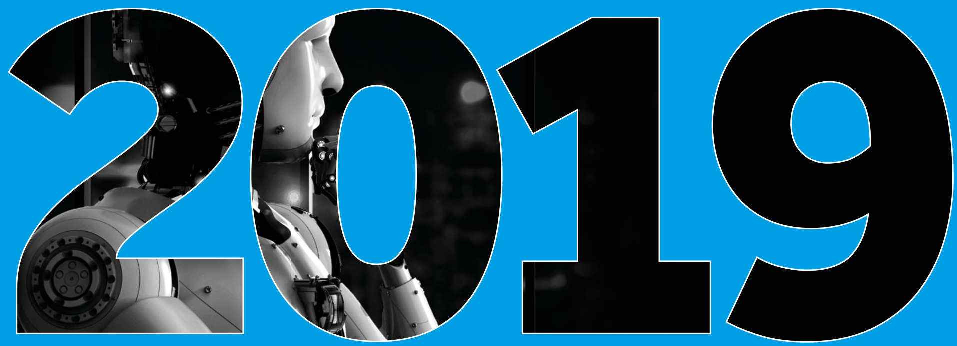
The Ghost In The Machine

MAY/JUNE 2019

ADM Investor Services International Limited

EDITORS NOTE

MAY/JUNE



Trade and debt tensions, grains and sugar under pressure, automation, Regulation.

Welcome to the June 2019 edition of The Ghost In The Machine, which covers a broad spectrum of topics ranging from the outlook for commodity and oil markets, along with key economic, geopolitical and national themes, and indeed the impact of automation and digitalisation.

Grains and softs have had a torrid time over the past 12 to 18 months as 'carry out' surpluses and little sign of any material cuts in output. Though, the US flooding impact on planting and the WTO challenge against India's subsidies and incentives are potentially game changers – we examine the evidence. There is also a look at how hedging activity in oil and other commodities has a lot more to consider in terms of risks than just price volatility.

Transport and distribution services are a critical component of most commodity business, and the advent of driverless trucks will have a major impact, as will automation in many sectors. Regulation has become a major business consideration for all financial markets, but also in football, and some of the similarities between the two are quite striking.

Trade tensions and politics have become a major influence on investor sentiment and views on the economic outlook, none more so than the US China bilateral trade relationship and the seemingly perennial challenge of the US 'debt ceiling'. We take a look at antecedents and prospects for both in coming months. Advocates for increasing government spending to give growth in the developed world a boost are becoming ever more vociferous, and frequently cite the work of John Maynard Keynes in their rationale, but what were the key aspects of Keynesianism, above all the constrictions that he outlined?

THE GHOST IN THE MACHINE

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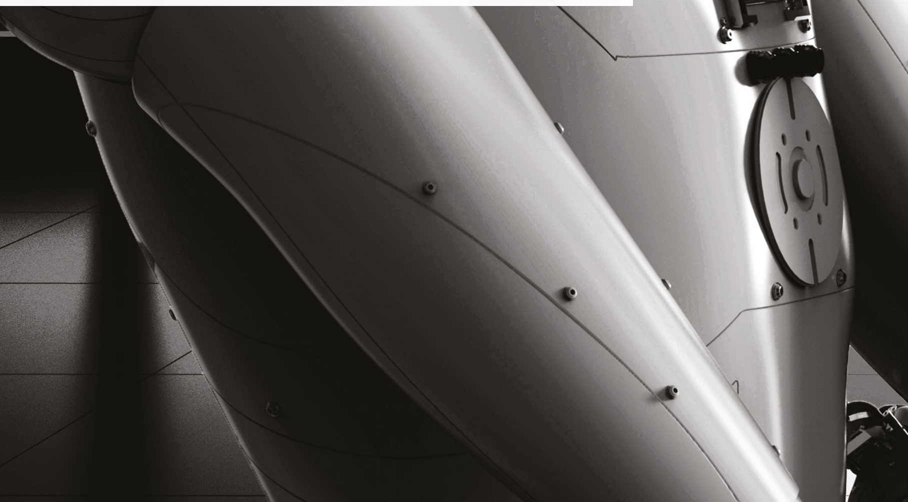

AUTOMATION NATION!

Some jobs will be gone... but don't blame China!

It seems strange to me... that when researching this article, every piece I saw on autonomy in truck driving used an image of a truck as the main picture (obviously)...but each had a cab! Why? Why would you need a cab in a truck, tractor... whatever...when the whole point's about not needing a human component? I can immediately think of two examples of autonomous driving you could use as images. The first are the automated combine harvesters and tractors in Jonathan and Christopher Nolan's excellent film 'Interstellar'. The second are the futuristic delivery trucks in the film 'I Robot' starring Will Smith. Both in the future you'd think...maybe? I do think the Nolan's film has the advantage of not being CGI in their scenes. Anyway, what I'd specifically like to look at is the expansion of automation in delivery systems of bulk goods via road – a.k.a. trucking!

If we take the US as an example, the most common job by State in 29 of the 50 States is variously described as 'Truck, Delivery and Tractor Drivers'[1]. In all, there are about 3.5 million truck drivers in the US plus another 5.2 million involved in ancillary support to the trucking industry. That's about one in fifteen of the total workforce – a huge number of jobs (source: American Trucking Association). Yet this industry is facing some serious issues even before automation. It's short about 51,000 drivers which may grow to about 175,000 by 2026. The average age of a driver is 55 years[2] ...not a young man's game. Additionally, many of those drivers may not have even graduated high school, so it's not attractive in that sense as well...and why would you join an industry that may not be there within 10 years?

1 Source: Freightwaves
2 Source: BLS

"...THERE ARE ABOUT 3.5 MILLION TRUCK DRIVERS IN THE US PLUS ANOTHER 5.2 MILLION INVOLVED IN ANCILLARY SUPPORT TO THE TRUCKING INDUSTRY."

"...A JOB LESS LIKELY TO BE AUTOMATED WOULD REQUIRE 'A SERIES OF NON-ROUTINE TASKS THAT REQUIRE SOCIAL INTELLIGENCE, COMPLEX CRITICAL THINKING AND CREATIVE PROBLEM SOLVING.'."

Now...along comes automation. This is ideal for this industry because of the inefficiencies. As much as 20% of trucks run empty loads. Truck drivers may have a typical waiting time of 2 hours with 63% reporting 3 or more hours. Broking these shipments prior to shipping can additionally take up another 2 – 3 hours and add up to 15 – 18% of the freight cost[3].

All of this can accelerate the move to automation, with the advance of robotics, AI and 5G mobile networks. Arguably, 5G may make the most impact, as one commentator put it 'It's like going from Earth to Mars...it's not a faster world...it's a different world.'. I could now go into a whole piece on 5G and its impact and the influence of China...but that would require a whole article of its own. Rather, I'd say it will make the world we live in completely different from the one we know now.

Going back to automation, an Oxford study some while ago suggested that half the jobs in the US would be at risk. However, it's more complicated than that simple headline. We've all benefited from major changes from such things as the Industrial Revolution and mass production that have made goods cheaper, jobs easier and safer. Yet there have been losses...and in this it is very much a question of semantics. Specifically – many tasks have disappeared though not all jobs. An example of this was the introduction of ATMs in the 1980's which seemed to threaten bank tellers. However, there has been a moderate increase in bank teller jobs from 1980 – 2010[4] as they were reassigned to more sales and other customer related tasks. An even bigger example would be how in the 1900's some 40% of jobs in the US were in agriculture whereas in 2000's there were only 2%. Where did those 38% go. Well... they went into jobs that did not even exist in 1900...IT, healthcare, software, mobile devices, etc...[5].

Will the transition be even...no! New jobs may not pay as much. The trucking industry is not readily re-trainable into IT for example. Oh...and did I mention the average age is 55? It will not be easy – but it could be helped by funding for suitable retraining programmes, some sort of wage cushion, insurance and perhaps tax credits...but all of this costs money. Where would you get this from? Let's look at what the trucking industry, the major beneficiary of such automation, can propose. By the way, if you think this is in the future...forget it! Automation of trucking is already here and on a huge scale. Vale in Brazil, the world's largest iron ore miner, has been running automated 240 ton mining trucks from the mining front to processing since 2018 at its big Brucutu mine in Minas Gerais (yes...that mine!) and expected to automate its whole fleet by...basically...now! Nor was it the first. In addition to the expected savings in manpower they found unexpected cost savings of 15% in equipment lifespan and 10% savings in fuel and maintenance...and the trucks drove faster! Some social input here perhaps?

So what ought the truck drivers and perhaps all of us, tell their/our children to look for in the bright future of automation? Well, journalist Farai Chideya has given this some thought and suggested looking for an 'Episodic Career'. When you embark into the world of work, don't look for the one job you want to do...look for the five!

Finally, here's a short list of things that will happen and what 'to do...'. Automation will not stop, jobs will be lost, help those who do lose, prepare the next generation and prepare more flexible career plans. Furthermore, John Oliver, the US based UK social commentator when discussing this wisely suggested...a job less likely to be automated would require 'A series of non-routine tasks that require social intelligence, complex critical thinking and creative problem solving.'. I wonder how many of us can say our career or job fulfils some or all of those points. Oddly, both in 'Interstellar' and 'I Robot' the chief characters did just that.

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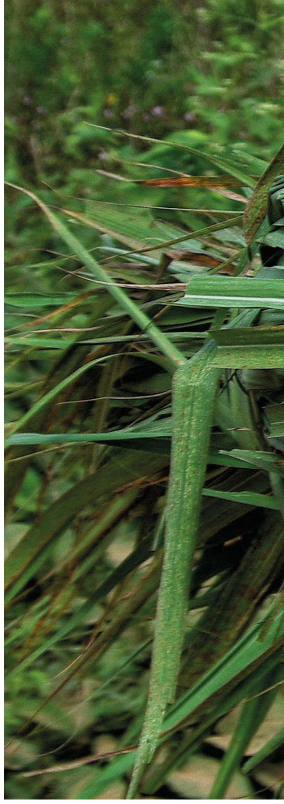
3 Source: Transfix
4 Source: Besson
5 Source: David Autor, MIT



INDIA'S SUGAR DILEMMA

The Indian government's dilemma on supporting their farmers while adhering to the rules of the World Trade Organisation.

