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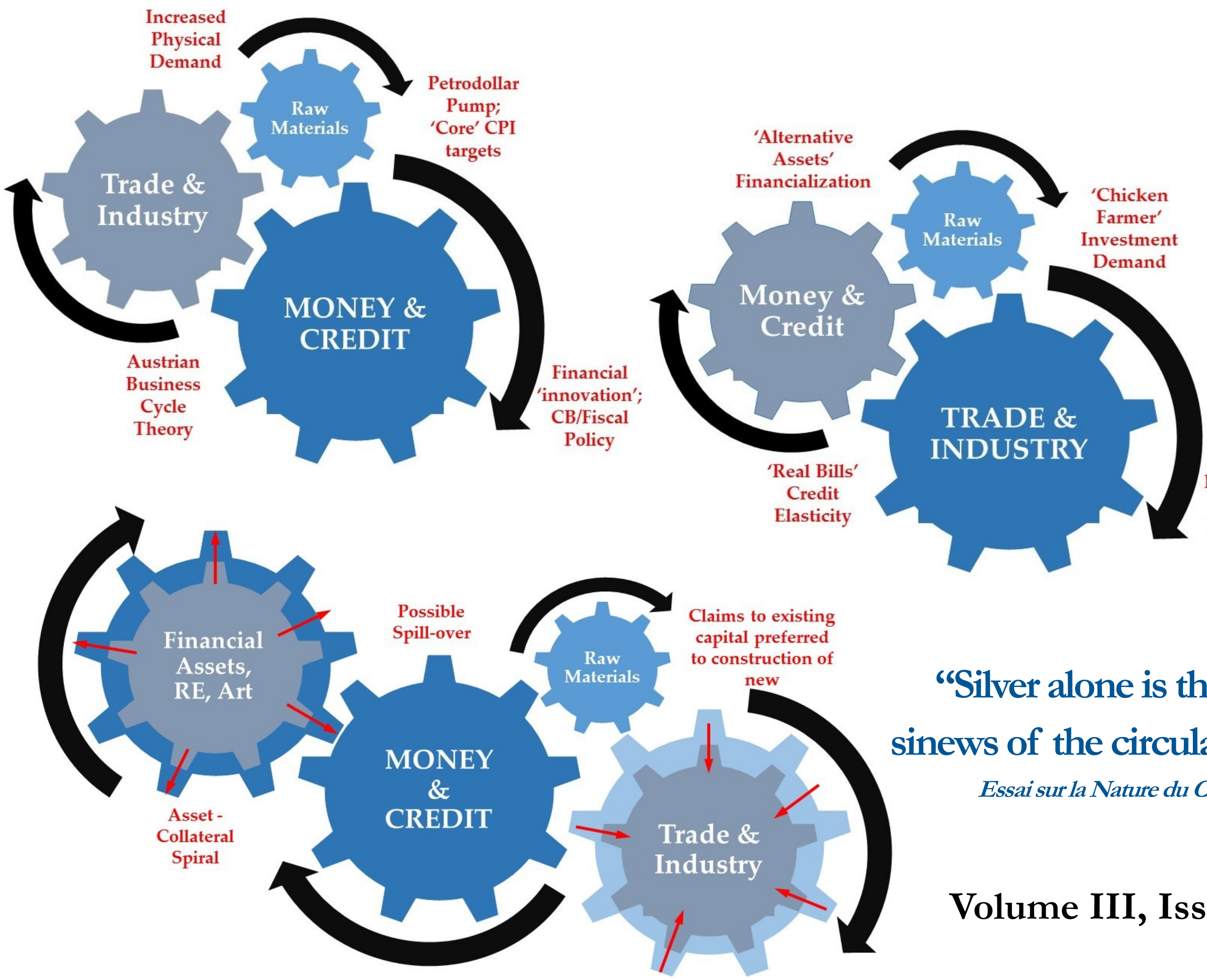


"Silver alone is the true sinews of the circulation"

Essai sur la Nature du Commerce

Volume III, Issue III

Pitching Curve Balls

The long and the short of yield differentials

Here, as a complimentary offering, I present a fleshed-out version of my recent public podcast on this topic, complete with explanatory charts and illustrations of the argument advanced in the text.

My discussion of this and other matters—which should be appearing roughly once a week—can be found on Sound Cloud under 'CantillonCH', on Apple Podcasts under 'Cantillon Effects', and now also on Spotify using the same name. I hope you will try them out for size.

Touching Base

It is impossible to open the financial pages, tune into to a specialist news channel, or surf the offerings of the eager idea-peddlers of FinTwit just now without finding someone offering their twopenn'orth about that little something called the 'yield curve'.

By 'curve', of course, we generally mean the difference between the interest rates applicable to investments of long and short maturities – though just which long and which short is often a matter for personal taste or – if you prefer – subjective foible.

