

Silver

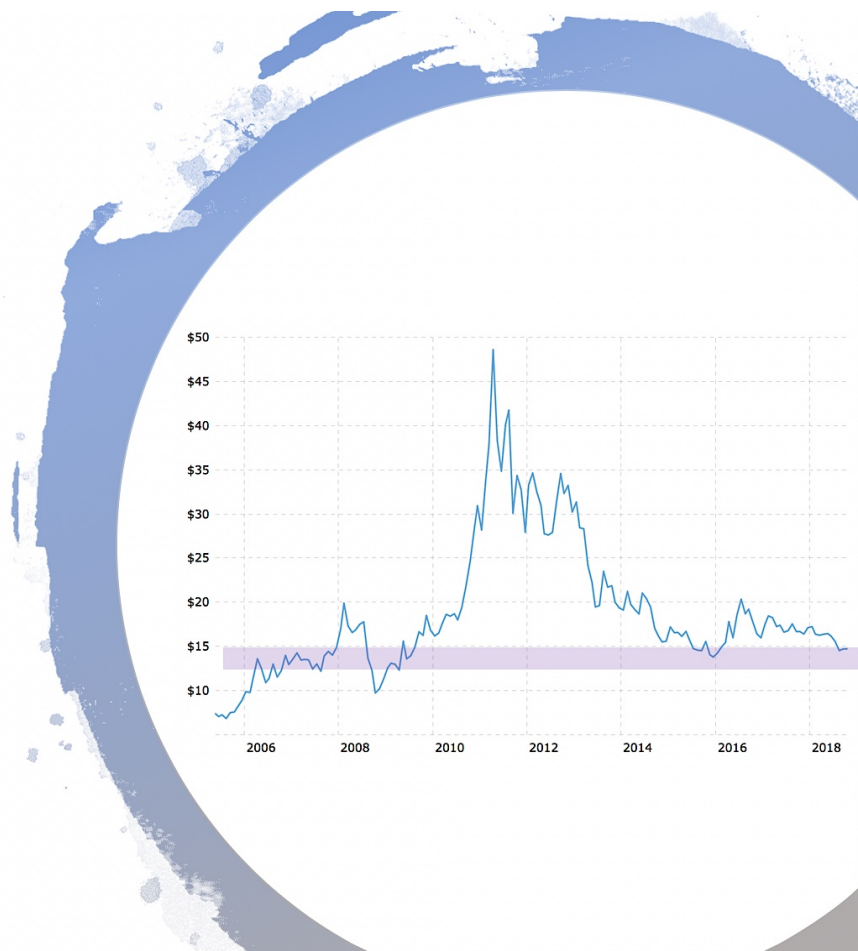
The Unavoidable Reality to Future Price Rises?

The 8 Dynamics

19th October 2018

By D Mitchell

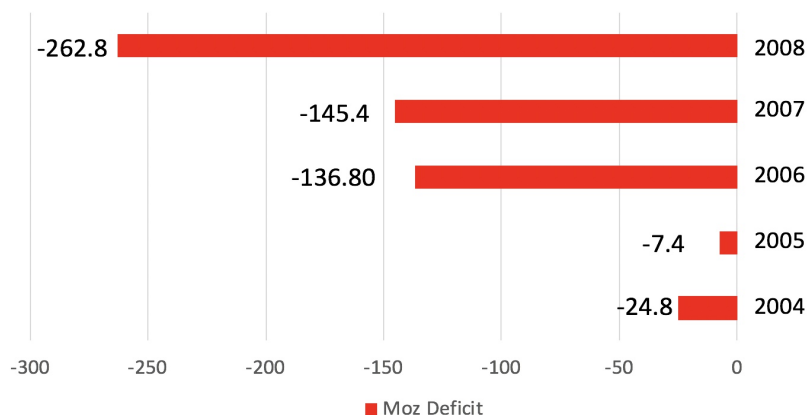
Silver has been in severe bear market since the price peak of April 2011 falling approximately -70% in price from the peak of US\$ 49.82, as you can see from the chart on the right; silver is again at levels last seen as far back as year 2006.



