



Dismantling the deflation machine

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Seeking to escape the inflation of the 1970s, policymakers have inadvertently engineered an equally powerful deflation machine. Over the past 30 years, this has been mightily reinforced by the transformation of China's economy and the impact of technology.

Today, a financial system that is structurally intolerant of inflation faces a changing political-economy regime that makes inflation inevitable. The markets have wired themselves to the wrong inevitabilities.

Asset and wealth managers – and their clients – need to be prepared for some of the most important changes for a generation.

Has monetary policy run out of road? That sounds like the sort of question economists debate over digestive biscuits and tea.

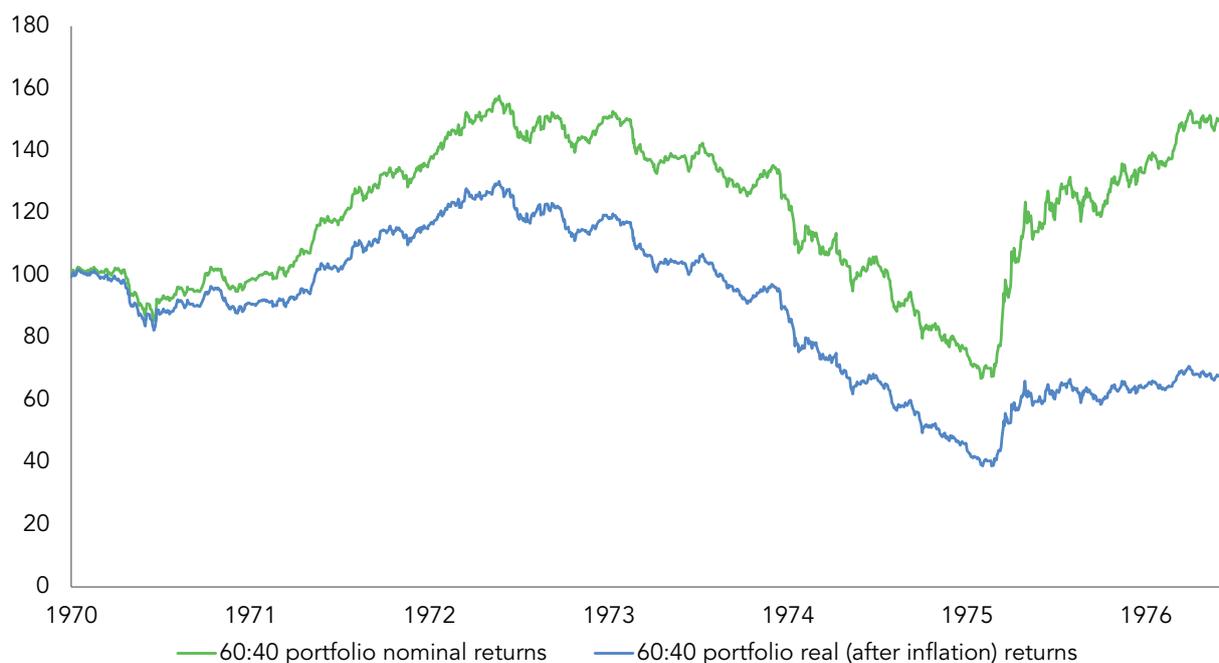
So let's put it differently. Are we on the cusp of economic regime change and wealth destruction on a scale not seen since the early 1970s?

Figure 1 should rattle the teacups. It shows how a classic balanced portfolio – 60% equities, 40% bonds – would have performed in the 1970s. From its peak in 1972, this portfolio lost around 60% of its nominal value by 1974. In real, inflation-adjusted terms, the loss over the same period was 70%.

Of course, that was an inflationary era. OPEC's oil price hikes delivered a major structural supply-side shock to the economy, with a real impact on productivity.

Today, the climate is deflationary – isn't the idea of inflation fanciful? The answer, we believe, is no, because the instability inherent in one extremity can easily swing to the opposite. At Ruffer, we see this swing as not merely possible, or even likely, but inevitable.

Figure 1 – Performance of a 60:40 portfolio in the 1970s



Source: Global Financial Data



It doesn't take a wild imagination to see where it would come from: a material change in the global political-economy regime. From a regime where central banks are the key players, influencing the economy through monetary policy, to a regime where governments play a determining role through fiscal policy. In this new regime, government spending is directly financed by the central bank, an activity with multiple names: monetary financing, helicopter money, money-financed fiscal transfers, or People's QE, all subsumed within Modern Monetary Theory.

Again, no wild imagination is needed to see that this regime change will come about in an era of populist politics. To a politician, monetary financing can look very appealing – a seemingly painless antidote to the pressures of extreme income and wealth inequality, climate change, rising government deficits, soaring healthcare costs and unfunded pension obligations.

Beyond national politics, we can add in the rumblings of a new Cold War between the US and China. My colleague Alexander Chartres will cover this in the 2020 Ruffer Review. One investment implication: Cold War II will be bad news for global supply chains, with profoundly negative supply-side implications.

These factors can seem rather theoretical in a world where the active players think of inflation in developed markets as an extinct volcano. Yet the laws of economics are as implacable as those of the natural world. Recreate the pressures which have, in the past, set off volcanos or inflation, and they will erupt again.

Back to our economists' tea-time discussion: has monetary policy run out of road? Or are we on the wrong road in the first place?

My answers to these policy questions are long ones. They travel via Knut Wicksell, a St Bernard, the Greek debt crisis and Ernest Hemingway, before eventually coming in to land with a statement on the inevitability of inflation and an old advert for beer.

Monetary policy is a culprit, not an innocent bystander

To understand the road we've been travelling, we turn to Claudio Borio, Head of the Monetary and Economic Department at the Bank for International Settlements, the central bank for central banks.