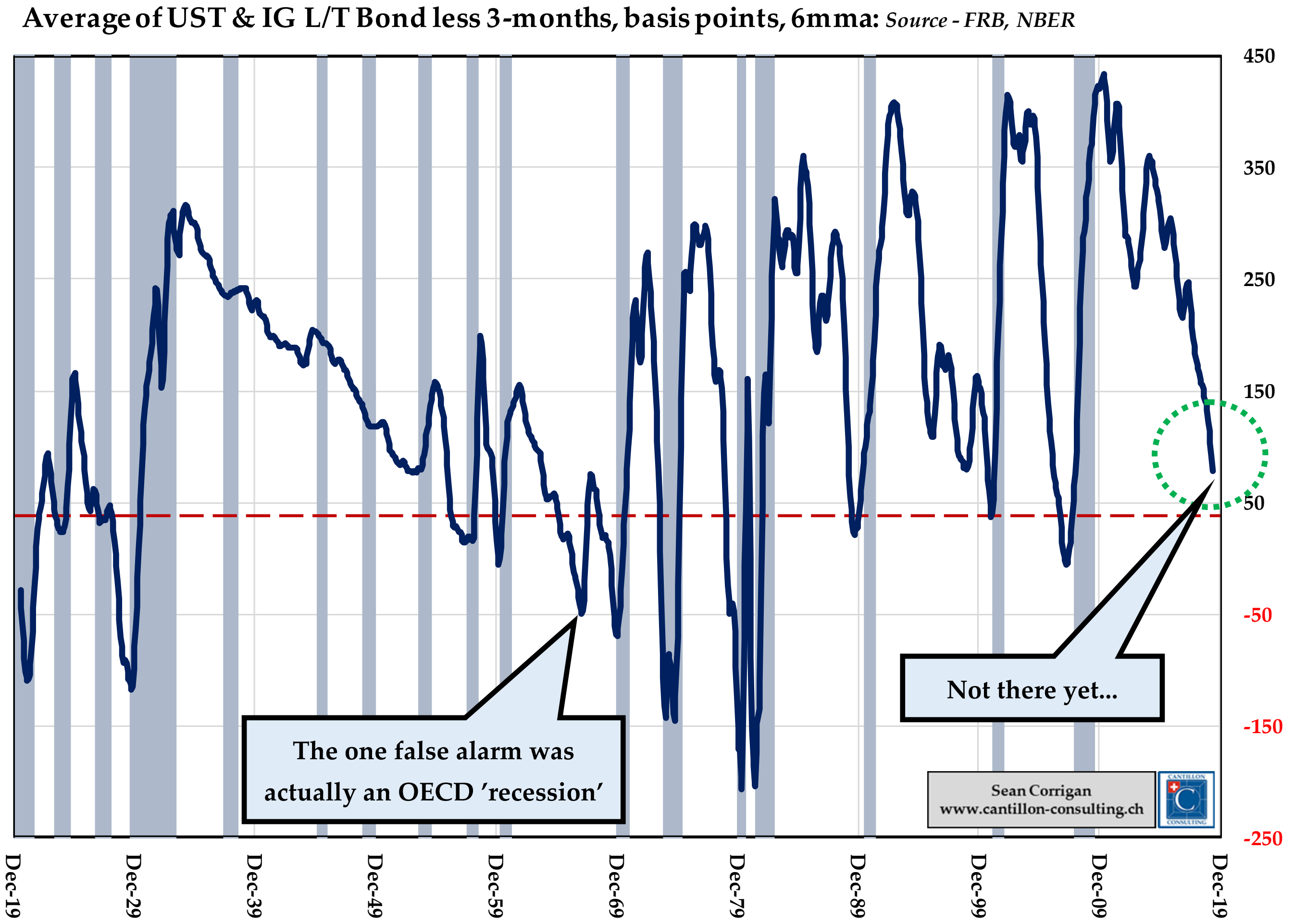
Typically – but by no means universally – the default measure is the gap between the yield on two-year government bonds and their 10- (or sometimes their 30-) year equivalents, though some like to start all the way up at the front of the maturity spectrum and compare the latter pairing to three-month Treasury bills instead. We've even been known to compare some similar money market instrument to a forward-forward rate, far enough out that guesses about the immediate trajectory of monetary policy settings should have a greatly attenuated impact.

Here we must stop to remark that there as many attempts at explaining what determines the shape of this 'curve' as there are PhD students dancing on the head of a pin - none of them entirely satisfactory as you may have gathered from the very fact of that profusion itself. Despite this incertitude, modern experience teaches us to regard it as normal for the curve to be 'positive' – that is, for the Ten-year note, say, to throw off more income per period than, for example, the Two.

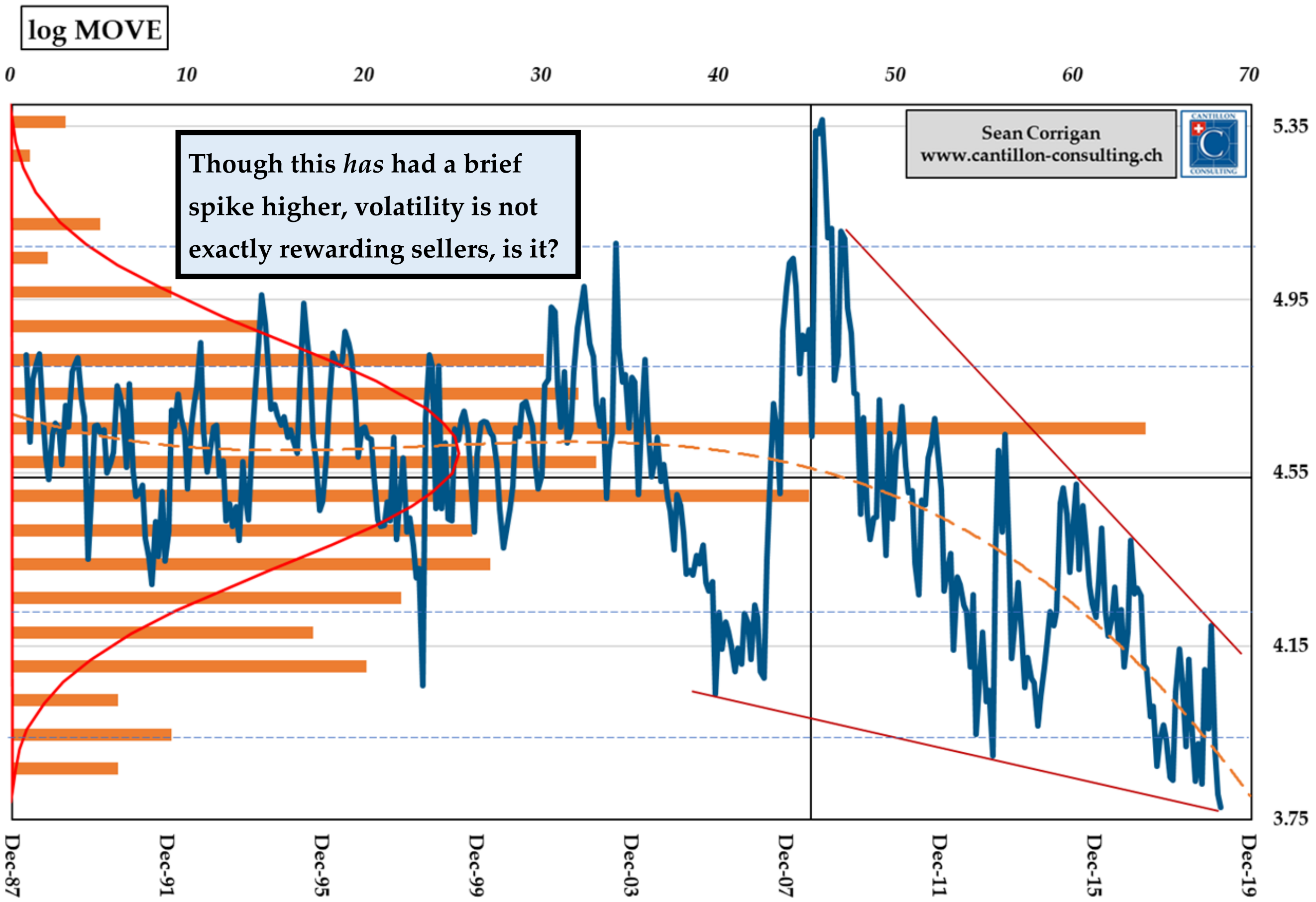
Intuitively, this makes sense if you consider that the longer you trust someone with your money, the greater the uncertainty about what adverse changes may occur between the granting of the loan and its repayment: changes to your debtor's ability to pay; to your need for funds in the interim; and to the general economic and legal background of just what and how much that money will buy when you get it back, as well as how heavily taxed it might one day happen to be.