So, what should an investor think at this point, stay away from the white metal at all costs or in fact are we actually looking at one of the great historical value investment trades looking over the next 3 to 5 years?

To discern what to expect we have to understand why the price of silver rose so dramatically into year 2011. Silver along with other investment metals was driven by a number of factors, predominately the global financial crisis of 2007 to 2009 and the on-going after effects of this meltdown, we also saw the oil price rise from 58 US\$ in late 2006 to a high in 2008 of 140 US\$ or a rise of +240%. We were also experiencing very tight supply in silver with consistent global supply / demand deficits.

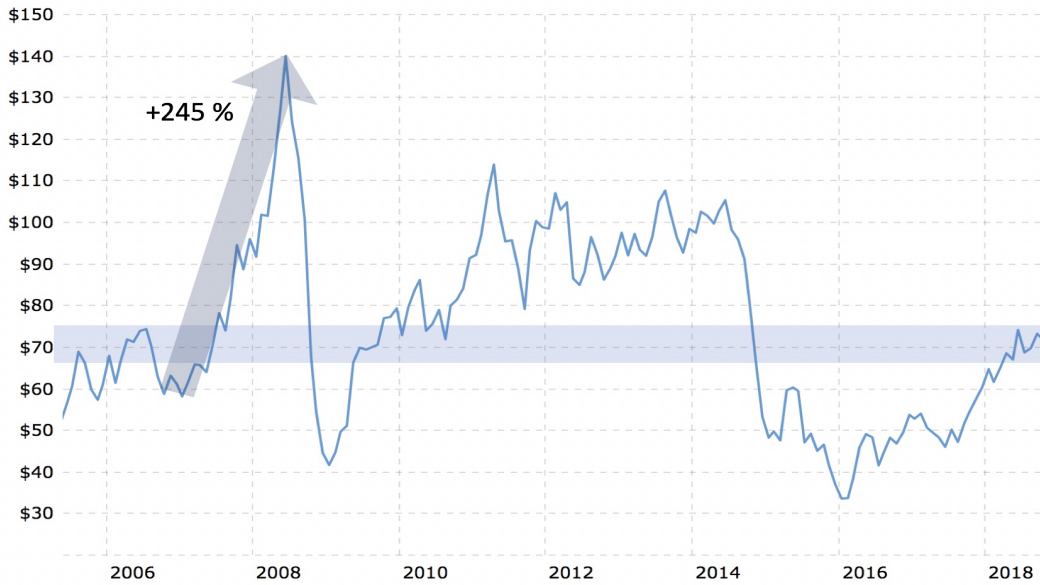
Global Annual Silver Net Balance 2004 to 2008