Heroes of economics fall into two categories – those who find fame immediately through the exposition of their ideas (Keynes, Friedman), and those whose insights are only fully grasped when events have confirmed them (Minsky being a leading example). Borio will be remembered for his commitment to unearthing the truth behind how monetary policy – principally inflation targeting – actually operates.

Borio has established why the conventional models used by central banks for setting interest rates are like financial weapons of mass destruction. In his own words¹:

“The failure to adjust domestic policy regimes and their international interaction raises a number of risks: entrenching instability in the global system; returning to the modern-day equivalent of the divisive competitive devaluations of the interwar years; and, ultimately, triggering an epoch-defining seismic rupture in policy regimes, back to an era of trade and financial protectionism and, possibly, stagnation combined with inflation.”

Borio has developed an integrated theory of how monetary policy operates in the international financial system. It's hard going for the casual

¹ BIS Working Paper No. 456 (2014)

reader. My summary of the intuition behind his theory runs like this...

Central banks rely heavily on models to set interest rates. These models are based on the assumption that money and monetary policy don't affect real economic variables – things like productivity – in the long run. Money is seen as akin to oil in an engine: it helps the parts move, but it doesn't change the engine's structure.

Implicit in these central bank models is the notion that there's a "natural rate" of interest – an invisible equilibrium real interest rate consistent with full employment, so that the actual output of the economy equals the potential output of the economy. In this state, the economy is neither held back nor overstimulated by the availability of capital.

The actual interest rate set by central banks is decided by reference to this natural or equilibrium interest rate. If interest rates are set above the natural rate, monetary policy is deemed tight; if it's below, then policy is loose.

Within this framework, the aim of monetary policy is to keep inflation and inflation expectations stable, so that the economy tends towards its natural equilibrium and operates around full employment.

The central bank models assume the two mischiefs – mischiefs that will make the interest rate invalid – are inflation, and (separately) inflation expectations. This is their preoccupation, but it isn't Borio's. For him, money is not so much a result of what's going on, but rather a cause. Money is not neutral, but a driver – the amount of oil influences the cylinder-count in the engine.

If Borio is right, and I'm certain he is, then the implications for monetary policy are profound. His model explains why monetary policy, over the past 30 years, has propagated a sequence of financial crises, each of which was 'cured' by a lower interest rate, which in turn sowed the seeds of a subsequent crisis.

Central bankers are not operatives who monitor and tweak a factory's output when the

assembly-line needs attention. Their response to things going wrong ensures that, down the road, they will go wrong – and, crucially, more wrong – again. Furthermore there comes a time when that 'more wrongness' is sufficiently egregious or unstable, to bring other factors into play.

Our contention is that the present factory cannot take another crisis.

The current monetary system has no anchor

What makes me so sure Borio is right and most of the central banking community is wrong?

Ben Bernanke, Chairman of the US Federal Reserve from 2006 to 2014, said "it takes a model to beat a model". This is how academic economists think. But sometimes common sense and intuition do a better job than a model, and here, it's the nature and role of commercial banks that need the common-sense test.

When commercial banks lend money, they grant nominal purchasing power to one agent without reducing it for other agents in the economy. In the language of newspaper headlines, they 'create' money.

If I want a loan, it does not require existing savings to provide the ammunition to provide me with it. The loan creates the deposit, not the other way around². The amount of bank lending is therefore not constrained by the quantity of deposits in the banking system at any point in time. The quantity of bank lending adjusts to accommodate the demand for it at the prevailing interest rate; the quantity of deposits follows.

This means the banking system can expand and allocate purchasing power – at terms, and in quantities, which differ from those implied by the full employment equilibrium in central bank models. This purchasing power is a 'real life' event: it cuts the real world adrift from the theory implicit in the central bank models. This is, of course, a dangerous state of affairs. It would not perhaps matter if such disequilibrium is able to right itself. But will it?

² See Michael McLeay, Amar Radia and Ryland Thomas (2014), Money creation in the Modern Economy, Bank of England Quarterly Bulletin

In our view, central banks ensure it doesn't. Their singular focus on maintaining low and stable inflation ignores even greater misalignment in other parts of the system – namely, debt within and between countries.

The Knut cracker

The original idea behind the central bank equilibrium models comes from the nineteenth-century economist Knut Wicksell. Wicksell, and those economists who developed his thinking, saw the necessity of the financial system's need to right itself. In his day, the working of the gold standard ensured disequilibrium was corrected; bullion sloshed backwards and forwards from the weak (who thus needed to mend their ways) to the strong. The profligate become poorer, the virtuous richer – until the incentive to grow stronger becomes paramount.

But that was in 1898, when the gold standard operated. Today, there is no gold standard. US President Nixon suspended it in 1971 and it collapsed completely in 1973.

Then what anchors the system today? Not a lot. In theory, it is the capital and liquidity requirements of the banks. Yet these are rarely binding constraints during economic upswings: constraints actually tend to loosen in booms, making finance pro-cyclical, with booms getting bigger and busts more damaging.

Now we are much closer to an unanchored world – to what Wicksell described as a 'pure credit economy'³. In this world, there is no return to equilibrium.

To quote Borio again⁴:

“For a pure credit economy, with no external gold backing but with only inside money (credit-backed deposits), [Wicksell] had no answer. He could identify no forces that would take the system towards equilibrium. To Wicksell, a pure credit economy was largely a fictitious, futuristic concept.”

The bottom line? Central banks have models which implicitly assume there is an anchor on the financial system, ensuring the financial sector cannot drag the economy away from its natural equilibrium for long. But we now live much closer to Wicksell's fictitious, futuristic, pure credit economy. One in which he, patriarch of equilibrium models, would question the usefulness of these models as a basis for setting monetary policy.

In this world, central banks can 'cure' an immediate crisis by suppressing the system, but they ultimately cause the disequilibrium to grow bigger over the long term.