Thus, it would hardly be strange if you were both to demand more compensation and to be less willing to tie your fortune up for each successively longer period, the former directly raising the cost and the latter indirectly doing so by reducing the supply of funds naturally available for the purpose.

Be that as it may, empirical observation shows us that whenever this relationship becomes reversed – when the curve becomes 'inverted' (sloping down to the right), as we say – the economy is usually in danger of



Since the mid-50s, recessions have followed occasions when the average of Treasury and corporate curves have traded at less than 40bps, as was the case between the Great War and the Great Depression



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hitting the rocks and hence, when the curve starts to lose its upward tilt – when it 'flattens' – a cold sweat starts to overcome both members of the speculative class and the kindly central bankers who tend so generously to backstop their activities.

But it is only a short step from an empiricism which is entirely lacking in any solid theoretical underpinning to blind numerology and to cabbalistic superstition of the kind which either implicitly believes that an inverted curve 'causes' the ensuing recession or mutters darkly that the Market-with-a-capital-M is embodying some deeper, esoteric foreknowledge of the crisis to come, even though no-one active in that Market can quite put their finger on what it is of which they - and they alone - are supposed to be aware.

In essence, financial markets have lately allowed this sort of consideration to send themselves into an orgy of rabid tail-chasing.

The logic - if we can dignify it with the term - runs as follows.

The fourth quarter's sharp correction in asset markets, combined with undoubted evidence of an economic deceleration, both at home and abroad, has led the Solons at the Federal Reserve to back-pedal hastily from their earlier, gentle tightening of conditions and so, by a process of extrapolation all too common in the metier, patently to be on the verge of performing a full about-face and easing again.

Thus, it must be time to buy more of those longer-dated, fixed-income securities - those bonds - which will presumably most appreciate in value under such circumstances.

Negative Curve or Negative Calorie?

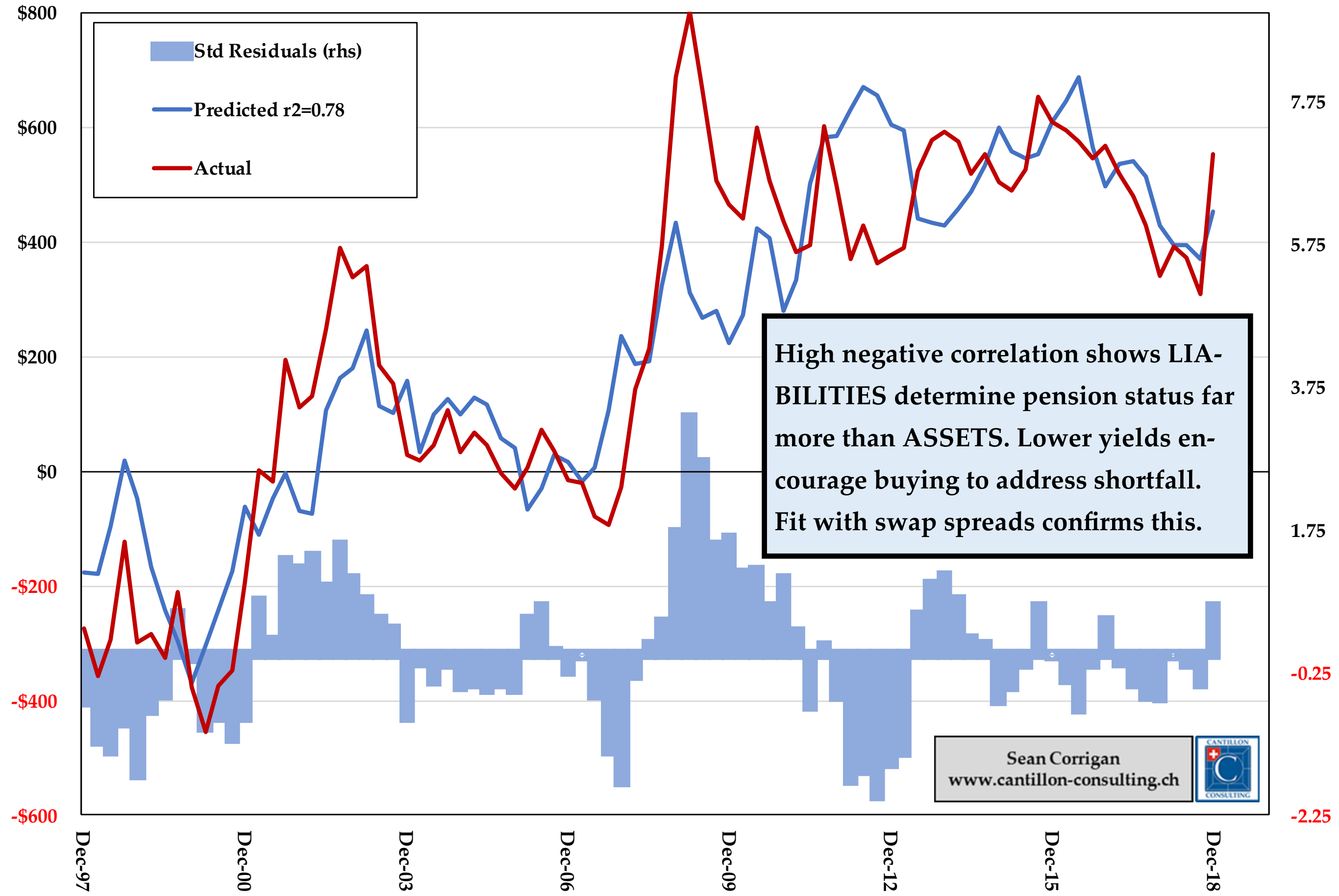
Aggravating this shift in buyers' preferences, the so-called 'leveraged' accounts identified by the regular futures market reports - i.e., the ones who play the game on the thinnest of margins and who borrow the greater part of their table stakes - have come into this turnaround collectively carrying record short exposures and so are having to chase the market higher in a scramble for self-preservation.