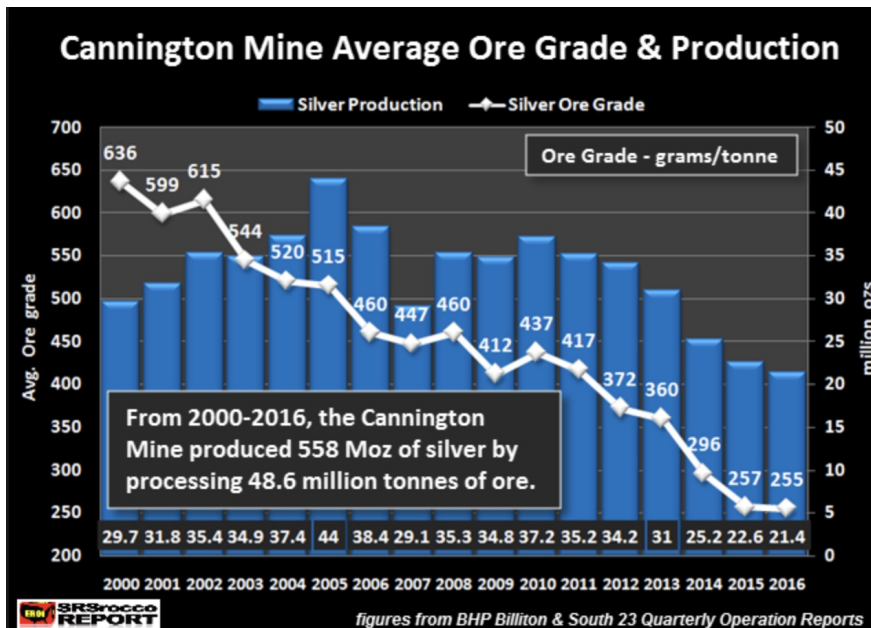
Investment Dynamic 1

Cost of Production: One of the main drivers back in the first decade was the oil price, in fact more accurately we have to take into consideration the actual physical cost of production of silver, cost of mining metals is an enormous energy intensive business and hence the price of oil is one of the major components to the business model and cost of production.

Crude Oil WTI Chart



But considering oil is back to 2006 levels of roughly 70 US\$, I am sure the readers are now asking “why would I be talking about the effects on cost of production at this point?”. To be precise it is global falling ore grades of existing mine supply, one the world’s largest zinc-silver mining groups is Australia’s Cannington.



Ore grades have collapsed between -40% to -50% globally. Cannington one of the world’s largest silver producers is clearly indicating the trend underway.

Effectively the silver producers have to process near double the amount of ore to produce the same amount of silver when comparing 2006 to today, and hence oil / energy consumption has in effect doubled.

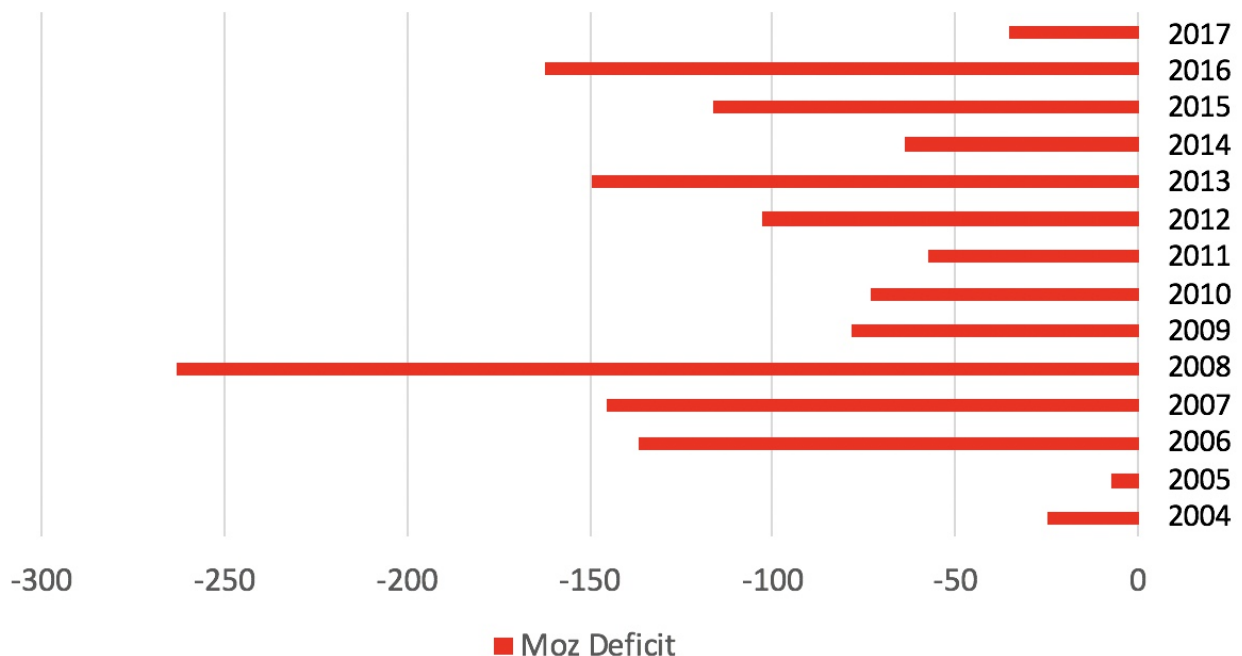
When comparing like-for-like the mining production from 2006 against today in 2018, miners are essentially paying 140 US\$ price for oil (70\$ present price x 2), the actual peak of oil in 2008.