Monetary policy misunderstands the role of the financial sector

Think of monetary policy as being like the flexible leash between a dog owner and a dog. The dog owner is the real economy; the dog is the financial sector. The looser the leash, the more out-of-control the dog can get.

Our current central bank models – dynamic, stochastic, general equilibrium (DSGE) models – proclaim that the path the real economy takes is not materially influenced by the financial sector, or the length of the flexible monetary policy leash. If you believe in these models, you only need to rein the dog in if it is causing the owner to overheat. And, what's more, the dog will always eventually return to the path set by its owner.

Today, this is how monetary policy is primarily set – for the dog owner, with merely a sideways glance at the St Bernard. It is generally a variant of inflation targeting, with a financial stability add-on. Interest rates are set based on the

³ See, for example, Andre Lara Resende (2018), Towards a Wicksellian Pure Credit Economy

⁴ BIS Working Paper No. 346 (2011)

dynamics of inflation, and on where inflation sits relative to the central bank's target (typically around 2%).

In the central bank models, the behaviour of inflation should give us information about whether interest rates are above or below the invisible/theoretical natural rate. If inflation and inflation expectations are rising, it must mean the economy is operating above potential – it needs to be cooled with higher interest rates. In this world, a price-stability objective gives the real economy the best chance of reaching its potential output at full employment.

Because of how the financial sector behaves in practice, the reality is more like a giant St Bernard attached to a faulty flexi-leash. The owner struggles with the play in the leash while the St Bernard dashes after a rabbit. Cue whip-lash, being dragged through a bush backwards, perhaps a trip into a ditch and on to the local hospital.

The effect, in technical terms, is that the system as a whole is much more path-dependent, and can end up in an undesirable place. Put differently, the mood of the financial sector, influenced as it is by monetary policy, can often set the path and destination of the real economy, rather than the other way around⁵. In this world, monetary policy should be set with an eye on both the leash and the St Bernard. It needs to consider – how excited is the financial world? And how overextended is the financial cycle?⁶

The central banks' current theology underplays the crucial role of the financial sector. As Borio writes⁷: “The issue is not so much whether monetary policy should lean against the wind; rather, monetary policy is the wind – for better

or worse, the policy regime is a determinant of long-run outcomes.”

China and technology have been part of the deflation machine

Monetary policy has changed the financial conditions over the past 30 years, but these changes have been amplified by two other major forces of deflation: China and technology. (Ageing societies are often added to the list of deflationary influences, but the empirical evidence is questionable.)

China, here, is shorthand for three things.

First, a material positive supply shock for traded goods. Globalisation gave businesses access to the cheap labour and subsidised capital of China (and other emerging markets). This put a disinflationary force on consumer prices. The breakdown of the USSR and the liberation of Eastern Europe is also part of this trend.

Second, mercantilist policies designed to maximise exports. Emerging markets running trade surpluses suppressed their currencies. The aims were to protect their traded goods sectors and export competitiveness, and – following the Asian financial crisis in 1997 – to build foreign exchange reserves as insurance against sudden capital outflows.

Third, intellectual property theft. This is particularly important in the technology sector. It forced domestic industries to become very competitive very quickly, keeping significant downward pressure on pricing.

After China's admission to the World Trade Organisation in 2001, trade with China, and concomitant foreign exchange intervention, accelerated. By resisting the tendency for its currency to appreciate, China was able to prevent the natural equilibrating forces of international economics from operating. Price inflation of Chinese traded goods was suppressed. This put downward pressure on consumer price inflation in developed economies like the US.

China's intervention in foreign exchange markets to keep its currency low led to a rapid build-up of its foreign-exchange reserves, from

⁵ See for example, the work of John Lewis and Fergus Cummings at the Bank of England on lower interest rates driving up the cost of housing, or Fergus Cummings and Lisa Dettling (2019), *Monetary Policy and Birth Rates: the effect of mortgage rate pass-through on fertility*

⁶ Financial cycles are defined as long swings found in aggregate measures of financial conditions – essentially credit and housing prices. Note the financial cycle does not coincide with NBER-dated business cycles. Swings in the financial cycle are generally longer in duration (or, in other words, of a lower frequency) than those in business cycles

⁷ BIS Working Paper No 817 (2019)

\$0.17 trillion in 2000 to \$3.84 trillion in 2014 (see figure 2). The mechanics of this intervention equate to China acting as a superbank, creating money, buying dollars, and investing those dollars in US assets, mainly US bonds.

In short, China provided a deflationary feedback mechanism which added to the dynamic of keeping US interest rates low, credit expansion rapid, and trade imbalances high. The poster child? Walmart’s supply chain.

Rapid development of information technology has added to the disinflationary pressure. It has boosted labour productivity, given greater price transparency, opened up supply chains, and disrupted traditional businesses, often involving firms focused on growth over profits. The poster child? Amazon.

Wiring up the machine

The interlocking gears of China and technology – combined, a positive and long-lasting supply shock – were impressive. Allied to inflation-targeting monetary policy with its DSGE models, in an era of globalising supply chains and global finance, it set the world on an inevitable path

