What happens to that production if rates rise and/or we have a recession?

The Oil Spike that Kills the Super Cycle

Now we know a few things about oil in the coming years:

1) Investment is down significantly
2) We are finding less oil than we have in 75 years
3) Shale loses money
4) Shale depends on investors willing to fund the losses
5) Shale depends on low interest rates
6) About half of US production is shale & the US is the world's largest producer
7) We need more oil just to meet growing demand and old wells dying

It is not a stretch to imagine issues with oil production in the years ahead.

What about demand? We get more and more non oil energy production and that is a wonderful thing – but the research suggests oil production will need to continue to rise in the future to fulfill demand. Oil still moves our world despite the progress in non oil energy.

The exploding middle class in the emerging and frontier world will create significant demand increases for oil in the coming years. I would suggest it is quite possible that the demand growth from this population hasnt been properly accounted for in demand models. Below is an excerpt from a White Mountain Letter I wrote in April – you can click on the image for the letter.

White Mountain Letter – April 19th 2018

- Very soon (like a couple of years soon) intra-Asian trade will be worth twice as much as Asia's trade with the rest of the world. **Link**
- By 2030 two-thirds of the global middle class will live in Asia. **Link**
- By 2030 Asia will account for almost double the world's middle class consumption compared to North America and Europe – 60% **Link**
- By 2030, global middle-class consumption could be $29 trillion more than in 2015. Only $1 trillion of that will come from more spending in advanced economies. **Link**
- Asia will have more middle class citizens than the West has total citizens in just 2 years **Link**
- By 2022, the middle class could be consuming about $10 trillion more than in 2016; $8 trillion of this new spending will be in Asia. **Link**
- About 150 million people will be added to the middle class each of the next 5 years and 88% of the next billion will be in Asia. **Link**
  - *380 million Indians, 350 million Chinese, and 210 million other Asians*
- By 2030, today's lower middle-income countries, including India, Indonesia, and Vietnam, will have middle-class markets that are $15 trillion bigger than today. **Link**
- The rate of increase of the middle class, in absolute numbers, is approaching its all-time peak. **Link**

So now the oil picture is pretty clear – future supply could face constraints caused by chronic low investment levels and a weak shale industry in the US – while demand is faced with a middle class explosion in the Indo-Pacific region.

If those supply and demand dynamics create a spike in oil prices with the backdrop of extreme debt levels and interest rates that cannot rise without killing the economy – you see my concerns that oil holds the potential to end the global long term debt cycle. This oil spike looks like it is at least a couple of years away – if not a decade+. In my opinion that temporal setting fits well with the timeline we face for central banks. As it stands the US Fed can cut rates by 2-3% and can print money to buy treasuries and other assets. This would push

rates to zero or even negative levels and would ensure debt levels (especially government) would reach new highs that could not sustain policy rates above 2% due to debt servicing costs.

A quick spike from say $50 to $150 would create inflation levels that would demand rate hikes which would usher in the end of the super cycle. None of this is guaranteed to occur – it is meant to be a mental model to see the world through as we move through the next decade. Watch oil investments, discoveries, and the sustainability of the shale industry. Watch oil demand from the Indo-Pacific and oil production from the US. Watch the short term debt cycle and the policy responses from governments and central banks around the world. Keep this all in mind and understand that oil could be the pin that pricks the bubble that is the super cycle we have lived in our entire lives. This is not a high probability event considering the many variables, but it is worth keeping in the back of your mind in the years ahead.

I will be watching this very carefully and clients of Pinecone Macro Research will enjoy access to my real time thoughts on this and everything else in the markets. If you would like to come along for the ride you can sign up HERE. If you want a sample you can reach out to me on LinkedIn, Twitter, or email me directly at pineconemacro@gmail.com.

Regards,
Chase Taylor
Founder, Pinecone Macro Research