There has been a seismic shift in global sugar production over the past season. Brazil, for so long the world's largest sugar producer has been toppled by India. In truth, India has been gearing up to take over as top dog for several years. They are already the largest consumer of sugar in the world and with about 30 million cane farmers; sugar is a very important economic and political commodity.

While sugar consumption across Europe and the US has been hit by health concerns, it has continued to solidly increase across Asia. Whether by design or accident, India being strategically placed geographically to take advantage of cheaper freight rates, has seen its market share increase to the detriment of the likes of Brazil. Of course, it is much easier to take market share if, firstly, prices are low and secondly you give support to your farmers or exporters, or both.

The Indian government cannot be directly held responsible for the current low world prices but their support of their farmers and mills with incentives and price supporting measures have not only exacerbated the over-production problem but has also exercised the wroth of other producers. Brazil and Australia have both requested the World Trade Organisation (WTO) formally initiates a dispute consultation against India. Thailand, the EU, Costa Rica and Guatemala have now requested to be part of the dispute consultation.

So what caused this collective cry of 'foul' from the sugar producer fraternity? In late September last year, the Indian government approved incentives to encourage (force) mills to export at least 5 million tonnes. These incentives included a transport subsidy of up to about $41 per tonne depending on distance from port. Additionally, the cabinet approved raising the price the government directly pays to cane farmers to about $1.90 tonne for the 2018/19 season. Also in September the minimum selling price of sugar was set at around $42 per 100kg. In early March the government announced soft loans to sugar mills to help clear cane tax dues arrears. They also increased the minimum selling price to just over $45 per 100kg.

> *"FROM A GOVERNMENT PERSPECTIVE THERE IS ONLY ONE THING WORSE THAN PRODUCING TOO MUCH SUGAR AND THAT IS NOT PRODUCING ENOUGH."*

While it is understandable that other producers should be angry enough to refer India to the WTO some sympathy should be given to the Indian government. They are somewhat caught between a rock and a hard place. There are probably around 200 million people in India that directly or indirectly benefit from the sugar industry. It is impossible for the government to control production, especially as sugar remains one of the most political of commodities. Not only are there 30 million cane farmers but also over 600 sugar mills. From a government perspective there is only one thing worse than producing too much sugar and that is not producing enough. Famine is still a dreadful memory for many. In 1972 over 25 million people needed help when Maharashtra was hit by a huge drought.

The government had little alternative than to offer incentives. Undoubtedly politics was the main driver but, longer term; if nothing had been done the whole industry would have suffered severe financial damage to the extent that production could completely collapse. This could not be countenanced by the government.

The likes of Brazil and Australia realise that their complaint to the WTO will not result in any quick resolution of the issue. Indeed they probably do not expect any change to the current incentives scheme. Nevertheless, they need to be seen to making the complaint on behalf of their growers and refiners. They also perhaps hope that the Indian government may think twice before approving incentives in the future.

Many are of the opinion that India will look after their own before bowing to any imposed disciplines by the WTO. Of course some would argue that the majority of sugar producing countries are awash with tariffs, quotas, subsidies, incentives and soft loans and it is purely a case of 'the pot calling the kettle black' in condemning India's incentives. The likes of China, Pakistan, Russia, the EU and the USA support their home sugar industry with quotas and import and export controls. Some of these are allowed under the WTO but some stray very close to being disingenuous.

As mentioned above, for the Indian government not to support their farmers and mills could mean a catastrophic dive in production. The flipside is that incentives will encourage their farmers to continue to grow cane so India will continue to make more sugar than they require. The current incentives are likely to be continued and might even be improved. Chatter is that Indian sugar production will drop next season but is still likely to remain well above domestic demand. There are plans to use cane to increase ethanol production, but this is likely to take several years to have any significant impact. So, unless the monsoon fails, the Indian government needs to keep both the home industry and the WTO happy. A tricky dilemma.

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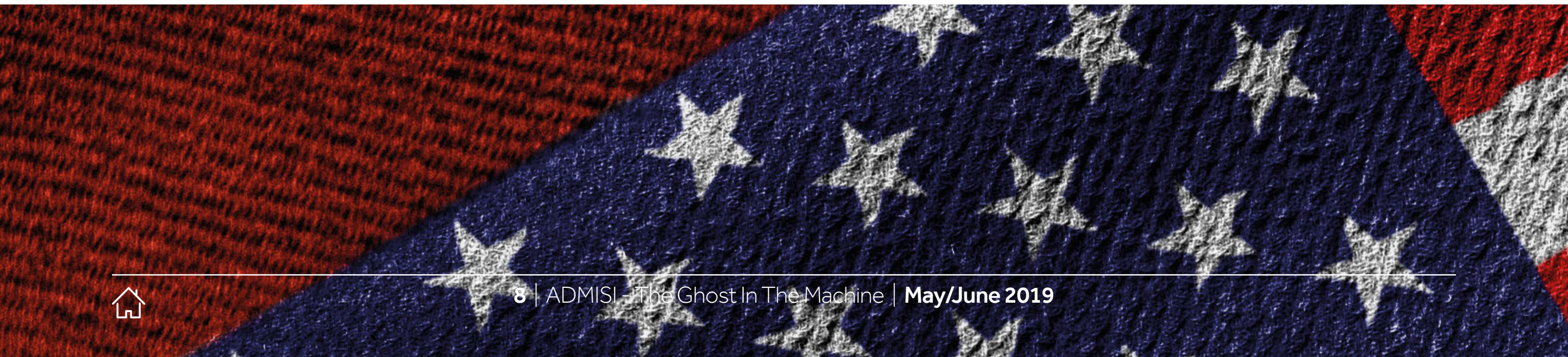
THIS TIME IT'S DIFFERENT…. OH REALLY?

The phrase 'this time it's different' is one that is widely disparaged in financial markets, and with good reason. All too often 'this time it's different' is associated with the mindless 'smile and dial' positivism that has been the bane of financial markets even in their infancy, and all too often the accompanying 'irrational exuberance' turns to 'deep visceral fear', as former Fed chairman Alan Greenspan once articulated.

Rest assured this short piece is not about how another financial market phenomenon is set to last forever. It is rather that the world is going through fundamental change, economically and politically, and there really is no going back to some pre-Global Financial Crisis and/or pre-Trump and populism modus operandi, the nostalgia for which is a case of viewing the past through heavily rose tinted glasses. While Mr Trump would doubtless like to lay claim to being one of the, if not the primary driver of this change, it is rather more the case that he has in effect fast tracked a process of change that has been under way for some time to an end game, at the centre of which is what we now have to call a US China 'trade war'. No one 'wins' a trade war, in general they end because the destructive forces that they unleash become intolerable. One side may consider that it has gained the upper hand, but the victory is so Pyrrhic that it is in truth tantamount to defeat.

The latest developments in US/China trade relations confirm that this is now a battle for leadership of the world in political and economic terms. It is a 'Thucydides trap' and the odds do favour China as the winner in the longer run, and not only due to historical precedent of the old empire generally failing, but above all as the locus of the world's economic activity shifts away from Europe and North America above all due to demographics. However the more immediate question is how this trade war will play out, above all in terms of the fall-out from it for the global economy, and it is also worth taking a moment to consider how the world has arrived at this point.

China's rise to become one of the two major economic powers is generally attributed to Deng XiaoPing's reforms, which indubitably contributed to its rapid expansion over the past 30 years. But the broader global historical context needs to be remembered. The 'Cold War' as we know was a case of two starkly different doctrines pitted against each other, with both deploying Armageddon as the ultimate point of defence, and sustaining both a high level of defence related spending, and keeping a good deal of technological developments under the aegis of national security institutions. In tandem these served to constrain government expenditure on other parts of national economies, and stifled technological innovation. As is well documented the 'peace dividend' as a result of the end of the Cold War was enormous, and even if there was a lot of wastage, it certainly helped to fuel the rapid evolution of the 'tech' sector, and above all globalization of manufacturing production. But the counterfactual question which is rarely posed is: whether Deng XiaoPing's reforms would have delivered the same outcome for China's economy, if the Cold War had lasted another ten or even twenty years?



As was the case with the previous period of globalization at the end of the 19th century, the elation about 'winning' the Cold War started to fade and resistance to the forces globalization started to build, above all due to the pendulum swinging sharply away from labour to capital, in effect ripping up the post-World War II 'social contract'. Unsurprisingly the swing to capital also saw an injudicious liberalization of banking and financial markets, which it was argued would foster innovation in these sectors, but just as in 1907, actually resulted in a rapid build-up of financial excesses, that came crashing down during the Global Financial Crisis ("GFC"). Fortunately the similarity with the early 20th century stopped there, as the popular memory of the enormous devastation and suffering as a result of the two World Wars remained very much alive, even if it now appears to be fading.

However the forces of the 'technological' or 'fourth industrial' revolution were already deeply embedded in the world economy, in terms of innovation, as well as the mobility of labour and capital. Unfortunately the titanic efforts of central banks and politicians to ensure that the extant global financial system did not collapse also served to exacerbate the already rising tide of inequality, which the political classes were largely unwilling to address, or at best pay lip service to, due to a fear of upsetting the vested interests of capital, which had an ever increasing grip as the primary source of party political funding. In turn, this served to foment the sort of populism for which Trump is the standard bearer, above all given an understandable view that the established 'popular' political parties seem unable to take real action to address real social and economic issues, and instead only appear interested in preserving their political careers.

There is of course considerable irony in the fact that the purveyors of populism, whether in the USA, UK or continental Europe could by and large not be more 'establishment' even if they tried. These are definitely not Bolsheviks, though perhaps they should worry about a return of bolshevism, above all if the world were to suffer another sharp economic slowdown, and far beyond the borders of mother Russia.

But the fact remains that the USA and China are now in a trade war. On one level Trump's trade crusades are very much valid, trade agreements are in general a result of the way that the world economy functions at the time of negotiation. They de facto require either a time defined novation or a sunset clause, effectively acknowledging that as the world economy evolves, such agreements need to be adapted to the changing modus operandi. In practice, the titanic efforts and expenditure of political capital that are required to reach such agreements militate against such clauses, but that does not obviate the need for them. The shining examples for how the ensuing stasis, if reforms are not enacted, can paralyse or hobble economies is with no shadow of a doubt the Eurozone and the EU.