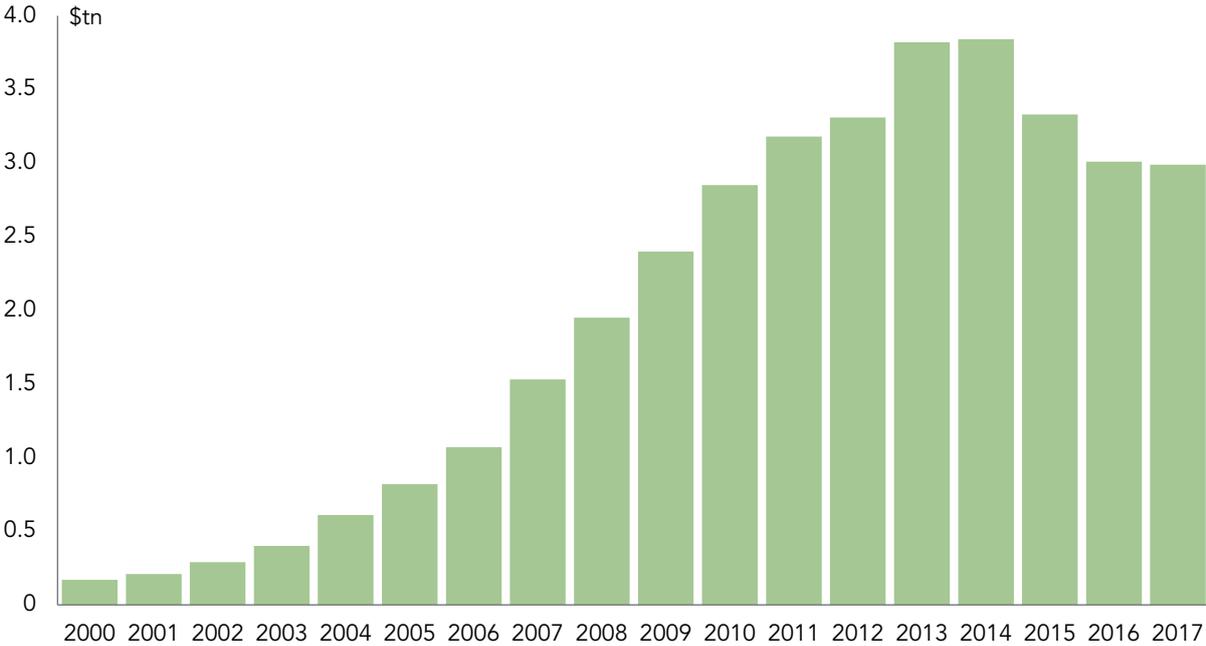
to zero interest rates – via successive financial crises and incrementally higher debt.

Monetary policy was biased to being too loose, because central bankers – misunderstanding the structural forces at work – feared persistently lower inflation. Domestic and international financial cycles interacted and amplified each other. We experienced a succession of financial crises (Asia in 1997, dotcom in 2000, credit crisis in 2008) which resulted in interest rates ratcheting down. Why the ratcheting? Because the reaction to each unwinding of financial excess was to cut interest rates further. The aim was to bring forward tomorrow’s demand to today, to ward off the underlying disinflationary forces revealed and exacerbated by the crisis – deflation creates a shortage of demand.

As a result, aggregate debt in the financial system has increased, both absolutely and as a percentage of GDP.

One man’s debt is another man’s asset – why, then, are debt and balance sheets so important? Because debt creates asymmetric behaviour between borrower and lender. When the system is under stress, borrowers are forced to mend their ways; lenders, by contrast, have a choice

Figure 2 – Chinese government foreign exchange reserves (\$tn)



Source: State Administration of Foreign Exchange, China

whether to fill the void left by the adjustment that borrowers have to make. And since the borrowers repairing their balance sheets weakens the economy overall, and increases the danger of an especially bad outcome, it makes sense for asset owners to wait-and-see. The debtors' retrenchment is not offset by the increased spending of wealth holders.

Higher levels of debt in an economy mean it is both more susceptible to catastrophic failure and less amenable to stimulative policies. So central bankers have to work harder when debt levels are high. But by working harder, they slow the necessary adjustments in places where balance sheets are unsustainable; this incentivises leveraging-up in places where balance sheets are strong. In a global financial system, these dynamics spill across borders. Good in the short-term, of course; but down the line it means the financial system is more crisis-prone and monetary policy less likely to work. In each downturn, policymakers have to step on the accelerator even more than they did in the previous one.

This reaction function to crisis has become known as the central bank 'put' – central banks are now expected always to step in to underwrite the system by loosening monetary policy, as a safety net to markets. Unsurprisingly, this adds punch to the punch bowl, encouraging risk-taking behaviour by investors.

In the 1930s, it seemed that depression was a permanent feature of the landscape. How they would have yearned for the problems of inflation which beset the lives of their children! Our fathers, in turn, yearned to overcome the intractable, irreversible, irresistible problem of inflation that dominated the 1970s.

To escape that inflationary disruption, policymakers a generation ago inadvertently wired up an equally disruptive deflation machine, with monetary policy as the key propagating influence. In this system, the natural rate of interest, per Wicksell, is not stable. Instead, it follows the policy rate lower through successive financial

crises. Lower rates – natural, nominal, and real – beget lower rates.

The key intellectual error is to believe interest rates are at their natural level when inflation is at its target. Following in the footsteps of Keynes, Hayek and Minsky, Borio argues, rightly, that this can only be true if the financial system is also in balance – that the distribution of assets and debts, generated by a given level of economic activity, is sustainable.

Yet, as evidence of imbalance, consider the successive financial crises in the 1990s and 2000s. Interest rates could not possibly have been at a true natural level. If we could have observed what the natural level really was, my bet would be that it tracked the policy interest rate in its journey to 0% in 2009. From there, unconventional monetary policy, in the form of quantitative easing, has become the norm⁸. Later, in Europe and Japan, interest rates turned negative.

Despite enormous monetary stimulus, the economy and financial system have been unable to normalise. Ten years on from the crisis, we've had an anaemic economic recovery in western economies but a prolific rise in asset prices. When the US tried to tighten monetary policy in 2018, equity markets fell sharply. Having only raised rates from 0% to 2.5%, the US Federal Reserve was forced to reverse course aggressively in 2019. Inflation, and inflation expectations, remain subdued and below central bank targets, having undershot forecasts throughout the recovery.