Additionally, in today's world, there are other self-reinforcing factors at work. Lowered bond yields feed through into the pricing of mortgage securities, making their in-built option for the borrowers to prepay more likely to be exercised and so encouraging lenders to buy additional paper as an offset - a phenomenon known as 'negative convexity'. The implied options of which mortgage investors are thus intrinsically short have suffered the added disadvantage of late of being priced at the lowest levels of modern times, as evidenced by the MOVE volatility index's plunge to record lows.

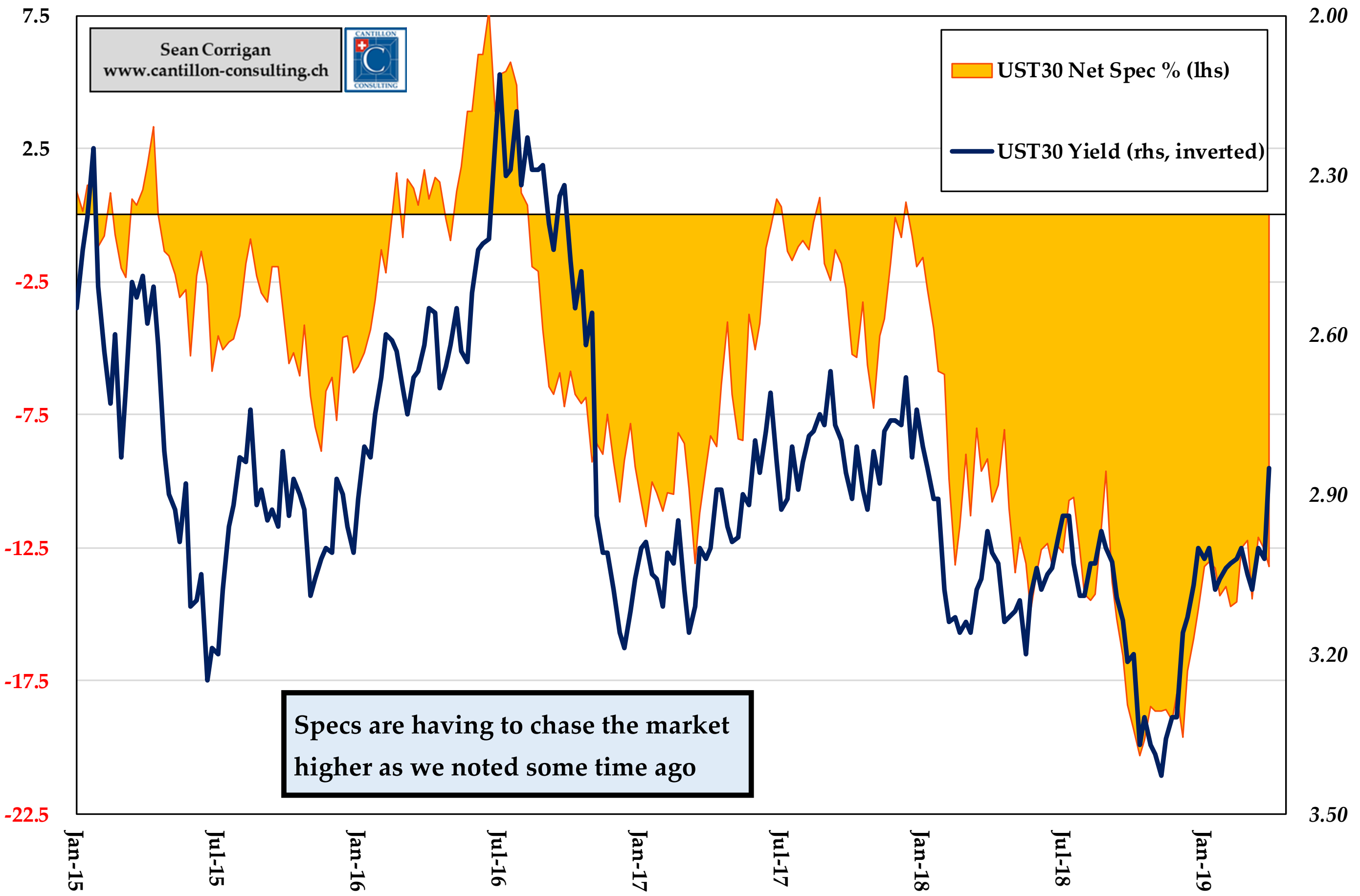
A similar feature will also be at work thanks to the idiosyncrasies of pension fund accounting by which the calculated value today of the scheme providers' future pay-outs rises as falls the interest-rate by which these are discounted. Thus, a further counter-balance is required, whether undertaken through derivative markets or directly by buying bonds.