The biggest concern is that with the trade war increasingly focused on technology, security and intellectual property rights, along with the threats to an already beleaguered auto sector, the world economy suffers a much sharper loss of traction, which neither monetary or fiscal policies in many countries are in a fit condition to effectively and meaningfully address. Indeed such a slowdown may well expose the monetary policies that have been deployed since the GFC as having been little more than a salve, to cover up the cracks in the financial system, and the woeful ineptitude of the political classes. The risk would, in such a situation, be testament to one of the oldest tenets that when all economic solutions have failed, there is always a military alternative. But that is not the central scenario, indeed there is still very good reason to believe that it is in both China's and the USA's interest to return to the negotiating table and fashion an alternative arrangement. The only option not on the table is go back to the pre-existing operating parameters.

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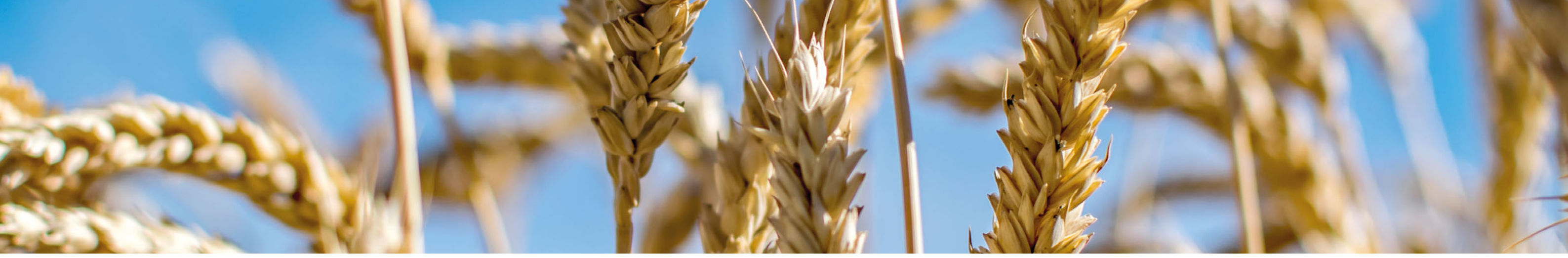


A TALE OF 2 MARKETS

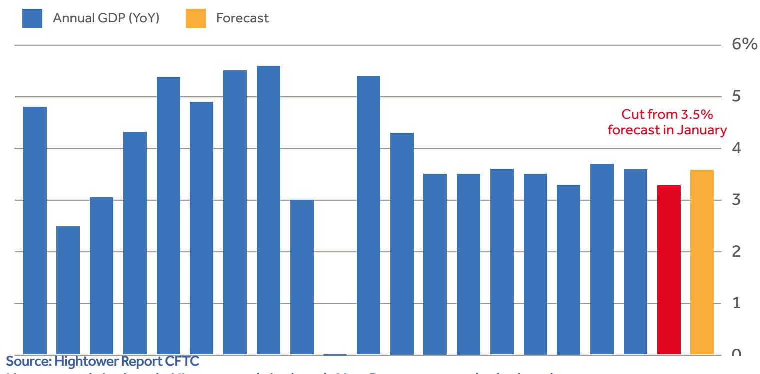
Before the United States Department of Agriculture's (USDA) May 10 Crop Report, managed funds had a near record short position in grains. With total open interest also almost a record.

On May 10, the USDA increased US 2018/19 soybean carryout by 100 mil bu to 995. This is due to lower exports. This was bearish. USDA estimated US 2019 soybean acres near 84.6 million versus 89.2 last year. This would suggest a crop of 4,150. USDA increased world 2018/19 soybean end stocks to 113.1 mmt. USDA raised world crop 2 mmt, lowered crush 2 mmt and exports 4 mmt. USDA dropped China imports 2 mmt to 86.0. USDA estimated world 2019/20 soybean end stocks at 113.0. 2019/20 crop is estimated near 355.6 mmt vs 362.1 for this year.

The USDA also increased US 2019/20 US corn carryout more than expected. USDA increased US 2018/19 corn carryout 60 mil bu to 2,095. This is due to lower ethanol use. USDA estimated US 2019 corn acres near 92.8 million versus 89.1 last year. This would suggest a crop of 15,030. This suggests a US 2019/20 corn carryout near 2,485. This was bearish. USDA increased world 2018/19 corn end stocks to 326.0 mmt. USDA estimated world 2019/20 corn end stocks at 314.7. This was higher than expected.

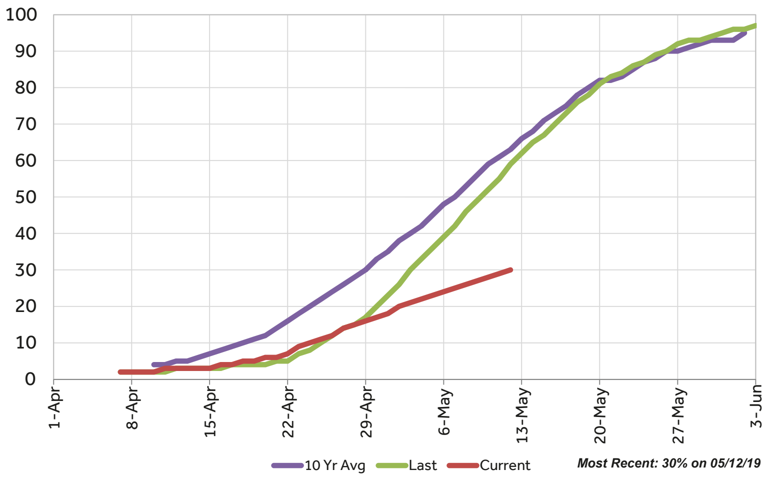
The USDA left world 2018/19 wheat end stocks near 275.0 mmt. USDA estimated world 2019/20 wheat end stocks at 293.0. This was higher than expected. 2019/20 wheat is estimated near 777.5 mmt vs 731.5 this year. USDA also estimated the US 2019 all wheat crop near 1,897 mil bu versus 1,884 last year. USDA increased US 2018/19 wheat carryout 40 mil bu to 1,127. This is due to lower feed and export use. USDAestimated US 2019 wheat acres near 45.8 million versus 47.8 last year.

Figure 1: CBOT Grains – COT – Disaggregated Futures and Options Managed Money – Net Positions - Number of Contracts



Source: Hightower Report CFTC
Max: 672,042 (8/21/2012) -Min: -538,727 (4/30/2019) -Most Recent: -525,026 (05/07/2019)

Chart 2: US Corn Percent Planted - Select States



Source: Hightower Report USDA data

On May 13, USDA estimated US corn and soybean planting pace is well behind normal which is helping prices. The key question now is, will farmers who can plant corn add to intended acres given that corn prices could be better than soybean? US corn yield could drop 3-4 bpa from USDA's May estimates and farmers in the wet area could be unable to plant corn. Some feel US corn acres could drop 3-4 million from intentions. Lower yield and acres could drop US 2019 corn crop 1.0 billion bushels.

Traders will now have to decide what is more important, higher world 2019/20 supplies or US weather and the potential for a lower corn crop.

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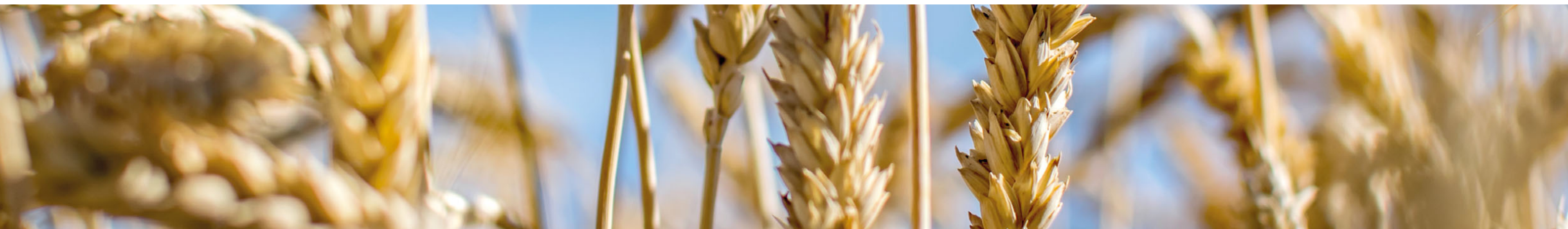


REGULATION, STOCK INDICES AND… FOOTBALL!

Capitalisation ranked indices and football leagues have a lot in common. If nothing else participants want to be at the top of both.

However, where the biggest company sits at the top of an index, this is not necessarily the case in a football league; the biggest is not necessarily the best. In the 2016-17 season, Manchester United the 'largest' club in the world lost to all of the three newly promoted clubs.

But there is a similarity between football and financial markets and it has recently reared its menacing head in the guise of regulation. What appeared to be a localised English Premier League misdemeanour now threatens to jeopardise the standard assumption of who spends the most goes highest.

Firstly this year, Chelsea (EnglishPremier League champions in 2014-15 and 2016-17) were found guilty of breaching the financial rules and banned from spending any more money on players. More recently Manchester City, this year and last year's Premier League champions, if found guilty of financial misconduct, face considerable sanctions. The allegations of wrongdoing hit at the centre of financial transactions involving the Abu Dhabi owners themselves. As The Daily Mail reported, 'Leaked emails last November appeared to show how they used direct funding from Abu Dhabi United Group, the investment fund owned by Sheik Mansour to supplement sponsorship deals.