It's as if the doctor upped the dosage of a favourite drug, to as strong a dose as dared. The patient did not fully recover, and relapsed as soon as treatment started to be withdrawn.



⁸ For an account of “why monetary policy had to be changed aggressively” during the financial crisis, see Glenn Stevens, former Governor of the Reserve Bank of Australia (2015), *The changing landscape of central banking*, address to the Official Monetary and Financial Institutions Forum

A negative discursion into below zero interest rates

Now, even the doctor is beginning to doubt the drugs. Central bankers are no longer dismissing heterodox ideas out of hand – Mario Draghi, for example, at the end of his term as president of the ECB, said the ideas of Modern Monetary Theory should be considered⁹.

Questions about the efficacy of monetary policy, its limits, and, importantly, its distributive effects loom large.

What is the lower limit for interest rates? Are we in a low interest rate trap like Japan? How effective is the transmission of monetary policy at low interest rates? Have low interest rates and quantitative easing made wealth and income inequality worse? Will policymakers be impotent when the next recession strikes? Are low interest rates causing financial imbalances to build up?

There are both theoretical and practical answers to all these questions.

For example, in theory, the effective lower bound of interest rates (the point beyond which further monetary policy in the same direction is counterproductive) is below 0%. This is because of the costs that come when moving out of bank deposits to holding money in physical currency – think insurance and storage. So depositors will only shift to storing physical cash when negative interest rates exceed the related costs and charges. Of course, to get around this problem, a country could do away with physical cash and move entirely to digital money¹⁰. Depositors would then have no alternative: either accept a negative interest rate, or do something with the money. That's in theory.

In practice, negative interest rates on retail deposits have unexpected consequences. Human behaviour rarely follows the rational logic of economic theory. In my article for the 2019 Ruffer Review – with a micro focus, to this year's macro – I included a chart on investor

behaviour. It showed how investors allocate increasing amounts to risky assets as nominal interest rates tend toward zero. The allocations are much higher than they should be on a pure risk-reward basis. Is it such a stretch to think that negative nominal interest rates on retail deposits would cause retail depositors to do extreme things?

And then there's the reversal rate, with its impact on the behaviour of commercial banks (see Box 1).

The problem with these discussions of negative rates is that they start in the wrong place. They focus on the economists' tea-time question – has monetary policy run out of road? – which implies that monetary policy was on the right road in the first place.

With Borio's lens, it is clear that wrongly-configured monetary policy has built the wrong road, and sped us along it.

The longer we stay on this road, the harder it is to change course without disrupting markets. And the more seismic the rupture.

Two opposing forces

Two powerful and opposing forces are developing. First, the financial system is wiring itself as if it is inevitable that we are staying on the current road – a road where monetary policy is the primary policy, pushed to its absolute limits, and where inflation is a more dormant threat than deflation. This force leads to secular stagnation (many years of slow growth), accompanied by very low interest rates, as far as the eye can see. The second force is the political-economy. This is bending, in part to the social consequences of having been on the current road for too long.

Now, financial markets have a growing intolerance to policy regime change, while the political shifts create an imperative for change. This has the makings of an unstoppable force meeting an immovable object.

Let us look at this tension through the eyes of the market.

⁹ Hearing at the Committee on Economic and Monetary Affairs of the European Parliament, Brussels, 23 September 2019

¹⁰ See Ken Rogoff (2016), *The Curse of Cash: How Large-Denomination Bills Aid Crime and Tax Evasion and Constrain Monetary Policy*

BOX 1 – THE REVERSAL RATE

The reversal interest rate is the rate at which accommodative monetary policy reverses its intended effect and becomes contractionary for the economy. At some point, negative rates begin to hurt banks and constrain their willingness to expand lending.

This occurs when the capital gains that banks make from mismatches in duration are more than offset by decreases in their net interest margins. This lowers a bank's net worth and tightens its capital constraints.

The determinants of the reversal interest rate are 1) banks' holdings in assets with fixed (non-floating) interest payments, 2) the strength of the constraints they face, 3) the degree to which interest rates can be passed through to deposit rates, 4) the initial capitalisation of the banks.

Quantitative easing increases the reversal interest rate and hence should only be employed after interest rate cuts are exhausted.

Over time, the reversal interest rate creeps up, as the capital gains effect fades out (holdings in long-term bonds mature) while the net interest margin effect does not.

Markets – intolerant of change

Markets are vulnerable to changing liquidity conditions (see Box 2) and the market's unstable behaviour at the end of 2018 provided a glimpse of the frailties; the economy was in fine shape, but liquidity conditions were not. The resulting sharp falls in equity and credit in December 2018 forced the US Federal Reserve to U-turn the following month. As I write this in December 2019, the Fed has now cut rates three times, and is again expanding its balance sheet to restore order in funding markets.

The financial system that prevails today presumes the deflationary forces are structural

and permanent and that any cyclically-induced monetary tightening will burn itself out, as it did in 2018. Markets have wired themselves to the secular stagnation narrative. To adapt Irving Fisher's infamous phrase: we've reached a permanently low plateau for interest rates and inflation.

This is echoed by the IMF's former Chief Economist, Olivier Blanchard:

“What is clear is that the low rates reflect more than the lasting effects of the financial crisis. Their decline is a long-standing trend, starting in the mid-1980s. It is fair to say that, while many factors have been identified as potential causes, ranging from an ageing population to precautionary saving, to lower growth, to a higher demand for safe assets, we are still uncertain as to the role of each one. What can be said, however, with more confidence, is that none of these factors appears likely to reverse any time soon.”¹¹

The net effect is that we now have a financial system unable to comprehend a view of the future which is anything other than that described by this narrative based on the past. There is no sense that policy regime change is inevitable, or that it could be successful in moving us off the path of secular stagnation. Nor is there a sense that what might be good for the economy is bad for markets.