Finally, long yields are not just subject to the influence of their home-grown central bank. With economic alarums ringing around the globe, the Fed is hardly the only monetary authority to be rowing worriedly back from adopting a less accommodative stance and so

US Private DB Pension Deficit (+) regressed on UST10-yrs: *Source - FRED, FRB*



UST 30-yr (upper) & 10-yr (lower) Futures Net Spec % O/I v Yield: *Source - CFTC, FRED*



even exiguous US yields do offer eye-watering wide pick-ups over competing instruments if one is prepared not to hedge the currency exposure.

The upshot of all this is that the appetite for longer bonds has become greatly heightened and, like some wondrous dietary aid, this is, for now at least, a hunger which only increases the more one eats to satiate it.

More avid buying means long bond prices rise. Higher bond prices mean lower yields. Lower long yields mean a flatter - or even, at present, a partially inverted - curve.

But - eek! - and here dear Fido becomes positively frantic in trying to seize his own rearmost appendage in his jaws - the eco-necromancers insist that an inverted curve MUST mean a recession is nigh; that the Fed must be getting nervous (as it demonstrably is). Thus, the prospect of a rate cut looms all the larger in the windscreen and - you guessed it - we need to buy more bonds, invert the curve more deeply, and so fan our fears even further.

In all this cacophony of mutual self-alarm, if not outright mass hysteria, it is hard not to think, as we often do, of Fritz Machlup's humorous but telling analogy of the idiot magician who was just as surprised as his audience when he pulled out of his hat the rabbit he himself had only recently concealed there.

Fast and Furious—the Flattening

OK. So perhaps we have almost convinced you by now not to treat this yield curve business too mechanistically. But still you may reasonably be left wondering why it is that it seems to have been such a reliable weather-vane in the past?

The simple - if not the simplistic - answer is, of course, that the Fed - whose influence is necessarily much more strongly felt on short, rather than long, rates - has over-tightened: that, driving using the rear view mirror as it inevitably must if it insists on being 'data dependent', in the current jargon, it simply fails to recognise that its past restriction has caused more strangulation than it had imagined. Too late, something cracks, somewhere in the system: losses mount, factories are boarded up, business stagnates, and a new financial calamity seems to threaten.

This provokes a panicked release of the brakes and a gear-wrenching, tyre-squealing jab on the gas pedal instead. The recession is underway.

Well, yes, sometimes.

The central bank's previous sins in the Boom - whether of omission or commission - will have encouraged too much activity whose continuation is by now too firmly predicated upon such laxity continuing if not, by this late stage, actually intensifying. There are, after all, limits to the billions of dollars of borrowed funds one can shell out for a succession of cash-guzzling, 'Unicorn' fantasies as well as to the forbearance extended to those less faddish firms just barely scraping by as their owners' plans fall by the wayside and the markets for their goods fail to meet their over-optimistic explanations.

At this juncture, the Fed's horrified recollection that aeroplanes which begin to experience more drag than thrust are also prone to suffer a catastrophic loss of lift means it will shortly be cutting rates, once more - and furthermore doing so, according to its own flawed doctrines, more rapidly than ever it raised them.

The upshot of this is that those short rates upon which we said the central bank's decisions have the greatest impact now fall away much more quickly than do the long. Having flattened or inverted up to this point, the curve now rapidly re-steepens as all hands are set to the monetary pumps, once again.

Risibly, there is an entire school of one-eyed macro chart-jockeys who will earnestly tell you that it is therefore not the inversion itself which signals the Recession with a capital 'R' - something which, by the way, is only declared in retrospect and then only according to the somewhat arbitrary divinations of the Oracles of the NBER - but this Fed-driven re-steepening which rings the tocsin.

In other words, they tell us that can be no recession unless the Fed first acts upon worries that it has in fact caused one, even though what passes for confirmation of that judgement is much later promulgated by our select body of academics and so only appears on their all-knowing horoscopes and line-graphs many months afterwards. Yet all this is supposed to be tradable by us financial dabblers and actionable by real wealth creators in real time?

Genius!

Man the Lifeboats!

What we are left with here is the drag exerted by a Maelstrom of market tail-chasing helping to intensify the vortex of Fed second-guessing and the turbulence that causes feeding back to reinvigorate the first, like two black holes spinning into one another in an act of grand cosmic annihilation.

Can it be that there nothing more to it than this? Is it really turtles all the way down?