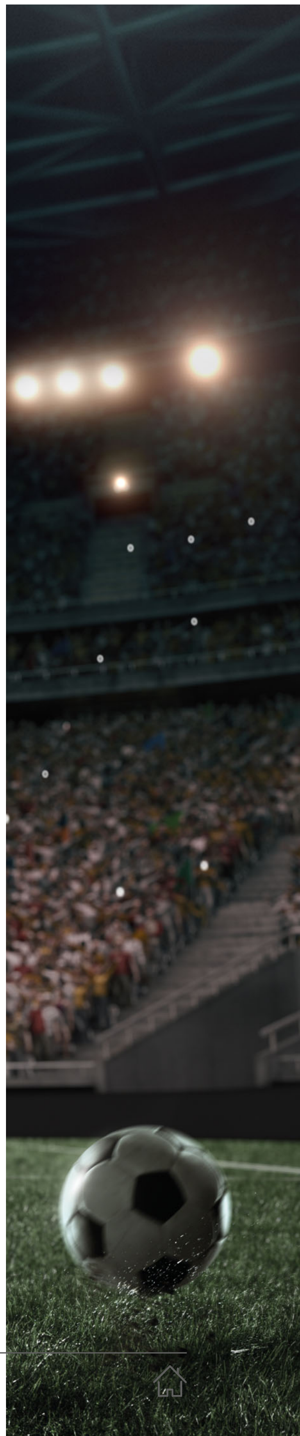
It is claimed the Abu Dhabi United Group, the holding company which owns City, directly paid £59.5m of Etihad's annual sponsorship, with only £8m coming from the airline. UEFA's rules place a strict limit on the cash an owner can inject directly into a club to prevent over-inflation in the football market'

It is highly unlikely that the Abu Dhabi owners will want to stand publicly against UEFA (football's governing body) and fight. Manchester City are an instrument of Abu Dhabi, which bought the club in 2008, and are very much viewed as a soft policy to gain international influence. UEFA are aware that this will not be simply a case of them against a football club, politically this is much bigger.

The punishments are potentially draconian and the precedent has been set. Juventus, the Italian footballing giant, was caught up in 'the Calcio-poli scandal' in 2006. They were demoted to the second division and had two 'Serie A' titles taken away from them. UEFA, as football's regulator, can reasonably claim it has done a good job in recent years in the control of financial excesses. The Premier League the season before this, saw all 20 clubs reporting an operating profit, delivering an aggregate 1.034 billion pounds of profit which was more than double the season before.

Interestingly, while Spain and Germany also feature well with combined operating profits of 437 million euros and 343 million euros respectively, Italy had an operating loss of 26 million euros and France 51 million euros but overall revenue growth and most importantly, club profitability has increased sensibly.

> *"IT IS HIGHLY UNLIKELY THAT THE ABU DHABI OWNERS WILL WANT TO STAND PUBLICLY AGAINST UEFA (FOOTBALL'S GOVERNING BODY) AND FIGHT."*



The two founding tenets of football profitability appear to be buying very expensive players and paying them a lot of money. Premier League salaries amount to around 3 billion euros, paying out over 70% more than Spanish clubs. Premier League broadcasting rights are set to be renewed at a level of more than 1 billion euros higher than any other league, from 2019-2020. Overall the financial position of European football appears healthier than it has ever been, so it is perverse that owners should now be trying to illegally manipulate the situation or can it be assumed that there has been constant rule bending for ages? The Manchester City allegations go back many years and consequently eyebrows get raised on a political basis, at such a pivotal time for British football, begging the question: why with four English clubs taking the four European final places the whistle blowing has been actioned. Regulation never appears to stand independent of politics.

As companies move into indices and gain upward traction, similar things occur in soccer, with the enormous bonus of media rights payments to English premiership teams, those clubs are propelled further away from the following tired peloton of lower division football, who see little of the monetary rewards or media hysteria. The bigger stocks get bigger with indexation flows of money and the bigger clubs in football charge up their own leagues with the increasing share of TV money.

As stocks get chucked out of indices, the investment flows dry up. Unfortunately, similar also happens in football. Bolton Wanderers, one of the founder members of the football league, in May have been relegated to the third tier of English football, owing more than a million pounds to HMRC in taxes and having appointed administrators. Not only do they suffer the ignominy of relegation but they also start next year with a 12 point deduction in their lower league as a punishment for going bust!

The regulation scales of justice can appear unbiased everywhere. Most interestingly, while bashing the beleaguered has been a haven for regulators for many years, UEFA now face the problematic decision of banning one of Europe's richest and most successful clubs out of all European competition and perhaps stripping them of their domestic titles too. If
Manchester City are found guilty, in the punishment we might see the true impartiality and political independence of the sport ....if not, and like much regulation elsewhere, the mantra will hold that the bigger you are the more protection you will get.

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HEDGING - A RISKLESS STRATEGY? NOT REALLY

Although hedging with derivatives can reduce price risk, other risks can arise from this strategy which should not be underestimated.

A hedge is a risk management strategy that consists of reducing potential losses arising from adverse market moves in the price of a specific asset such as a commodity, currency, index or stock. For a firm with physical exposure in a specific asset, the hedging strategy would generally consist of entering into an opposite position using derivatives – a financial product for which the price is "derived" from an underline asset.

For example, an upstream company such as an oil producer is exposed to a drop in crude oil prices. Let's suppose that the oil producer is producing 1 million barrels of crude oil per month and wants to eliminate price risk. It could enter into a perfect hedge by selling a derivative such as future contracts for the equivalent of 1 million barrels per month.

However, the hedge can be defined as perfect only if the price of the derivative is 100% correlated to the initial position (the physical asset). In reality, this is not always the case. Oil producers and any other physical players will usually use benchmark contracts as proxy to hedge their physical exposure. As soon as the correlation between the physical and financial products drops below 100%, the hedge is no longer perfect which leaves the company exposed to basis risk.

Another risk that the company is facing is volume risk. Let's make the assumption that the above oil producer has found a derivative where the price is 100% correlated to the price of the crude oil that it is actually producing – reducing the price and basis risk to zero. One challenge that the oil producer will face is to align the volume of the natural positions (number of barrels produced) and the volume of the hedge (number of futures contracts sold) perfectly in line. Volumes actually produced can be slightly different than the volumes that were forecasted. For example, if the company produces 1.1 million barrels instead of the 1 million that was forecasted and hedged, one hundred thousand barrels will actually remain unhedged. Another challenge arises with the standardisation of the future contracts which are exchange-traded products with pre-defined contract size.

As hedging can be very costly, some companies such as airlines may decide to hedge only a part of their physical exposure leaving them partially exposed to adverse price move. This strategy can end-up being very risky - and in the worst cases can lead to bankruptcy - as fuel usually consists of around one third of airlines costs.

Now, let's assume that the oil producer manages to enter in a perfect hedge by completely eliminating price, basis and volume risk. Does this make its portfolio riskless? In theory yes but in practise no. A decrease of $1 in crude oil prices will be offset by a gain of $1 in the short future positions which will be paid to the oil producer by the Clearing House usually through a broker or a bank. Looking at it that way, the hedge is working perfectly. However, the story is slightly different when crude oil prices are actually going up. If crude oil prices increase by $1, this gain will be cancelled by a $1 loss on the futures positions. From a cash flow point of view, the oil producer will receive a margin call on the day or the following morning. In a perfect world, the oil producer could sell its oil inventory to generate cash and be able to pay the margin call. In practise, this could be more challenging if the oil inventories cannot be sold on time to pay the daily margin call. In other words, the firm needs to be able to have enough cash in hand or able to liquidate its stocks within a day to cover its margin call.

As highlighted in the previous example, liquidity issues are liable to arise when companies hedge illiquid assets which are subject to margin requirements. There are few case studies where companies collapsed or had to be restructured, as they could not pay margin calls as they were unable to liquidate their assets on time. Metallgesellschaft (MG) and Ashanti Goldfields are two of them.

> *"LIQUIDITY ISSUES ARE LIABLE TO ARISE WHEN COMPANIES HEDGE ILLIQUID ASSETS WHICH ARE SUBJECT TO MARGIN REQUIREMENTS."*

In 1993, Metallgesellschaft Refining and Marketing Inc. (MGRM) - a subsidiary of the German conglomerate MG - reported a loss of $1.5 billion by trading oil futures contracts on the New York Mercantile Exchange (NYMEX). A couple of years earlier, MGRM agreed to sell 160 million barrels of oil to customers at a fixed price at regular intervals over a 10-year period. As the company was exposed to a rise in oil prices, it bought futures contracts on NYMEX to hedge its short forwards. This strategy was aimed to hedge price risk but MGRM did not take into consideration liquidity and cash-flow risk. By the end of the third quarter of 1993, MGRM held extremely large positions in both forwards and futures. When oil prices moved against it, the futures positions generated a significant margin call that the company was not able to pay as the forward sales commitments were not generating daily cash flow.

Ashanti Goldfields (AG) is a gold mining company based in Ghana and one of the largest gold producers in the world. In 1999, the firm was hedging around 50% of its gold reserves. On the last week of September 1999, Gold prices jumped after 15 European central banks announced they were curtailing the sale of gold from their official reserve for five years. As a result, AG's derivative hedge book contracted a $450 million loss. As in the previous example, the firm defaulted as it was not able to liquidate enough gold reserves in time to meet its large margin call.

Finally, hedging also increases credit risk, as hedging clients are reliant on not only the operational performance of their broker or bank to credit funds to their account on time, but also that they will not default in entirety, jeopardising their money.

While hedging with derivatives can reduce or eliminate price risk, other risks may arise from this strategy and these could have severe negative impacts if they are not assessed and managed properly.

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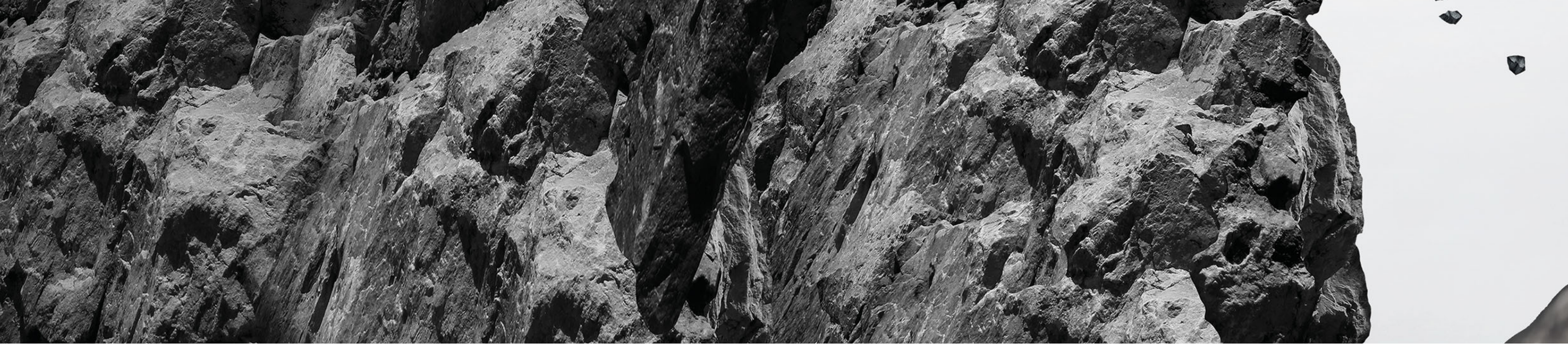


BEAR MARKET AHEAD FOR U.S. STOCK INDEX FUTURES?