This cost of production simply cannot be sustained with silver priced at today's levels, either the cost of production has to fall substantially, or silver prices have to rise considerably.

Investment Dynamic 2

Global Supply Deficits: Global supply / demand deficits have actually been recorded every year for the last 14 years consecutively, quite a feat indeed. The question going through many reader's minds right now is... "Where is all the silver coming from to fill these demand deficits?" and the simple answer is the metal is coming from stockpiles gained and built during surplus years in the 1980's and 1990's. This stockpile however is being whittled away very quickly due to these on-going deficits.

Global Annual Silver Net Balance 2004 to 2017



Source: GFMS, Thomson Reuters / The Silver Institute

In fact, global silver scrap (re-cycled) supply fell to its lowest level in 26 years. World silver recycling in 2017 has dropped by nearly 50% since its peak in 2011. According to the 2018 World Silver Survey, global silver scrap supply declined to 138 million oz (Moz) compared to 261 Moz in 2011. The long-term unsustainability of lower silver prices is producing a huge impact.

TABLE 1 - WORLD SILVER SUPPLY AND DEMAND

(million ounces)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Supply										
Mine Production	684.7	717.3	753.0	758.3	791.7	823.3	867.8	895.1	888.6	852.1
Net Government Sales	30.5	15.6	44.2	12.0	7.4	7.9	-	-	-	-
Scrap	200.7	200.6	227.2	261.2	253.8	191.0	165.4	141.1	139.7	138.1
Net Hedging Supply	-8.7	-17.4	50.4	12.2	-47.1	-34.8	16.8	7.8	-18.9	1.4
Total Supply	907.2	916.1	1,074.8	1,043.8	1,005.8	987.4	1,050.0	1,044.0	1,009.4	991.6
Demand										
Jewelry	177.6	176.9	190.0	191.5	187.4	220.6	226.4	226.7	205.0	209.1
Coins & Bars	197.9	94.9	150.3	212.7	159.7	241.1	234.1	292.1	207.8	151.1
Silverware	58.4	53.2	51.9	47.5	43.8	59.3	61.2	63.2	52.4	58.4
Industrial Fabrication	641.9	528.2	633.8	661.5	600.1	604.6	596.3	583.2	576.8	599.0
...of which Electrical & Electronics	271.7	227.4	301.2	290.8	266.7	266.0	263.9	246.0	233.9	242.9
...of which Brazing Alloys & Solders	61.8	53.8	61.2	63.2	61.1	63.7	66.7	61.5	55.3	57.5
...of which Photography	98.2	76.4	67.5	61.2	54.2	50.5	48.5	46.6	45.2	44.0
...of which Photovoltaic*	-	-	-	75.8	58.2	55.9	51.8	59.2	79.3	94.1
...of which Ethylene Oxide	7.4	4.8	8.7	6.2	4.7	7.7	5.0	10.2	10.2	6.9
...of which Other Industrial*	202.8	165.8	195.2	164.2	155.1	160.8	160.6	159.8	152.9	153.7
Physical Demand	1,075.8	853.1	1,026.0	1,113.1	990.9	1,125.6	1,118.0	1,165.3	1,041.9	1,017.6
Physical Surplus/Deficit	-168.6	63.0	48.9	-69.4	14.9	-138.2	-68.0	-121.3	-32.5	-26.0
ETP Inventory Build	101.3	156.9	129.5	-24.0	55.3	2.5	1.4	-17.8	49.8	2.4
Exchange Inventory Build	-7.1	-15.3	-7.4	12.2	62.2	8.8	-5.3	12.6	79.8	6.8
Net Balance	-262.8	-78.6	-73.2	-57.5	-102.6	-149.5	-64.0	-116.1	-162.1	-35.2
Silver Price, \$ per oz.	14.99	14.67	20.19	35.12	31.15	23.79	19.08	15.68	17.14	17.05

*Photovoltaic demand included in "Other Industrial" prior to 2011

© GFMS, Thomson Reuters / The Silver Institute

Global mine production in 2017 shrunk again YoY by over **-4%** from 2016 levels, while global industrial demand grew by **+4%**, and even with the huge fall in investment demand in 2017 for silver the actual net balance in supply / demand was again a deficit (- 35 Moz),

As you can clearly see in the data above global deficits are on-going.