One view of financial assets is that the limits of monetary policy matter little, especially if the baton for stimulating aggregate demand is passed to fiscal policy. We hold a different view, and expect a shift in the policy regime to undermine many of the pillars holding up the current market environment: from the mathematics of debt-financed share buybacks, to the emphasis on hoped-for future profits, so much financial behaviour is dictated by low interest rates.

¹¹ Olivier Blanchard (2019), Re-examining the Economic Costs of Debt, Prepared remarks submitted to the US House of Representatives Committee on the Budget

BOX 2 – BEYOND THE ILLUSION OF STABILITY

Summary of key points from my article in the 2019 Ruffer Review

- 1 Nominal returns drive behaviour.** Savers and investors tend to think in nominal terms as opposed to real (after inflation) returns. The cause is both contractual and behavioural. Contractual, because many institutional investors, such as pension funds, have nominal return targets for their portfolios. Behavioural, because of psychological biases such as reference dependence (we get used to a particular level of income from our savings, and we try to preserve the level when interest rates fall), and salience (nominal returns are visible, while real returns are not, and we tend to work off what we can see). This means the risk-taking behaviour of investors and savers increases non-linearly as nominal interest rates tend to zero. The more extreme monetary policy becomes, and the longer it remains in that state, the more people move up the risk spectrum and down the liquidity spectrum. We see this through the increased allocations of institutional investors to illiquid alternative assets such as private equity and private debt.
- 2 Role of bonds in portfolios.** The effect of a deflation-biased system has been to make bonds a very effective offset in portfolios, because bond and equity prices become negatively correlated. In effect, bonds have behaved like positive-carry equity put options. This encourages leverage, as we see in investment strategies such as risk parity. If the regime were to cease to be biased to deflation, bonds would become a less attractive portfolio asset. The measured risk – i.e. the volatility – of portfolios would increase, encouraging investors to de-risk and/or deleverage.
- 3 Regulation and liquidity.** Capital and liquidity regulations have been designed to make sure banks can withstand stressed markets. This has reduced their capacity as market makers, leaving asset management as the key marginal actor. Because asset managers don't have the same degree of flexibility as banks – they are constrained by the investment mandate, which is increasingly a passive one – the ability of the system as a whole to accommodate material changes in asset allocation shrinks. Liquidity mismatches between a fund's terms and its underlying assets exacerbate this problem.
- 4 Rise of quant-based investing.** Simply put, our enhanced ability to analyse data (which is, necessarily, only the past and the present) inspire investing strategies which assume past patterns and correlations will be repeated. Regime changes confound past patterns, and a new regime takes time to be incorporated into trading models.
- 5 Rising share of passive investing.** As all asset prices have risen, the shift to low-fee passive vehicles has accelerated. The effect of this shift is that beyond a certain threshold – circa 50%, it seems – investment flows matter more than fundamentals in determining price.
- 6 Risk premia investing and volatility.** When expected nominal returns are low, small but persistent risk premia become very attractive. Consider investors seeking to harvest the volatility risk premium. My view? It is dangerous for volatility to be an asset class and, simultaneously, a measure of risk for most of the asset management industry.
- 7 Embedded leverage.** The current regime has encouraged financial engineering, from debt-financed share buybacks to ratings-optimised Collateralised Loan Obligations. This raises the sensitivity of asset prices to changes in the operating environment.
- 8 Gap risk.** Many of the features mentioned above combine to increase the vulnerability of the system to gap risk – a large and immediate fall in asset prices. Gap risks arises because the market is unable to intermediate flows of assets with continuous pricing.

It's the political-economy, stupid

Brett Gillespie, a macro fund manager in Australia, recently observed that the past two centuries suggest a simple rule: a monetary policy regime lasts about 30 years before it gets thrown out. In Gillespie's summary, a brief history of the US gold standard shows that when a simple rule is adopted, inflation can be avoided – but strict adherence to the rule can create economic instability and political unrest. “We have had an inflation standard now for the best part of 30 years,” Gillespie writes. “I would argue this simple rule is now creating economic instability, if not political unrest.”¹²

Consider the rise of populist politics and climate change protests.

Populism has become synonymous with inequality. The trickle-down effect is not working – money at the top is not trickling-down to workers and others to improve their earnings. Inequality, of both income and wealth, has been directly attributed to a combination of extreme monetary policy settings, immigration, and globalisation. The very things that have provided the interlocking gears of the deflation machine.

Monetary policy can be linked to populism in a number of ways. A partial list might include: out-of-reach house prices; pension and insurance systems in funding crises; gains for Wall Street that don't transmit to Main Street; and people getting rich in ways that are both provocative and absurd.

What about climate change?

It might seem a stretch to link climate change to monetary policy, but there is a connection. The international monetary and financial system, wired as I've described, facilitated an accelerated development of infrastructure in China and other emerging markets. In the wake of the 2008 financial crisis there was a huge Chinese fiscal stimulus which gave rise to massive infrastructure development (as well as corruption).



To give a sense of the scale: According the USGS' cement statistics, China used more concrete between 2011 and 2013 than the US used in the entire twentieth century.

When an economy as large as China's can engineer an unproductive infrastructure boom through abuse of a pure credit system, we should not be surprised to see global carbon dioxide emissions rising. Clearly, China alone is not responsible for the climate emergency. My point is that monetary policy has catalysed activities that have accelerated the problem.

Wrapped up in the climate change movement is a belief that free market capitalism has let us down because it failed to properly price environmental externalities. And governments are seen to have failed on two fronts: to fix this market failure; and to confront the crisis with relevant investment, at a time of historically-low borrowing costs.