It is true that most of the fundamentals are currently bearish for stock index futures. Therefore, how can this bull market continue?

GLOBAL TRADE TENSIONS

Probably the most bearish of the fundamentals now is the global trade situation. The United States - China trade dispute, which has recently taken a turn for the worse, seemingly has been dragging on forever, and fears remain that when a deal is reached the conflict could escalate again if either side suspects the other is not holding up its end.

Also, there are simmering trade issues between the U.S. and the European Union. The E.U. says it is ready to discuss trade with the U.S., but it appears that a later rather than sooner trade agreement is likely. A disagreement over agriculture could derail talks before they even start. The E.U. says agriculture won't be up for discussion, while the U.S. insists it must be part of negotiations.

WORLD ECONOMIC GROWTH

The International Monetary Fund in April cut its outlook for global growth in 2019 to 3.3% from estimates of 3.5% in January and 3.7% in October, warning that trade tensions and declining business confidence were weighing on nearly all countries around the world. This is the third time the IMF has downgraded its outlook in the last six months.

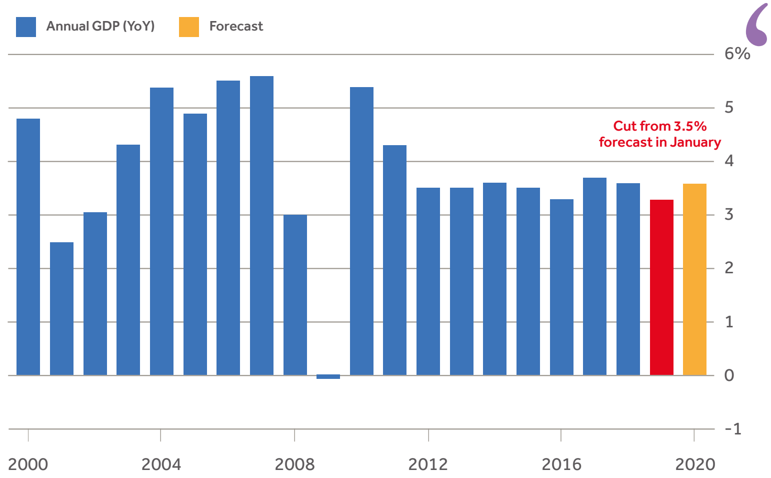
The IMF isn't alone. As a result of weakness in economic data, the European Central Bank slashed its forecast for 2019 gross domestic product growth in the euro zone to 1.1% from a previous estimate of 1.7%. The ECB now sees 2020 growth at 1.6% versus a previous forecast of 1.7%, while the outlook for 2021 was unchanged at 1.5%. In addition, the ECB cut its inflation forecast for 2019 to 1.2% from 1.6%, while 2020 was cut to 1.5% from 1.7% and 2021 was cut to 1.6% from 1.8%.

And in China, officials have ramped up spending, cut reserve ratio requirements and lowered taxes in an attempt to boost a slowing economy.

EARNINGS GROWTH SLOWDOWN

There are fears that the years long expansion in U.S. corporate profits may be coming to an end sooner than investors expected, which some analysts believe is a warning sign for the decade long bull market. Since the start of the year, some of the most visible companies in the U.S. have warned growth is slowing in one segment or another of their businesses.

Chart 1:



Source: International Monetary Fund - Bloomberg

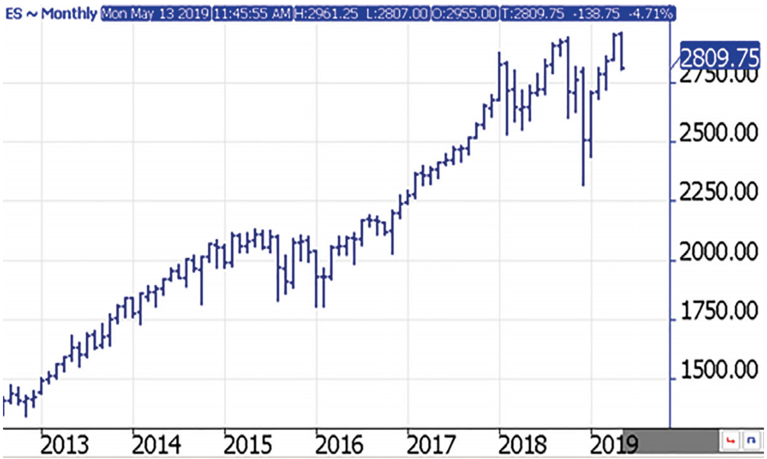
> *"EUROPEAN CENTRAL BANK SLASHED ITS FORECAST FOR 2019 GROSS DOMESTIC PRODUCT GROWTH IN THE EURO ZONE TO 1.1% FROM A PREVIOUS ESTIMATE OF 1.7%."*

GROWING NATIONAL DEBT

Another bearish fundamental is the growing national debt in conjunction with concerns that the government may have used its ammunition for fiscal stimulus on tax cuts and infrastructure spending too early.

Most of the fundamentals are currently bearish and from time to time they can have a serious, but as we have seen over the past 10 years, only a temporary negative impact on the stock index futures. How can stock index futures advance in the face of an onslaught of bearish influences?

Chart 2: S&P 500 Futures - Monthly



Source: Chart from QST

BULLISH INTEREST RATE INFLUENCE DOMINATES ALL OTHERS

Not all the fundamentals are bearish, however. There is one fundamental that quietly sits there, constantly and often without much media fanfare, exerting a steady bullish influence. This fundamental has dominated all the way up from when this bull market first began in March 2009 and it remains with us today. This fundamental ultimately dominated over a myriad of temporary bearish influences that have sprung up in the past 10 years, including political turmoil, banking crises, crude oil price shocks and severe weather related economic downturns. And yes, it will most likely eventually dominate over the current and seemingly insurmountable U.S.-China trade dispute.

This fundamental is the still very accommodative Federal Reserve, in spite of the nine 25 basis point hikes in the fed funds rate to 2.25% - 2.50%, from the Federal Open Market Committee since December 2015.

Also, from an overseas perspective there are still many countries that have negative interest rates, including several countries in Europe and in Japan.

"MOST OF THE FUNDAMENTALS ARE CURRENTLY BEARISH AND FROM TIME TO TIME THEY CAN HAVE A SERIOUS, BUT AS WE HAVE SEEN OVER THE PAST 10 YEARS, ONLY A TEMPORARY NEGATIVE IMPACT ON THE STOCK INDEX FUTURES."

At the April 10 policy meeting of the Governing Council of the ECB, it was decided that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 0.00%, 0.25% and -0.40% respectively. The Governing Council said it expects the key ECB interest rates will remain at their current levels at least through the end of 2019.

The Bank of Japan at its April 25 policy meeting stood pat on its main policies, maintaining its target for 10 year Japanese government bond yields at near zero and its short term deposit rate at minus 0.1%. The central bank revised its forward guidance saying it expected to keep extremely low interest rates until at least the spring of 2020.

Even though there are plenty of reasons for a bear market to develop for stock index futures, my view remains that the current variety of bearish fundamentals, either singularly or in summation including the U.S.-China trade dispute, will not be powerful enough to overpower the dominant bullish influence of the low interest rate environment globally.

I believe the harder the decline is now due to trade issues, the faster and sharper the advance will be after a trade deal is reached. The long term outlook for U.S. stock index futures is higher.

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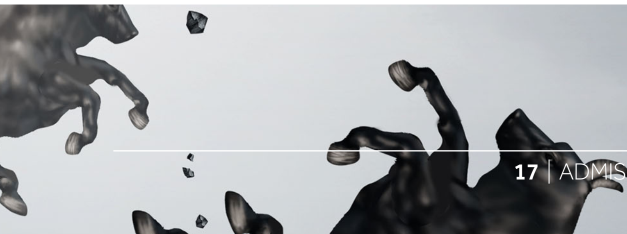


“KEYNESIAN THEORY IN PRACTICE AN EVER TANTALIZING TRAP?”

John Maynard Keynes was a leading British economist of the day, who is best known for his last and most important book: “The General Theory of Employment, Interest and Money”.

Keynes advised the government during the First World War and participated in the Versailles peace conference, which ended up extracting punitive reparations from Germany. Frustrated by his inability to change the minds of those in power he positioned the “General Theory” as a revolutionary text -which it has become. The book’s most important contribution is the reasoning behind the proposition that public spending would add directly to a nation’s output (and income). In the first instance, this money would go to contractors, suppliers, civil servants or welfare recipients. They would in turn spend some of the extra income. In essence it would yield both the primary boost from the direct spending, but also “beneficial repercussions”. He believed this would enable a government to drag an economy back to health.

Since the start of Trump’s presidency he has arguably adopted a Keynesian approach. Although it is terrible practice to judge a president on quarterly or annual GDP growth Trump has been quick to broadcast each quarter’s real GDP growth numbers as though he is calling off the numbers on a bingo card, and being positive that he is going to achieve a full house. Quite simply GDP = consumption + investment + government + (exports-imports). The segment that Trump and Congress have the most influence over is government spending, and there has been a very strong positive shift in these figures since the start of 2018 to aid his boasting.