Supply deficits simply cannot be sustained, at some point there is going to be a violent price reaction higher. When investment demand picks up strongly again the global deficit will expand greatly thus further putting incredible strains on price of silver higher.

Investment Dynamic 3

Peak Silver Production: Global mine production of silver has now experienced 3 consecutive years of falls, miners are faced with considerable headwinds with the falling price of the metal, huge and increasing costs of production, falling ore grades and a lack of silver exploration over the last 30 years has caused silver production to reach a peak. Forecasts clearly point to increased falls in production in the years ahead.

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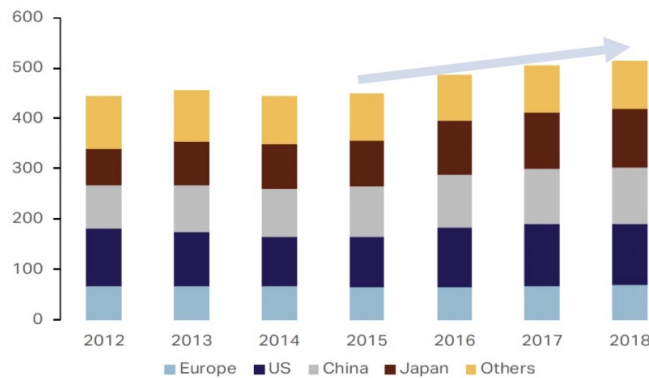
The Perfect Storm - Growing global demand, annual production deficits and now falling mine production is pointing to a perfect storm, which can only end one way, a resolution in higher prices.

Investment Dynamic 4

Rising Industrial Demand:

Growth has been widespread across key industrial applications in 2017, a trend that is projected to continue this year by Metals Focus. Looking at photovoltaic (PV), the global market achieved further robust growth in 2017, with newly installed capacity of around 100GW. This represented a 27% y/y rise, bringing cumulative installations to over 400GW by end of 2017. Obviously, such a strong increase of demand in PV applications translated directly into higher silver consumption.

Silver Industrial Demand Moz, with 2018 Forecast



Investment Dynamic 5

Banks Long Silver Futures For First Time in 24-Years:

One of the most dramatic turns is the fact that the bullion banks are now long the silver market for the very first time in the past 24 years of Comex futures markets data.

Hedge funds and speculators have lead the charge on shorting silver and are recording historical short positions. This simply never ends well historically for the speculators; the banks are in the stronger position with enormous power to leverage into positions (extreme low margin requirements) to simply overwhelm the speculators.

It seems they are now preparing for an historic short squeeze (higher) in silver.



Investment Dynamic 6

Price Ratio Against Real Global Production Ratio:

Market dynamics for silver are building dramatically with significant price distortions becoming quite prevalent, for example looking at physical global mine production in year 2016 ¹ the ratio of silver to gold was just above 8 to 1, for every 1 ounce of gold mined and produced there are only 8.5 ounces of silver produced, thus the physical Gold Silver Ratio (GSR) is naturally **8.5 to 1**.

As of today, gold is priced over **83 times** greater than silver, a huge disparity indeed and actually an historical marker of investor opportunity. In fact, the average based over the last 226 years has been closer to 48 to 1. Time and again, a price ratio close to or breaking through 80 has preceded a significant rally in silver.

¹ Source: USGS, WGC, GFMS & Thompson Reuters
 (Information: 32,150.75 troy ounce in 1 metric ton)
 Global Silver & Gold Mining Production Ratios For 2016
 Silver : 27,551 metric metric tons (8.5 times gold), Gold : 3,236 metric tons

The question is do these price ratios actually match global production in other metals or is silver a complete anomaly ? Let's look at copper, which silver comes as a by-product totalling 23% of global production.

Global Copper, Silver & Gold Mining Production Ratios For 2016:

- Copper = 19,400,000 metric tons (**704** times silver)
- Silver = 27,551 metric metric tons (**8.5** times gold)
- Gold = 3,236 metric tons (Copper / Gold mining ratio is **5,995** times)

Source : USGS, WGC, GFMS & Thompson Reuters

As we can see, the world produces over **5,995 times** more copper than gold, so the ratio is simply 5,995 to 1.