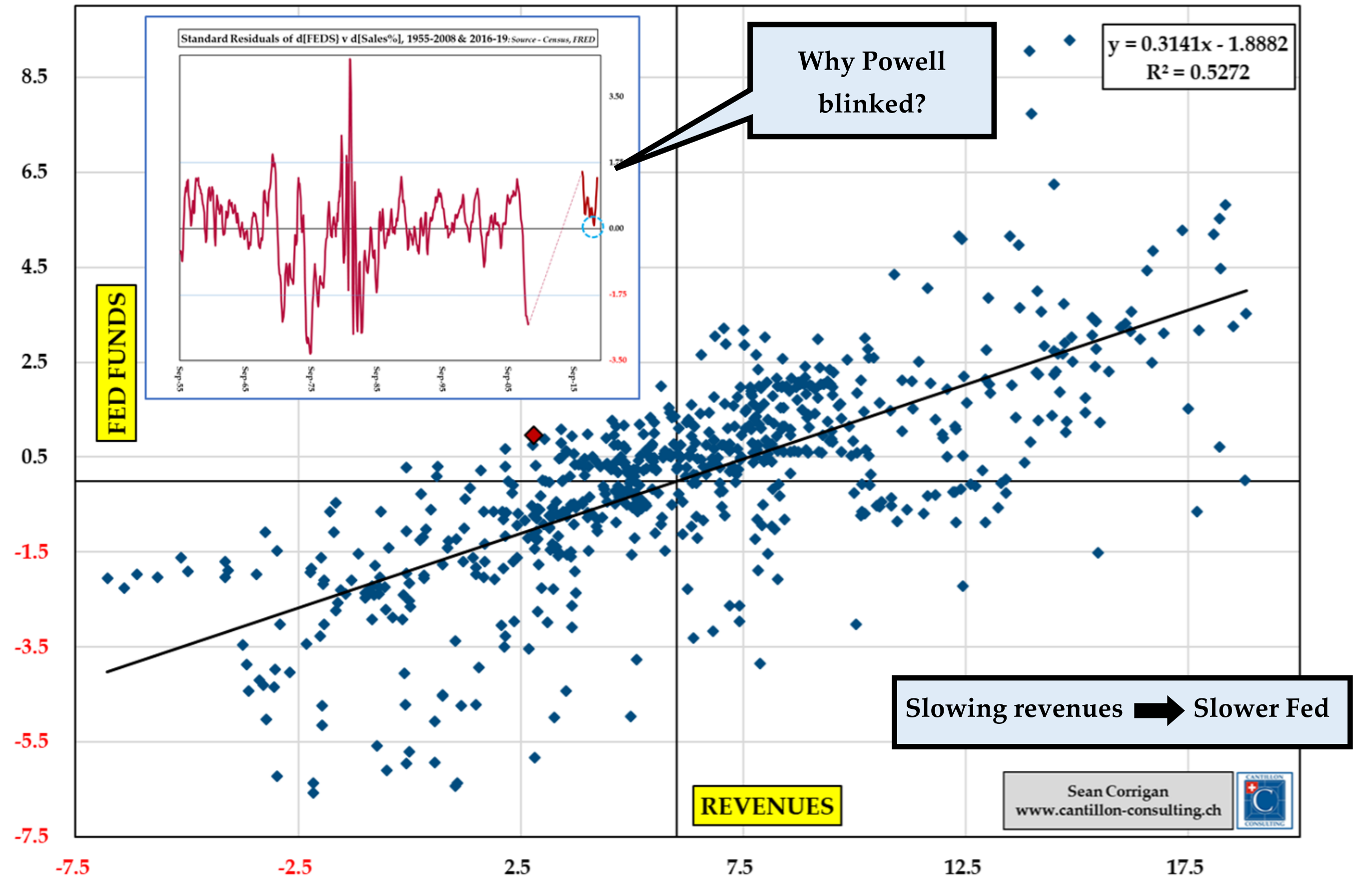
Well, way back in 1937 (Settle down, Ray, this isn't about you and your widely-promoted misreading of that era), Hayek addressed this very issue in a paper somewhat abstrusely called 'Investment that raises the demand for capital'.

What he laid out here was the rationale that when the tide goes out, those likely to be found swimming naked will do anything they can to avoid having their shame entirely exposed. In less metaphorical terms, those firms who have been misled into thinking more real capital is available to see their projects through to a profitable conclusion than actually exists will try to plug the gap in any way they can.

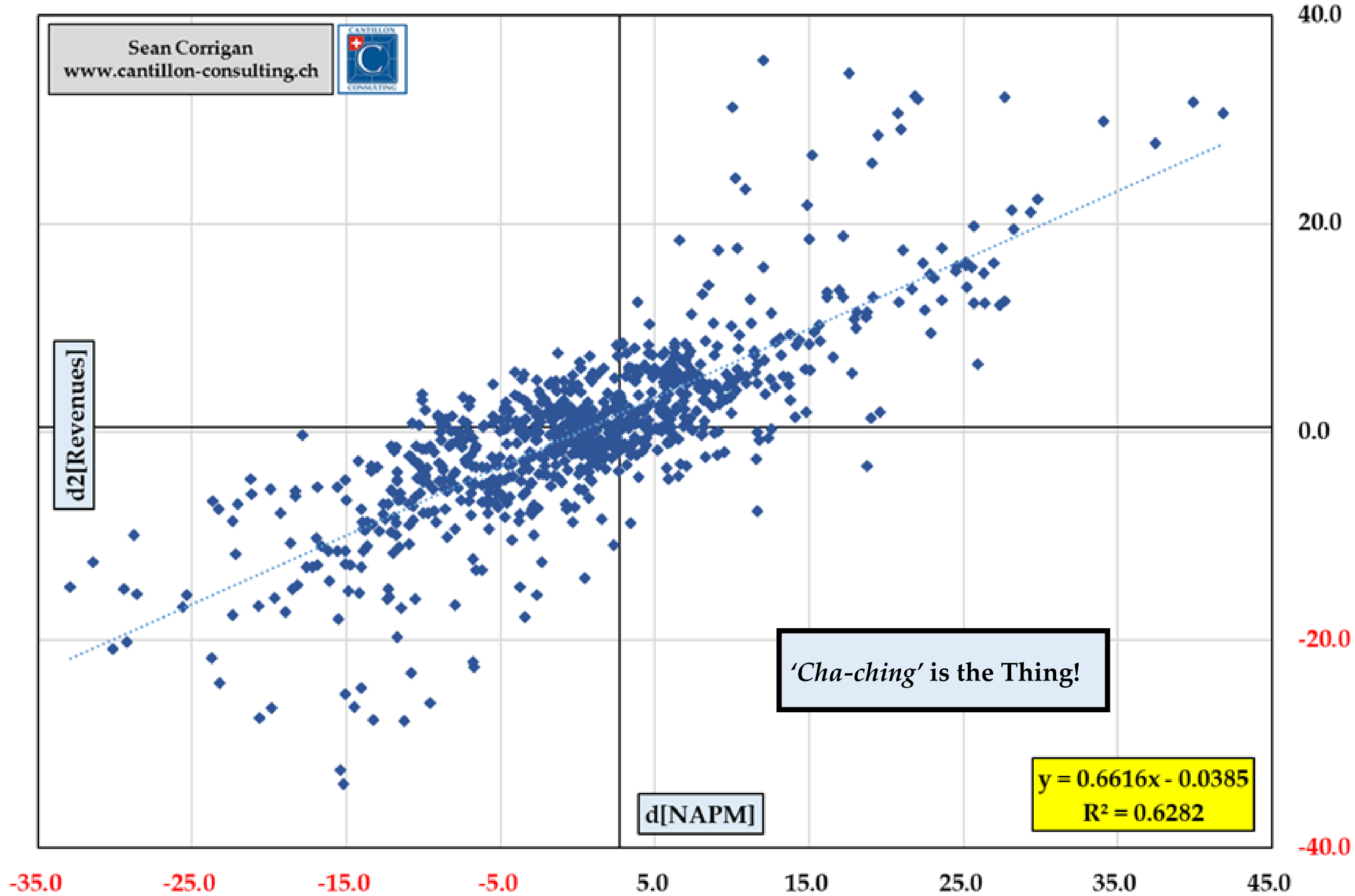
The attempt to achieve this will include undertaking short-term, distress borrowing wherever such finance can be located as well as aggressively dunning their customers for prompt settlement of their accounts while hiding behind the proverbial sofa when their own suppliers come-a-knocking - actions which, to the extent they succeed, only serve to propagate the distress, of course.