Yet Republicans are traditionally opposed to Keynesian economics, a fact that was heavily seen during Obama’s time in office where his attempts to use fiscal stimulus were repeatedly blocked, even during the recession. Discretionary spending had been capped since 2013. Yet when you look at some of Trump’s fiscal changes such as the tax cut and increased defence spending, a strategy employed by his predecessor Ronald Reagan, it is arguably Keynesian. The tax cut added money into the economy, and some of this money has been put to productive use (for example, the hiring of people) although some of it has been spent less productively (facilitating stock buybacks, additional savings for those already among the wealthiest in our society). Harvard’s Robert Barro, for instance, made a famous model to show that tax rebates couldn’t change gross domestic product in the way Keynes thought. If the government taxed people less today, they would know that taxes would go up in the future, and so they wouldn’t change their spending patterns. It is Barro’s argument however that ‘Conservatives’ bank on; that the system is after all inherently stable because when people keep cash in reserve they do not just put it under a mattress. They put it in a bank. The bank then lends it out again to someone who spends it.

Instead of spending $1.5 trillion on tax cuts which largely benefited the wealthy, Trump could have used this same $1.5 trillion to fund the infrastructure project he is now discussing with the Democrats, which per the Keynesian modal could arguably have larger 'beneficial repercussions' per dollar spent. Nothing prevents Trump from doing both projects, but this choice will increase the federal deficit. This is something Keynes himself viewed negatively. In 1945, while he was working with the British Treasury on post World War II planning, he wrote, "It is important to emphasize that it is no part of the purpose of the Exchequer or the Public Capital Budget to facilitate deficit financing." His opposition to deficits in the ordinary budget was his adherence to the idea that governments should manage their budgets in the same way that businesses do. He advocated government borrowing only if the money was spent on capital assets that could generate the revenues to repay the loans. It is not necessarily a bad thing so long as the deficit leads to economic growth, including additional hiring.

A great admirer of Keynes, Hyman Minsky, pointed out in his "financial-instability hypothesis" that periods of prosperity give way to financial fragility. In other words when the economy is doing well the temptation to take on further debt becomes irresistible. This idea has led way to the coining of the phrase 'Minsky Moment', which can be translated as 'financial crisis', and was heavily used following 2008. Considering the general consensus with regards to the global economy continues to be that it is unsteady, you would think that Trump and his administration's memory was not short enough to forget this. Yet only some countries in Europe took austerity measures post 2008, Britain being one of them and anti-Keynesian ideas had some purchase which in itself is humorous considering what Keynes 'General Theory' was born from. But even here, policy has largely shifted back to the idea of Keynesianism, as austerity felt never ending and has appeared to reap little if anything in the way of benefits.

Lauren Judd

BANKING ON THE LME'S FUTURE?

Last month's surprise announcement that SocGen would close its commodity OTC and market making businesses brings the curtain down on a metals business that started almost 30 years ago. SocGen will retain Category 1 LME Floor membership through its Newedge brokerage, but the withdrawal from Category 2 activities raises questions for customers, the LME, regulators and other market participants.

According to news coverage, the decision seems to be due to weaker performance across SocGen's retail and investment banking businesses and a desire to increase capital reserve ratios. Commodities typically attract higher capital risk weightings than many other asset classes, and the cuts hit hardest on a business seen as non-core by some bankers.

SocGen isn't the first to reduce their LME presence, with a number of banks reducing or closing LME desks over the past 5 years, leaving just a few heavyweight banks with established LME businesses and some smaller bank players. Adding in a number of strong non-bank Category 2 members with deep industrial roots, and nine remaining Category 1 Ring Dealer members, numbers are well down from the 1990s when perhaps 20 banks were vying for LME business, there were close to 20 floor members and a variety of non-bank players who would facilitate business. There are several trading houses and funds with significant business who could offer valuable liquidity, but the number of LME Category 1 and 2 members who facilitate customer business is worryingly low.

LME members have been under increasing financial and regulatory pressures over the past 20 years, with BIS Capital Adequacy increasing the costs of facilitating far forward business since the late 1990s. The fall-out from the 2008 financial crisis introducing regulatory separation of market making and customer business where, previously, market makers would warehouse risk due to the timing mismatch of customers' hedge activity in a cyclical market.

The sale of the LME didn't help either, with the new owners increasing trading fees and margin rates at LME Clear, perhaps trying to recoup some of the surprisingly high £1.4bn fee paid by HKEx.

The current situation is in sharp contrast to the LME of the 1990s, when banks first made their presence felt. The LME had been dominated by Ring Dealing members, numbering 33 in the early 1980s, mostly small companies but some owned by large physical players. The 1985 collapse of the International Tin Council's price / stock scheme dealt a heavy blow to the LME, with Ring Dealer numbers falling to 20 by the start of the 1990s.

Banks brought large balance sheets, good credit ratings and could attract new types of business, further helped by a number of external factors including the boom in investor business, low interest rates and surplus liquidity.

1990S – FUND BUSINESS AND COMMODITIES AS A "HEDGE AGAINST INFLATION"

Until the 1980s, pensions were largely state funded. In Japan, facing the oldest demographics in the industrial world where future pension obligations would outstrip worker contributions, the public were encouraged into personal pensions, a lesson quickly picked up by the US and UK (but not Europe)

Personal investment in Japanese equities and real estate pumped up their asset bubble in the 1980s, and Japan enjoyed a "wealth effect" until the bubble popped in 1988.

US rates were cut to cushion the blow and, by 1993 the US economy was leading a global recovery and the Fed's Alan Greenspan was promising higher rates and recommending commodities as a hedge against inflation to investors.

With the LME on price lows in 1993, drowning under a stockpile of Russian aluminium (LME Al stocks hit 2.67m Mt in April 1994), the arrival of these new investor buyers was well timed.

> *"IT TOOK A WEAK EQUITY MARKET AND LOW INTEREST RATES IN 2003 TO ENCOURAGE LONG TERM INVESTORS TO REALLY BUY INTO THE COMMODITIES ARGUMENT."*

Prior to the arrival of the funds, LME prices used to reflect the individual metal fundamentals, with the average correlation of LME metals to copper being around 40% from 1990-93. By early 1994, with new speculators buying LME metals across the board, the average correlation of LME metals to copper had jumped above 80%, and the LME has retained a tendency for prices to move in sync.

Funds were important to price action in the 1990s, but other players also had a significant impact. The "rogue" copper trader Yasuo Hamanaka built a significant long position against fund shorts, until it was discovered and closed out by his employers causing a dramatic copper price collapse in 1996. The after-shocks and subsequent price bounce led by stock drawdowns ate into the shorts' profits, and the whole episode contributed to the departure of some banks and LME brokers from the business.

The 1999 run up to Y2K saw some speculative funds pursue the idea that logistical problems would trigger a spike in metals prices, but the rally was modest and it wasn't until 2003 that the real weight of fund money would be felt on the LME.

2000S – "COMMODITIES AS A BUY AND HOLD ASSET CLASS"

Some banks had been fostering the idea of "commodities as an asset class" in the mid-1990s, but it was difficult to attract investors enjoying the equity boom topped with a dot.com rally, wrapped up in a low inflation environment ("new paradigm" of technology led growth).

The cyclical nature of commodity prices also made them a difficult fit for a "buy and hold investor" used to the bond and equity markets.

Bonds give a safe, risk adjusted return and equity prices reward the most innovative companies, whereas commodities are cyclical and production efficiencies should maintain downward pressure on prices (e.g. aluminium's production shift to cheap power locations).

Greenspan finally raised US rates to 6.5% in 2000 to take some steam out of the equity market but, by Jan 2001, was embarking on a series of rate cuts to address fears of a wider equities sell-off after the US dot.com bubble popped. US rates had already been cut to 3.5% by Sept 2001, and were cut again post 9-11 to reach lows of 1% by 2003.

Despite marketing commodities since the 1990s, it took a weak equity market and low interest rates in 2003 to encourage long term investors to really buy into the commodities argument.

Coupled with the emergence of China as a global powerhouse, the price impact on the LME was massive.

Arguably, many in the LME underestimated the extent to which investment buying would push prices higher, as the new wave of buyers showed little respect for previous chart highs and production economics which were understood by experienced metals players and had kept metals prices inside cyclical boundaries.

Chart 1

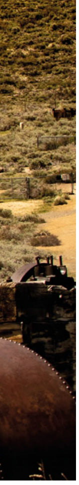
Source: LME/Bloomgb/ADMISI

"THE NUMBER OF LME CATEGORY 1 AND 2 MEMBERS WHO FACILITATE CUSTOMER BUSINESS IS WORRYINGLY LOW."

Chart 1 shows LME Cu and Ni 3m prices during normal price cycles in the 1990s, and the impact of investment buying from 2003 until the financial crash of 2008.

- Relatively early in the cycle, some low cost aluminium producers put on significant short hedge positions then faced significant hedge MTM losses as prices pushed higher, but all hedge obligations were met.
- The LME generally understood that copper's ceiling was $3200/$3500, and significant speculative short positions were placed with further triggers at $4000. These were breached in H2-2005, leading to losses at China's State Reserve Bureau and LME counterparts.
- Despite some assertion that commodities offered a hedge against equities and bonds, the rally of 2003-2008 and financial collapse ended that argument. Note the scale of the 2008 sell-off compared to the damaging copper collapse of 1996

The inflation and equity hedge arguments for buy and hold commodity investors were questioned at the time, and seem dispelled now:



INFLATION:
Inflation had been a major concern for bond investors in the 1970-80s. As it turned out, the 1990s saw the export of Western manufacturing inflation to China, swapping (unionised) manufacturing jobs for a flood of cheap imported consumer goods. This allowed the West to avoid traditional inflation despite enjoying a near continuous run of consumer spending. As the world's factory, China also became the number one importer of industrial commodities, diverting long established metal trade flows eastwards, laying the groundwork for the current US/China trade spat.

EQUITY HEDGE:
The idea that a small (<5%) commodity holding could hedge an equity portfolio was open to question. Financial investors soon realised that a booming economy usually meant strong equities and strong commodities rallied together, but why ask hedge questions whilst profiting simultaneously on long commodity and equity positions?

ROLL GAIN?:
In addition to being a conduit for fund money, banks developed a wide range of customer hedging tools. With large balance sheets and strong credit ratings, banks could offer certain industrial customers margin free hedging lines and the confidence to enter into 10 year forward hedges in a market extending only 27months, especially popular with car makers hedging aluminium risk over a model life cycle between 1997 and 2003. Banks helped some customers influence LME products, with NASAAC introduced by US car companies to address FASB133 hedge accounting rules.