Prices as of 19th October 2018: **Gold** (\$ 1,226.48) / **Copper** 0.1898 = **6,683 to 1** price ratio

Note : The price of copper as today 19th October 2018 is 2.7680 US\$ per lb, to covert this to grams you have to divide by 453.5923 (Avoir-Pounds) and then multiply by 31.1035 to derive the price per oz which is 0.1898.

So silver presently is priced at just **1/10th** of its real actual global production ratio while copper is just **-10%** below its production ratio.

Silver would have to rise by **10x times or +1,000%** to trade as its real production ratio !

A Serious Price Anomaly Exists - As demonstrated silver is priced at extremes, well below is production levels, a long-term buying opportunity indeed.

Investment Dynamic 7

Silver Inflation Last 40 Years Versus Everything Else:

Inflation or more correctly referred to as the fall in purchasing power of our paper currency units (US\$, £ or € etc..) of the last 40 years has been dramatic to say the least, let us compare what a list of commodities have done since the 1980 price peaks, which effectively was the end of an extreme inflation lead period of the 1970's?

So using the peak prices during 1980 to today

Gold	+45 % (from the peak price of gold of 1980 to today)
Copper	+210%
Crude Oil	+88%
Palladium	+338%
USA Consumer Price Index (CPI)	+292%
Silver	-71%

Now I could go on but I believe you get the picture, silver has not even broken its 1980 price high seen 38 years ago, while US inflation has exploded near 300%.

It really is not often you find such an undervalued asset, with no effective price downside against enormous prospective upside.


Investment Dynamic 8

Global Economic Debt Crisis of 2018 to ...?: The financial crisis of 2008-2009 was no ordinary crisis. It brought the whole

Western financial and banking system to its knees with widespread repercussions and severe economic pain. This crisis was built upon massive financial leverage and extreme debt growth, it may have been reasonable to expect that policy makers would drive down these excesses and building a strong foundation from which to build from, and hence today we could now have a system in place to prevent another debacle. However this premise is absolutely laughable at best and at worst downright criminal in regards to policy maker's fiduciary duties.

The lessons that should have been learnt and passed into real policy is that a massive build-up of debt and leverage tends to end in a serious financial crisis triggered by liquidity events that interferes in the way of rolling over ever growing amounts of debt eventually bringing down the whole house-of-cards. But the world lead by global central bankers, direct government interference and corporate largesse has in the last 10 years only implemented a wholesale binge in debt growth and leverage far morphing the extremes seen in 2008 and in fact the overall global debt expansion is the largest ever recorded in history as a percentage of global GDP. This will end very badly!

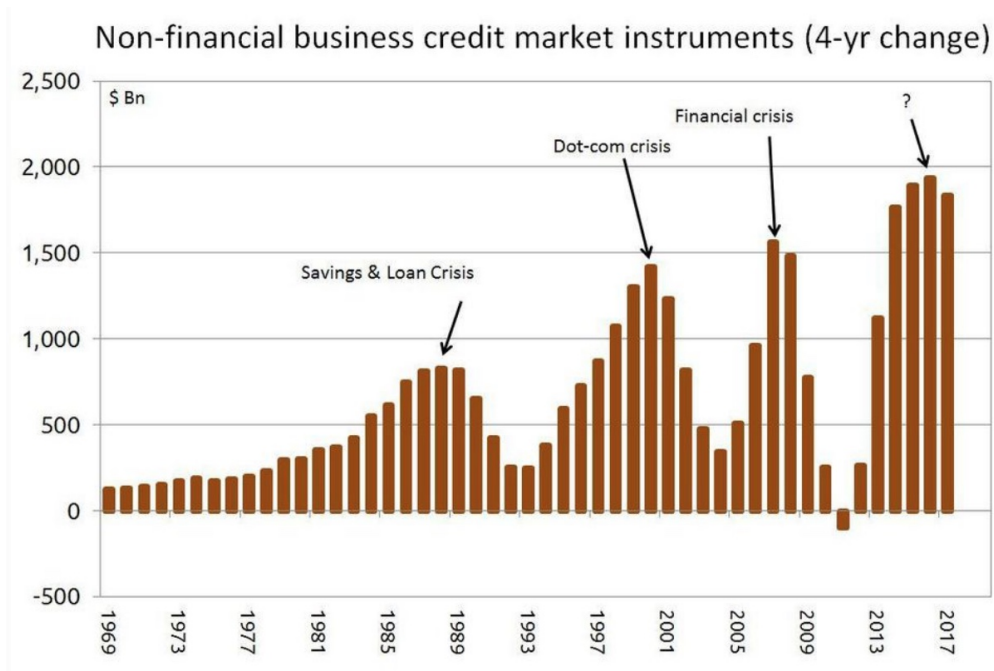
Lessons apparently not learned which can all be traced to out-of-control credit growth and leverage events, to name just a few.....