This need to bridge the gap between income and outgo, between revenues and expenses; to tide oneself over until one's goods resume their movement down a rickety, often jammed conveyor belt and off into someone's shopping basket, is therefore what pushes short rates painfully upwards. At the same time, the lack of incentive to engage in new, long term projects, mixed with a flight out of more risky investments to the relative safety of the most gilt-edged of fixed income securities, insulates the longer end from this pressure as does the gen-

US Business Sales yoy% v d[Fed Funds], t+2: 1955-2008 & 2016-19: *Source - Census, FRED*



NAPM YOY v 2nd difference Revenues, t+3, 1950-2019: *Source - ISM, Census*



eral faith that the current 'stringency' is only a passing phase which need not be incorporated into prices across the whole entirety of the maturity spectrum.

Hence, the curve first flattens and even turns negative as an overly-elastic credit boom turns to a fully-fledged, Austrian bust.

The Cash-Till Tango

So, the issue which faces us today is twofold: has the Fed overcooked the pudding and/or is the Hayekian squeeze underway?

In either of these cases we should expect find corroboration of the yield curve's message in rising delinquencies and defaults; in a rash of foreclosures and bankruptcies; in greater bank provisioning for loss and lower bank profits, as a consequence. We would anticipate tighter loan conditions in the form of more restrictive covenants and wider credit spreads - as well as lower loan volumes, fewer securities issues, and obvious disinvestment flows. Businesses everywhere should be complaining that those fair-weather umbrella-holders, the banks, have declared 'rain stopped play' and that borrowing has become much more difficult. Finally, the quotations of many other assets - not least the paper issued by the shakiest, most speculative of entities should be tumbling.

As the reader is aware, the question, 'Do we see any of this at present?', calls forth a resounding, 'No!'. With the partial exception of the first quarter's fading of new issue volumes (outside of China, at least!), in fact, much the converse seems to apply.

So, does this in turn mean the US economy can be categorically said not to be facing any troubles, despite the selective anxiety pervading financial markets?

Not entirely.

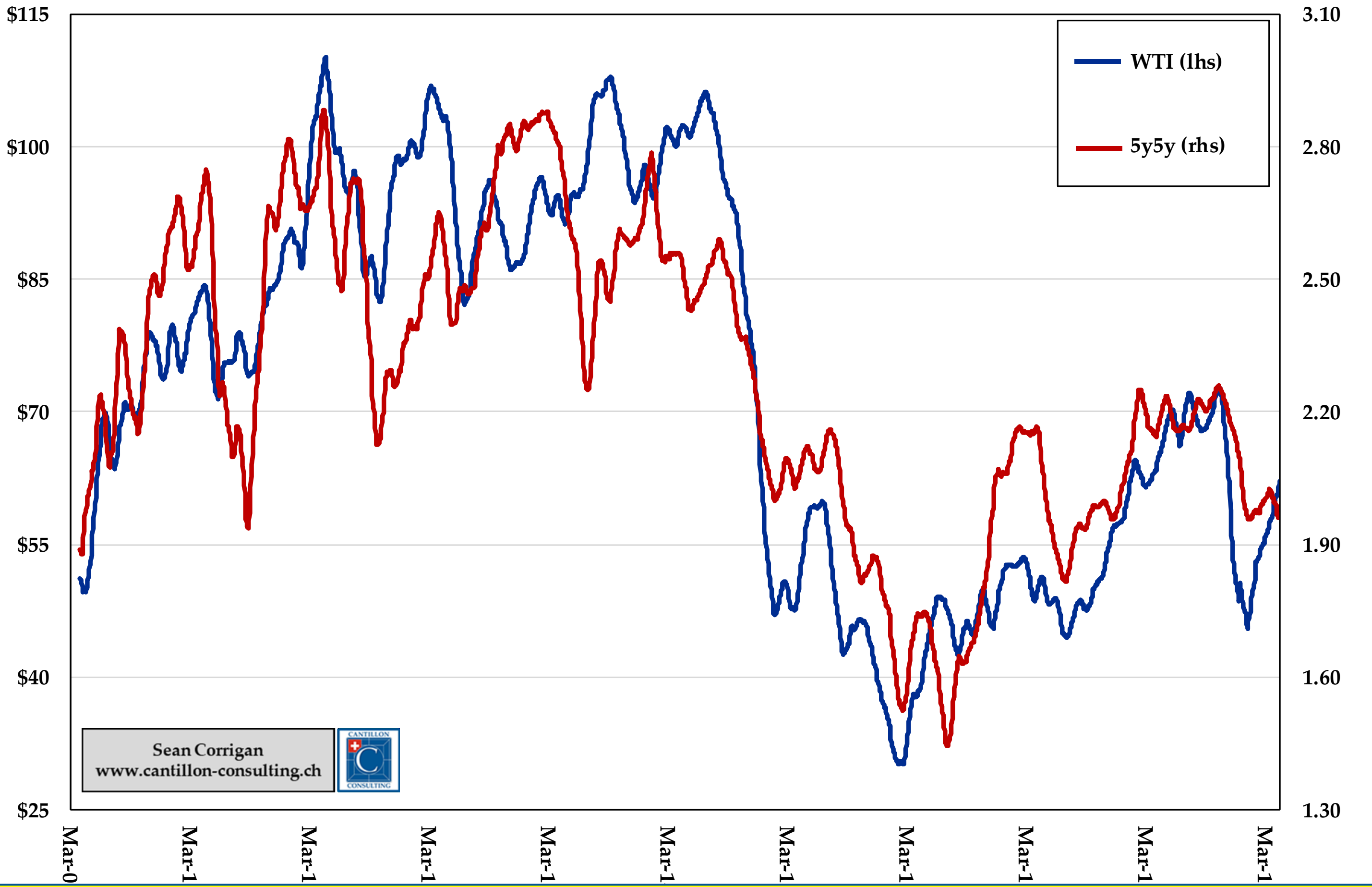
From your author's perspective, the caveat arises from a consideration of what he regards as among the more timely and least manipulated sets of useful data, viz., those relating to turnover, to shipments, revenues, sales - call them what you will.