Policymakers, sensing these trends as inexorable, know that if they don't act, they risk being forced out of office. (But if they mix up their causes, as French President Emmanuel Macron did, you get civil unrest: Macron's fuel surcharge was good for the environment, but not for the poor. *Bonjour les gilets jaunes.*)

The pressure propels politicians towards greater government spending. Why, you might wonder, has it taken politicians so long to figure this out? The answer is in Greece.

¹² Brett Gillespie (2019), The end game approaches for monetary policy

A Greek tragedy

The eurozone debt crisis in the early 2010s was centred on Greece. Excessive Greek government debt and the political naughtiness associated with it were seen as the culprits; the resulting political and social chaos were seen as a warning sign. The message? If you don't want to become Greece, then get control of your government finances. Balanced budgets and austerity became the watchwords.

The assumption behind the message was wrong, and the application was tragically timed.

Wrong because worries about government debt are far more pressing when you are part of a currency union; a true sovereign has its own central bank, which will always honour a cheque written by the government. Greek debt had credit risk because Greece did not have its own central bank and there was a credible threat that the ECB would not accept Greek bonds as collateral. A true sovereign has a great deal more fiscal latitude than Greece had.

Tragically timed, because it injected a fear factor into fiscal policy, among politicians and the electorate, just at the time when policymakers should have been fundamentally rethinking both monetary and fiscal policy in the wake of the financial crisis. As a result, politicians abandoned economic policy to central banks – and therefore to unelected technocrats who are both constrained by their mandates and who do whatever it takes within their mandates to achieve their objectives. Implicitly, this assumes monetary policy does not redistribute wealth or income, and so can be safely enacted by technocrats.

Today, central bank mandates are usually some combination of price stability (not including asset prices) and full employment. But they have only monetary policy at their disposal. If central banks worry that inflation expectations may fall too far, then they act like that doctor who only has one drug, and keeps administering it in bigger doses. Even when the negative side-effects begin to outweigh the benefits, central banks feel

they have no choice but to keep trying – because this is what they are mandated to pursue.

This is exactly what has happened. The side-effects of extreme monetary policy are feeding back into the political economy, forcing a reassessment of the role of fiscal policy. But this is largely because governments abdicated responsibility at the crucial moment.

This is now changing. Central banks fear the impotency of monetary policy in the next recession – if inflation expectations fall and nominal interest rates are limited by the effective lower bound, it makes it very hard for central banks to force real interest rates into negative territory. Monetary policy loses its power.

At the same time, politicians are waking up to the need for fiscal policy to address unrest. It is inevitable that fiscal policy is going to play a bigger and more systematic role in the policy mix in future.

As the gold standard came to an end in the 1970s, so we are now approaching the end of the 'inflation standard' as its successor.

Expect a more inflationary combination of monetary and fiscal policy

The logical response to the political pressures is for monetary and fiscal policy to work together to raise nominal GDP.

By targeting nominal GDP, policymakers can reduce aggregate debt-to-GDP ratios to reduce worries over government debt levels. By using fiscal policy more actively, they can ensure the policy stimulus transmits into the real economy, without getting stuck in the financial markets, while also addressing directly sources of unrest.

The mechanism for monetary and fiscal policy coordination could come with a new label, or it could just be more active fiscal policy allied to a more tolerant monetary policy regime.

This is not the place to debate relative merits. The important point is that once it is accepted that fiscal policy should play a more systematic role, we will have taken the first step towards a new political-economy regime.

The deflation machine is being dismantled

Just as the ‘inflation standard’ is beginning to be replaced, other parts of the deflation machine are being dismantled.

The US under President Trump is becoming less tolerant of trade deficits and foreign-exchange intervention, while taking a much tougher stance on technology transfer and cybersecurity. China, the key cog in the deflation machine, is the main target. Manufacturing supply chains are having to be realigned to an emerging cybersecurity cold war in which China is considered a long-term security threat. Capital, as well as trade flows, are being targeted by US politicians. This all adds up to a negative supply-side adjustment (the supply of the same quantity of goods costs more) and it impairs the way US monetary policy transmits into China. Capital is more hesitant to flow into China, just as Chinese exports to the US are under pressure. Both these reduce the deflationary feedback of US monetary policy, at the moment when economic policy is, in its own right, becoming more directly inflationary. The combined forces will take markets by surprise.

If you believe, as most investors do, in the secular stagnation thesis, then the structural features of the global economy, such as ageing demographics and IT, set the inflationary potential of the system. These structural features, all pointing to deflation, appear immutable. They overwhelm any changes to the policy regime – a re-run of Japan in the 1990s, or the industrial revolution in the late eighteenth and early nineteenth century.

If Japan is your map, then a shift in the policy regime doesn’t impact the structural inflation regime; rather, it is an attractive palliative to these structural forces. But Japan is

the wrong map; the US in the 1960s and 1970s is a better template for what lies ahead.

The ‘when’ question: preparing for the inevitable

It’s always easier to identify that an inflection point is on the way, than it is to say either when it will happen, or what precisely will trigger it. This is why Ruffer portfolios – dominated by the need to protect against the mischief we see – are essentially indifferent to the market direction in the period, however long or short, before the inflection point comes. We see inflation protection as an essential component of the all-weather portfolios we seek to build – if inflation is really rising then bonds and equities are likely to fall together, as interest rates pick up.

The path is now shifting to one that makes inflation inevitable. The journey to inflation will not be smooth. It will likely involve another financial crisis, a crisis that creates the collective will that moves us to a new policy regime.

It is impossible to say whether inflation will manifest itself before or after a crisis, so we own the protection now, even though there are few obvious signs of it being required just yet.

For the markets, liquidity is the primary axis of vulnerability; asset managers, rather than the banks, are the primary venue.