- **Tulip Mania of the 1630's** that ended up in a crash was fuelled by a huge increase in leverage created by tulip "futures."
- **The Mississippi Bubble of 1718-1720** - a financial scheme alongside extreme speculation and debt growth in 18th-century France and mirrored in the UK that triggered a speculative frenzy and ended in total financial collapse.
- **1873 to 1880 and into 1896** The Long Depression was a worldwide price and economic recession, felt predominately in Western Europe and North America
- **1930's Great Depression** caused by a speculative mania, which was founded on extreme financial leverage built in the 1920's culminating in the stock market crash of 1929.
- **Latin American Debt Crisis culminating in 1982**, driven by foreign debt growth, which exceeded their actual earning power.
- **USA 1990 Savings & Loan crisis.**
- **1990 Japan Crash** caused by extreme asset bubble with a tripling of land and stock prices fuelled by debt expansion leading into near 3 decades of deflation.
- **1997 Asian Financial Crisis** can all be traced to out-of-control credit growth and borrowing in Japanese Yen (the carry trade) to the fund the speculative expansion.
- **2000 NASDAQ stock market crash**, speculative mania.
- **2007-2009 Global Financial Crisis** had at its core an exponential build in leverage built around mortgage derivatives.
- **2018 - ? Greatest of All Global Debt Crisis**

In the aftermath of the 2008 crisis, global authorities, central banks and governments have printed a river of red ink to extract the world from that particular crisis, not to re-balance the system and eradicate the leverage but to re-invigorate global growth by oceans of new printed cash liquidity and zero per cent interest rates.