As we have frequently pointed out, the chime of the cash register ringing is both the most welcome sound a businessman can hear as well as the most immediate sign that his affairs are progressing as he would wish. Indeed, changes in the frequency with which that cheery '*Cha-ching*!' reverberates across the shop floor are what he seems to weight most heavily in his assessment when he gives answers to one of those regular sentiment surveys, such as the American ISM or the German IfO.

Moreover, there is a demonstrably solid and very long-standing coincidence between the pace of revenue growth and changes in the Fed funds rate, with the latter tending to be hiked when the former accelerates much beyond a 6% per annum pace.

Indeed, by those lights and despite all the derision heaped upon him for his supposed lack of backbone, Fed Chairman Powell was right to say in the early autumn that rates needed to rise further, then - as the heady pace of advance began to cool - to temper that assessment to describing them as 'just below neutral' a month or two later. As that cooling then developed into something of a genuine chill by the year's end, his move to call an interim halt to the tighten-

Crude Oil price v US Forward BEI, 4wkMA: *Source - FRED*



Yes, yes—we know! 5y5y BEI is *supposed* to provide a useful reading of medium-term inflation expectations. But we all know it just tracks spot WTI and that latter is threatening to break a key $63/bbl level, dear Fed-watchers and Bond Bulls.

ing - was also no more than past precedent might dictate.

Let us not be misconstrued here: the Federal Reserve's conduct of policy has been increasingly abject from at least the time of Greenspan's chairmanship. It has been far too tolerant of building financial excesses and too anxious to try to forestall their inevitable collapse; too tardy in raising rates in the upswing and too aggressive in cutting them in the down. In fact, one of the few positive things one can say about the institution is that it has not been as badly run as have its major peers - whether the perennially hapless Bank of Japan, the nakedly-political ECB, or the Bank of England under the direction of its Narcissist-in-Chief, Mark Carney.

At least when Powell took up the cudgels early last year, the glacial and belated pace of rate increases tentatively undertaken by his predecessor - five baby steps spread over two years coming after seven entire years of near-cryogenic, moral paralysis - was smartened to at the tempo of a stately Sousa march.

Faites vos jeux

Last summer, this was, we re-iterate, entirely justified - not only were financial markets looking decidedly bubbly, but that key measure of sales growth had quickened appreciably to a 6-year high of around 8%.

Then the rot set in.

Whether through the impact of the Sino-American trade war; the knock-on from the European demonization of diesel-fuelled road vehicles; China's vice-like squeeze on shadow-banking; the US government furlough; the abnormally harsh winter and early spring floods; or whether due to less ephemeral and therefore more deep-seated issues remains to be seen: but, since the late spring, there has been a decided *ritenuto* in the tempo of the Cash-Till Tango.

Manufacturing, wholesale and retail trade, both residential and non-residential private construction and - of course - imports and exports: all of these were vibrant in the first half of last year and all are now doing little more than marking time in a manner not seen since the shale-led commodity collapse of late 2014 or, indeed, since the GFC itself or the bursting Tech Bubble before that.

This real-world phenomenon bears every bit as much attention, therefore, as does anything happening on the officially-rigged gaming tables of fixed income.

Bond markets spent much of the time since the early-2016 end of what we called the 'Hidden Recession' - and, more particularly, an extended stretch following Donald Trump's inauguration - pushing ever higher in yield.

By contrast, the last quarter's stock market rout and the subsequent relaxation - both real and rhetorical - on the part of the world's major central banks has forced those yields, pell-mell, back down into the middle of the range which has contained them for the past seven years, with 5s and 10s leading the charge.

Short-dated futures - which represent the market's collective guess as to what interest rates will apply to loans of up to a 3-month tenor at various dates to come - have gone from pricing in at least one more hike to discounting an initial cut as early as the autumn, with more being predicted to follow in 2020.

For that to be a bet worth taking, you have to believe that revenues - and with them all the profits, jobs, investment, and other activity which follow in their train - will not quickly shake off the past several months' torpor.

If that does happen - if they do indeed regain some of their former vigour, as perhaps the most recent uptick in the ISM index and its accompanying commentary might just be presaging they will - then that infamous inverted yield curve will have proven, this time at least, to have been an oracle of a distinctly Delphic nature.

Sean Corrigan

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