The trigger for a liquidity-led crisis could either be monetary policy tightening – we got a glimpse of this in Q4 2018 – or an exogenous shock. The shock – a rapid escalation in US-China trade tensions, or swing to the left in the US election, for example – forces a sudden reassessment of the risk of recession or default, and triggers outflows from credit, leading to a sharp tightening of financial conditions.

In the absence of a shock, it will take the emergence of genuine inflation risk for markets to break.

The journey to higher inflation may be gradual, then sudden

The inflationary road to ruin is best captured by Ernest Hemingway. In *The Sun Also Rises*, one of the characters is asked, “How did you go bankrupt?” His reply: “Two ways. Gradually, then suddenly.”

Gradually – fiscal policy is already being tentatively added to the policy mix in the current cycle. We see this happening in the UK, Europe, Japan, China and, likely again in the US after the 2020 election. Allied to extremely loose financial conditions, and central banks becoming more tolerant of inflation overshooting their targets, this is likely to support nominal GDP growth. Growth itself is beginning to benefit from a turn in the global industrial production cycle. Any diminishing of uncertainty around trade and Brexit will reinforce this positive cyclical dynamic.

Policymakers will be emboldened by their fiscal activism. Voters will vote for more of it. Inflation itself will start to surprise on the high side. This gradual inflation eventually triggers a policy tightening, which triggers a liquidity crisis in markets.

Suddenly – the financial crisis will jolt policymakers into monetary-fiscal coordination. This time it will be Main Street’s QE rather than Wall Street’s QE, allied to fiscal policy. This will complete the transition, allowing a sudden inflation to emerge.

The conclusion? Prepare for an inevitability

It isn’t controversial to say monetary policy is almost out of road. Not only because it is theoretically out of road, but also because policymakers are beginning to see that we’re on the wrong road.

Central banks are backing away from the idea of deeply negative interest rates. Instead they are calling on governments to use fiscal policy more actively. Governments, for their part, are happy to oblige given the political pressures of populism and climate change.

For most observers, this is a welcome development in the face of secular stagnation’s deflationary influence.

To us, it represents the dismantling of a deflationary machine that has, for the past 30 years, engineered lower and lower interest rates. It’s important to remember that these deflationary forces have been kept at bay in the real world by unsustainable levels of borrowing, an unsustainable structure of global economic activity, and unsustainably low interest rates – and this has led to a massive re-rating of asset values. To predict an end to the deflationary machine is to predict dislocative markets – unseen since the de-rating of equities between 1972 and 1975.

Few people fully appreciate Claudio Borio’s insight that inflation-targeting monetary policy has been a propagating force at the core of this machine. The forces of deflation have been as much driven by monetary policy as they have been by structural factors.

If Borio is right, and we believe he is, then changes to the monetary and fiscal policy regime



– the end of the inflation standard – will have a profound impact on the characteristics of the system as a whole. The structural forces of deflation suddenly appear less immutable.

A shift to fiscal activism, particularly if it is decisively signalled, will move us into a regime with much higher inflation potential. Given the political-economy pressures faced by governments, we believe this shift is inevitable. As my colleague Peter Warburton puts it in his forthcoming article in the 2020 Ruffer Review: “Inflation, long viewed as an ancient peril to be eradicated, has been re-cast as the agent, probably the only viable agent, of income and wealth redistribution.”

If this is accompanied by a negative supply side shock – caused by, say, protectionism and disruption to supply-chains – then inflation will emerge more easily.

By contrast, financial markets, capitulating to the secular stagnation narrative, have wired themselves – both actively and passively – to the wrong inevitabilities. To low interest rates forever. To asymmetric central bank reaction functions. To a negative bond-equity correlation.

A financial system which is now structurally intolerant of inflation faces a political-economy regime change which makes inflation an imperative. There are two opposing inevitabilities. And inflation is the only winner.

Here is how Ben Bernanke put it in November 2002¹³: “Under a fiat (that is, paper) money system, a government (in practice, the central bank in cooperation with other agencies) should always be able to generate increased nominal spending and inflation, even when the short-term nominal interest rate is at zero.”

Once governments and central banks cooperate, inflation will win out. The new political-economy regime will have much more in common with the 1970s than it does with the financial world of today.

While inevitable, the journey to inflation will be bumpy because it will involve a financial crisis with the asset management industry as the

epicentre of stress. The policy response to this crisis will likely be forceful monetary financing under the banner of Modern Monetary Theory, or Helicopter Money, or People’s QE. It will mark the beginning of a new, more inflationary regime dominated by fiscal policy; the era of technocrats will be over.

The financial crisis needed to trigger this decisive shift could come from an early inflation surprise. Governments are already losing their aversion to running higher deficits and central banks are more comfortable with the idea of running economies hot. Alternatively, the trigger could be an exogenous shock which jumps the global economy into recession, causing a sudden reassessment of default risk, and stress in credit markets.



As we consider how best to position our clients’ portfolios for the journey ahead, I am reminded of an ill-advised commercial for Foster’s beer that screened in British cinemas in the 1990s.

It ran something like this: “Concerned about global warming?” the ad’s narrator asked. “Then a) make a donation, b) write to your MP, or c) just say bollocks to it and enjoy the sunshine while it lasts with a glass of cool Foster’s Ice.”

Hoots of laughter at the time; not funny now.

Only a minority believed in the inevitability of global warming in the early 1990s, just as only a minority now believes in the inevitability of higher inflation.

Today, many investors seem happy to sit with a beer by the swimming pool, expecting the good weather to continue.

At Ruffer, our portfolios are positioned to enjoy some of the sunshine, while being protected – and seeking to profit – from the inevitable changes to come.

¹³ Bernanke (2002), Deflation – making sure “it” doesn’t happen here

Past performance is not a guide to future performance. The value of investments and the income derived therefrom can decrease as well as increase and you may not get back the full amount originally invested. The value of overseas investment will be influenced by the rate of exchange.

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