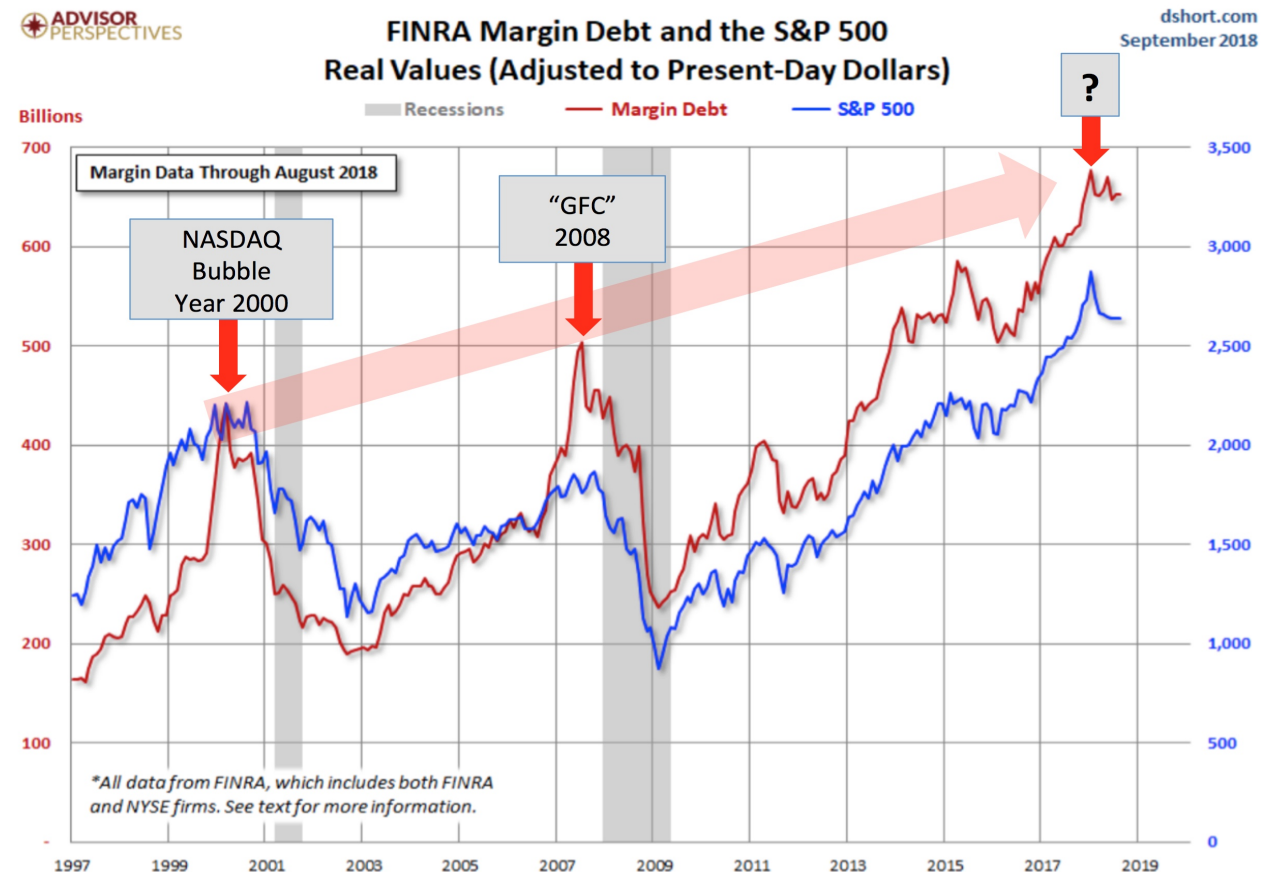
Corporations globally took advantage of interest rates at all-time lows, borrowing as much as they possibly could in the last 10 years, many of which rather than new investment instead used the proceeds to buy back their own stocks to push share prices higher and in turn driving stock markets higher.

Rapid growth of corporate bonds (debt) has peaked out at the onset of previous crises.



The present amounts are staggering. According to a report by the McKinsey Global Institute, corporate bonds around the world issued by non-financial companies have almost tripled since 2007 from \$4.7 TN to \$11.7TN. Of particular concern is that the largest credit category of overall corporate debt grew the fastest is BBB, sitting just above the edge of “junk.”

Now without question, cheap credit can have a direct stimulative influence on an economy with moderate debt levels, a tsunami of cheap credit (as we have seen since 2008) has profound effects. But once an economy has reached total debt saturation, where new debt fails to produce new growth, **the cheap credit trick no longer works to stimulate the economy.** At this point the repercussions of un-serviceable mountains of debt and enormous economic distortions eventually leads to a collapse.



Conclusion of Silver Opportunity: The number one priority from an investor's point of view is to recognise the downside negative prospects of an investment trade against the overall upside re-valuation outlook, staying away from emotion and researching the global picture and how this could possibly change the dynamics of said investment, while acceptance of the time frame involved also needs to be understood.

I have demonstrated an outstanding investment prospectus; rarely do such clear opportunities present themselves. We have a clear cost of production problem were in effect mining silver at today's levels are unsustainable, on the back of this cost dynamic we have global falls in mine production alongside a collapse of re-cycled silver (due to cost in-effectiveness), alongside all of this a growing industrial demand due to numerous new usages of this unique and precious metal and hence another reported year of a global supply deficit for 2018.

All while the global economy is heading like an uncontrollable locomotive with no brakes towards the cliff edge in the greatest economic debt crisis in history (due to all time historical debt records across every sector).

Precious metals are a go too investment class in severe economic crisis and this fact is not even considered debateable, what makes a better investment than silver considering all of the above?



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