Long dated hedge trades could generate massive MTM exposures, attracting capital adequacy provisions (BIS capital adequacy was revised a number of times), with increasing credit charges applied to forward hedge transactions. These long dated trades had already gone out of vogue by the time the LME's clearing house (LME Clear) increased margins, effectively curtailing activity in very long dated trades.

Banks offered many OTC products, memorably the Asian options which were used heavily in the Cu rally of 1994-96 and later blamed as a contributing factor to the 1996 price collapse by an exchange with no visibility of OTC positions. The LME launched TAPOS in 1998, but customers still seemed to prefer the OTC market.

Banks offered basket products in the 1990s (ahead of LMEX) and structured products including rate enhancing CCOs, similar to the debt CDOs purchased by yield chasing investors, which crashed in 2008.

BANKS AND LME WAREHOUSING:
The financial collapse of 2008 hit physical demand too, and a near 5m Mt aluminium stockpile had accumulated in LME warehouses by mid-2009. The flood of QE liquidity staved off a deeper financial collapse, but some liquidity found its way into clever aluminium financing schemes at LME warehouses, owned by banks and trading houses.

The scheme used a relatively slow LME warehouse out-rate to build exit queues at two warehouses in the US and Europe. With new metal held behind the queue, the warehouse had a guaranteed rental income which could be offered as an upfront incentive to attract even more aluminium, and this incentive became a proxy for the global aluminium premium for physical sales.

Producers benefited from the high physical premium to offset low LME prices, but the scheme was too effective because the growing warehouse queues were the best bid for new metal, and physical premiums rose towards $500/mt by late 2014. Talk of consumer class action suits in 2012 and LME warehouse rule changes saw the unwinding of the warehouse queues from 2015, and banks sold their LME warehouses.

At the peak, some estimates had the amount of financed aluminium on and off exchange at 15m-20m Mt in 2014, dwarfing the 2.67m Mt of LME aluminium stocks which scared the industry into "MoU" production cutbacks in 1993-1995.

Other LME banks were involved in metals stock financing in China, where local controls on collateral management were less than strenuous, leading to the Qingdao financing scandal which broke in 2014. Quick containment by the Chinese authorities prevented contagion to Shanghai or elsewhere, but several banks suffered losses and cut their commodity financing business thereafter.

SUMMARY
Banks have made their presence felt on the LME since the 1990s. Whilst the number of LME Category 1 and 2 members has dropped to worrying levels, there remains a real need for a market which facilitates metals hedging and investment business.

Lower trading costs and revised margins could help ease pressure on LME members, as may some regulatory flexibility allowing market makers to warehouse some risk when facilitating customer hedging business at different times in the price cycle.

Hopefully, SocGen's withdrawal from OTC and market making activities is the low water mark for financial intermediaries on the LME?

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IS THE US HURTLING TOWARD A DEBT CEILING CRISIS?

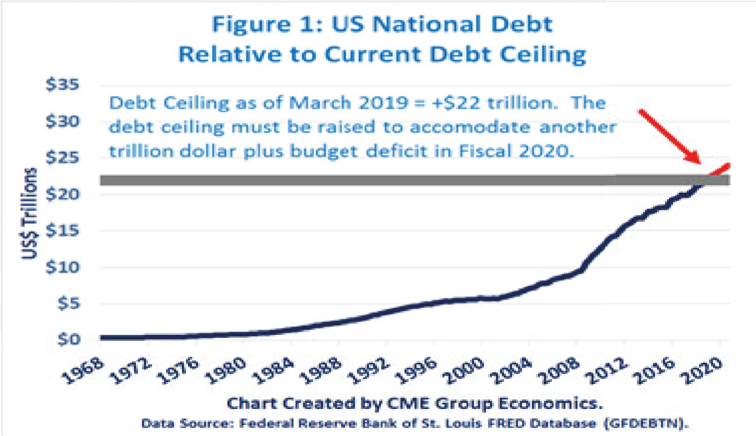
The US Federal Government may be hurtling toward a debt ceiling crisis and another possible government shutdown.

The current debt ceiling of $22,028,945,980,301.65 or just over $22 trillion went into effect on March 1, 2019, and the US Treasury has been managing its cash carefully to stay under the ceiling. With annual trillion-dollar budget deficits, because of the December 2017 corporate tax cuts, time will run out on the US Treasury's ability to stay under the debt ceiling around September 2019, give or take few weeks either way. Also occurring in the Fall of 2019, authorized US Federal Government funding will end on September 30, 2019, unless the US Congress and the President can agree on new funding for Fiscal Year 2020.

The only way to raise the debt ceiling and fund the US Federal Government for 2020 is to craft a compromise acceptable to the Democratically-controlled House of Representatives, the Republican-controlled US Senate, and President Trump. We note, though, that whether the issue is the trade war with China, building the wall between the US and Mexico, or allowing government officials to testify about the Mueller report, President Trump, feeling that he holds the stronger hand, does not appear to be in the mood to compromise. Thus, the odds on a debt ceiling and funding deal just seem to be getting longer every day. So yes, it does appear for now that the US is hurtling toward a debt ceiling crisis and a possible government shutdown in October 2019 that might undercut economic activity, roil equity markets, weaken the US dollar, and ignite a flight to quality rally in US Treasury securities.

First, we will cover a little of the history of debt ceiling. Then, we will examine the potential economic impact of a debt ceiling and shutdown crisis as well as possible market reactions. Lastly, we will turn to some lessons from Brexit that may apply to analyzing the willingness of politicians to compromise.

Chart 1: Saudi Net Foreign Assets vs. Brent Crude Price



Source: Bloomberg Finance L.P.

DEBT CEILING HISTORY

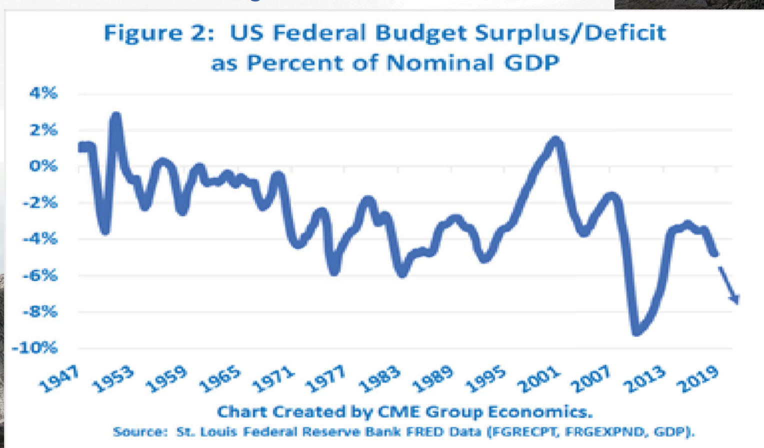
The US Constitution requires Congress to authorize debt issuance. Prior to WWI, the US Congress passed legislation for each separate issuance of Treasury securities. During WWI, the debt ceiling concept was introduced so that within a set limit, the US Treasury could issue debt without coming to Congress for specific authorization. For a long time, there were no controversies surrounding raising the debt ceiling to cover spending already authorized by Congress. During the late 1970s and 1980s, Congress followed the "Gephardt Rule", named after the Democratic House Majority Leader, which automatically raised the debt ceiling as part of authorizing new government spending requiring deficit finance. In the 1990s, House Speaker, Republican Newt Gingrich, voided the Gephardt Rule and decided to make the debt ceiling a political issue separate from funding the federal government.

The latest two debt ceiling crises were in 2011 and 2013. The summer of 2011 crisis sparked volatile trading in markets. Stocks fell sharply. Treasury Security prices rose (yields fell) in a flight to quality. Market participants were worried about damage to the US economy, especially since the 2008 financial panic was fresh in the memory and there was the ongoing European sovereign-debt crisis. Standard & Poor's downgraded the credit rating of the United States government for the first time in the country's history.

The next debt ceiling crisis began in January 2013 with the debt ceiling at $16.4 trillion, which had been set following the debt ceiling crisis of 2011. The US Treasury managed to keep the debt ceiling at bay all the way until October by taking extraordinary measures to enable payments. Once the Treasury ran out of options, the issue was forced, and the crisis ended on October 17, 2013, with new legislation continuing the funding of the federal government and raising the debt ceiling.

The challenge now is the massive budget deficits now running at over $1 trillion per year and growing. The budget deficit ballooned to 10% of GDP in 2009 to deal with the Great Recession, but through spending controls from 2010 through 2016, the budget deficit as a percent of GDP declined to near 3% of GDP as the economy grew steadily, if not spectacularly. The deficit pattern changed dramatically for the worse after the passage of the massive corporate tax cut in December 2017. Economic growth did not respond remotely enough to cover the loss of tax revenues and deficits are now likely to top 5% of GDP in 2020 and may exceed 7% of GDP in 2022 unless fiscal policy is adjusted.

Chart 1: Saudi Net Foreign Assets vs. Brent Crude Price



Source: Bloomberg Finance L.P.

ECONOMIC IMPACT OF SHUTDOWNS

Federal government shutdowns can be caused by the US Congress failing to authorize funding for the upcoming fiscal year or by a breach of the debt ceiling. Shutdowns involving a furlough of US federal government employees first occurred in the 1980s, but only lasted one day. As with the debt ceiling, that all changed once Republican Newt Gingrich became Speaker of the House of Representatives in the mid-1990s. The first long shutdown lasted 26 days in 1995-96. Then there was peace in the valley until 2013 with a 16-day shutdown, followed in 2018-2019 with a 35-day shutdown.

The combination of a full or partial US Federal Government shutdown with a debt ceiling crisis is bound to knock a few tenths of a percent off real GDP growth. Whether the economic damage is more severe depends, first, on the length of the shutdown and crisis, and secondly, on the economic environment when the crisis occurs.

The duration factor operates in a non-linear fashion. That is, a three-week shutdown has a negligible economic impact, but once the shutdown extends past a month, then multi-pay periods are missed, contractors are not paid, and the economic damage rapidly scales with every additional week.

Context matters, too, because if the economy is growing and creating jobs when the crisis occurs, then the crisis will do less damage than if the economy were in a recession. Our base case is that the economy will be growing in the 2% to 2.5% real GDP range in the second half of 2019 when the debt ceiling and shutdown crisis might occur.

Figure 3: US Federal Government Shutdowns involving Furloughs

SHUTDOWN	DAYS	EMPLOYEES FURLOUGHED	PRESIDENT
1980	1	1,600	Carter
1981	1	241,000	Reagan
1984	1	500,000	Reagan
1986	1	500,000	Reagan
1990	3	2,800	H.W. Bush
NOV 1995	5	800,000	Clinton
1995–1996	21	284,000	Clinton
2013	16	800,000	Obama
JAN 2018	3	692,900	Trump
2018–19	35	380,000	Trump

Source: Wikipedia https://en.wikipedia.org/wiki/Government_shutdowns_in_the_United_States

MARKET IMPACT

A debt ceiling crisis means that the debt ceiling has been breached and the US Treasury has run out of ways to conserve cash to avoid the need for additional borrowing. At this point the Treasury can only pay expenses as the cash arrives, and it will not be enough, so tough choices must be made, such as whether to pay social security recipients or pay the interest on the national debt. A government shutdown occurs when authorized funding has run out. Emergency tasks are still funded, but a meaningful portion of Federal employees may be furloughed until funding is re-authorized.

The initial market impact is generally to put downward pressure on equities, weaken the US dollar, and, depending on the magnitude of the equity sell-off, there may be a flight to quality in US Treasury bonds (yields lower, prices higher). This all reverses, although not necessarily in full, in the week or so after the crisis is resolved.

The Federal Reserve's rate policy may be impacted, too. The Fed will not want to "anticipate" a debt ceiling crisis/shutdown, so rates may be kept on "hold" in September, and only adjusted after the crisis has been resolved. And typically, the Fed will want to wait several months to assess the economic damage before considering a rate cut.

LESSONS FROM BREXIT

What does UK Brexit crisis have to do with the US debt ceiling? Brexit is an interesting example of the inability of leaders to reach political compromises when the electorate is deeply divided without a meaningful middle ground. How can you tell when an electorate has reached the point of stalemate? Well, can you invite individuals of both views to the same dinner party? In the UK, Brexit has been a dinner party killer.

As we can observe with Brexit, the consequence of an unwillingness to reach a compromise changes the political calculus. The political attention shifts from a focus on improving the economy to a focus on winning the next election, regardless of the consequences for the economy. That is, the political objective becomes one of establishing positions designed to win the next election rather than to reach deals that might be beneficial for the economy. To paraphrase a recent cartoon in The New Yorker magazine, when faced with a maze, the goal is not to find the exit but to occupy the corner office.

As we approach the Fall of 2019, the combination of breaching the debt ceiling and the US government running out of authorized funding will force a debate about the future path of government spending and require a compromise to be approved by the Democratically-controlled House of Representatives, the Republican-controlled US Senate and President Trump. We are not forecasting a debt ceiling crisis or federal government shutdown, so much as warning that the odds are getting shorter and contingency planning is in order.

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LOW SUGAR PRICES. WHEN ENOUGH IS ENOUGH?

The life of a sugar producer, no matter if from Cane or Beet hasn't been easy. The expansion of land usage mainly in India, even at the time of low prices is causing low prices to stay with us longer than many producers would had expected.

At the same time due to low sugar prices, Brazilian Cane Millers switched the Cane Juice to Ethanol (from 46% in 2017/18 to 35% in 2018/19) reducing production (-9,5 mln m/t) and it seems the Sugar Mix may not change much in 2019/20.

On the other hand, sugar consumption growth has slowed down (1.09% average in the past 6 years), given the economic issues in some countries like Brazil, change in diets in Europe and the USA, as well wars in the Middle East (Syria and Yemen), not to mention the lack of hard currencies in some African countries.

So, combining the higher production levels with low consumption growth and we still have a surplus on our hands, although less than the years before.

We estimate a total surplus of 10,4 mln m/t in the past 4 years to April 2019 and most of the extra exportable sugars are in India followed by Thailand, Mexico and some Central American countries.

Looking forward, one would expect that low sugar prices can't last. Producers are not really getting richer, and on the contrary, especially in Brazil given the high level of debt of many Millers, many are going into chapter 11 bankruptcy.

The books and experiences tell us that the solution to low prices are low prices, as lack of profitability leads to reduced husbandry, expansion etc… All that makes sense, but as long as someone steps in (Indian Gov.) and "encourages" exports (US$ 155 per m/t), low prices may take a bit longer to impact overall production.

As we know, the Indian Government has an issue on their hands i.e. high sugar production which leads to high stocks and therefore a heavy domestic market. This is not the case in many countries, where the domestic market is not as high as is in India (around US$ 475 per m/t).

Given the estimated cost of production of US$ 430 (high cane price +/- US$ 42 per m/t) the profitability is not high enough to allow for old debts to be re-paid.

With many crop uncertainties ahead of us - like Brazil (harvest started), EU/CIS (planting ended), Thailand (cane growing), Pakistan (cane growing), Central America (crop just ended). Is it India's behavior that is keeping the market under pressure, given the risk of another dose of "export incentives"?

Indian sugar consumption is estimated at 26 mln m/t and after a crop of 33 mln m/t and possible exports of 5 mln m/t the carry-over would be 12 mln m/t (end of October 2019).

We hear the coming crop should drop to 28 mln m/t but we also heard the same for the crop that just ended! Unless farmers plant less or don't replant as much or the weather is horrible, we may still have well above the domestic needs and stocks will rise again!

So, at the present moment we see the EU producing a bit more, Brazil not producing much more than last year and the rest of the world with similar crops. If we put them all together and compare the result to estimated consumption, then we end up with a small surplus of 2 mln m/t R.V. for April/March 2019/20, similar to Oct/Sept 2019/20.

Sugar prices at current levels of 12/13 cts are not sustainable in the long term as this leaves nothing on the bones for growers to expand and look after their fields. Consumption is unlikely to drop and the world is going "greener" so the Ethanol story has further upside potential.

We don't know how the weather will be. We hear of the risk of El Nino but it seems like only a 50% chance. A poor monsoon could affect Maharashtra, the 2nd largest Indian cane growing state but at the present moment the risk is low.

Cane and Beet growers need to address their production but also the need to stimulate demand, most likely via Ethanol. The Brazil example should be followed in many other growing countries, especially India, Thailand and Australia, where the Ethanol consumption can certainly grow, reducing exportable surplus and improving margins.

Any extra demand is a long-term project and it seems some growers and millers may not be able to wait and we may see further closures, financial problems and production issues.

The excess production is continuing to lead to low or no margins for the Merchants/Traders but this is a phase. Some Traders have given up on sugar, for the time being!

What sugar is enduring is also happening across many other Agri Commodities like Coffee, Corn and Soybeans, where excess production leads to low prices.

What we can say is that nothing lasts forever, neither pain nor gain. Consumers are enjoying the low cost, low risk and low volatility. We believe that low prices will lead to lower production eventually and therefore higher prices will return, it's just a matter of time. Until then, consumers have many tools to consider to protect their low costs and higher margins.

Producers would benefit from working as team to address the demand upside potential via alternative demands and perhaps India should be encouraged to see the Brazilian example and perhaps speed up the Ethanol demand growth.

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ADM Investor Services International Limited

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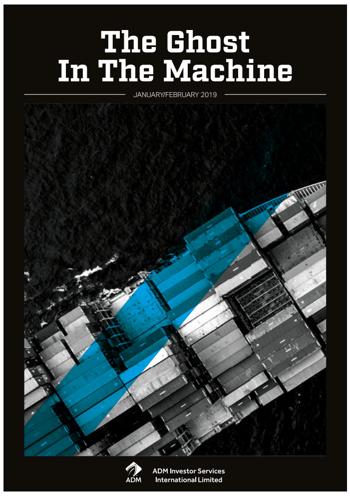

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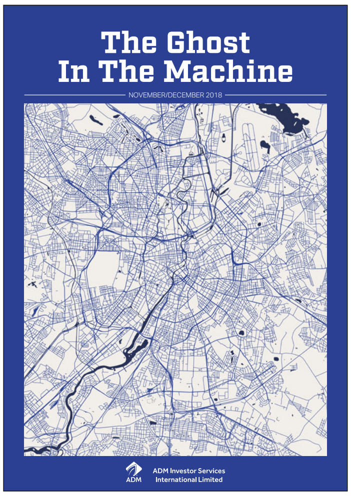

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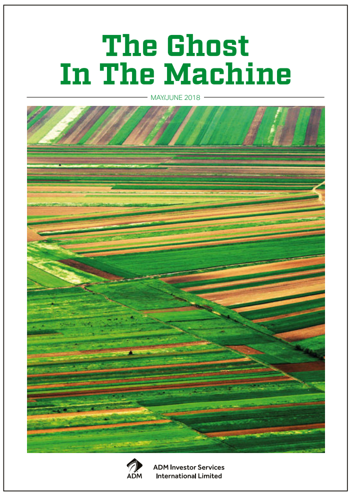

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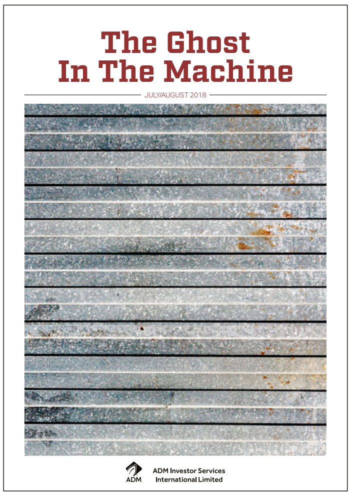

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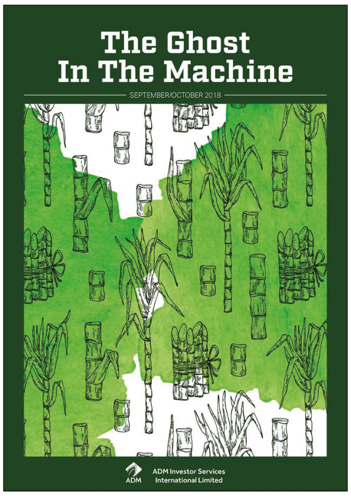

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The Ghost In The Machine

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