“False beliefs and unhappy endings”

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Tonight I want to say a few words about “False beliefs and unhappy endings”, essentially a shorter version of the title in the program. In a nutshell, central bankers in the major advanced economies have been pursuing increasingly risky policies for some time. In large part,this reflects the political reality that monetary policy is the “only game in town”. Yet, in no small measure, it also reflects some long held, but false, beliefs about how the economy actually works. Moreover, absent any discipline imposed by an international monetary system (we have in fact a non-system), virtually every central bank around the world is now engaged in a process of unprecedented monetary easing. As a result, I think the global economy could now be in an even more dangerous situation than it was in 2007.

Let me begin with some more light hearted philosophising about false beliefs, before moving on to a rather darker topic - where to from here?

On false beliefs, some of you may remember that very good line of Don Rumsfeld’s. “There are things that we know we know. There are things that we know we don’t know. But there are things that we don’t know we don’t know.”

A line I like even better is something Cromwell wrote in a letter to the General Assembly of the Church of Scotland. “Brothers, I beseech you, in the bowels of Christ, think it possible you may be mistaken.”

But the best line of all is from Mark Twain. “It ain’t the things you don’t know what gets you, it’s the things that you know for sure, what ain’t so.

I think central bankers and other policy makers should be much more open to this kind of advice. “False beliefs” are possible. They should be much more aware of how little we really understand, or indeed **can** understand, about how the economy works. And, of course, along with this possible absence of understanding comes a significant potential for unintended consequences. Policymakers often don’t get what they do expect and they often do get what they don’t expect. In the very worst case, policies are followed that actually end up doing more harm than good. In that case, as the American comic strip character, Pogo, once said “We have seen the enemy and them is us.”

Having dared to quote an American icon in front of this Canadian audience, let me be even more bold by turning to another American, Yogi Berra, who merited a whole book for his famous quotations. These quotations are famous because they are understandable in spite of being based on a fundamental misconception. Good examples would be “Of course you have to go to your friend’s funeral, otherwise he won’t come to yours”. Or, “When you come to a cross road. Take it”.

Like Berra’s quotes, modern macroeconomics is also based on a fundamental misconception; namely, that it can be understood and therefore closely controlled. It is a machine in the competent hands of its operator. That has been the mind set of most central bankers and also the underlying assumption of all the formal models currently in use at central banks, the IMF and the OECD. Unfortunately, this

assumption is wrong. A philosopher would say that we have made a profound ontological error. We have failed to realize that what one can know about a system depends on its nature. And the nature of our economies is simply too complex to be well understood.

Less fundamental, but still important when it comes to approximating reality and formulating good polices, our current models are also based on a whole host of highly dubious assumptions that have been imposed either to make the model more "theoretically rigorous" or to make it mathematically more tractable. Perhaps most important, money and credit are assumed to play no role in the economy and stocks do not matter. Other important but questionable assumptions are: log linearity in functional relationships, quadratic objective functions, certainty equivalence based on the assumption of Normally distributed errors, and a strong tendency for the economy to revert to "equilibrium". What if some, or perhaps even all, of these assumptions are not true?

And as for the estimation of these models, using past data, we also have to assume that the economy is essentially stable. The future will be the average of the past. Yet this assumption would seem contradicted by our observation of a constant stream of innovations and changes in the real and financial spheres.

Taken all together, these assumptions produce highly linear forecasts. They rule out the unexpected consequences of policy choices, not least ultra easy monetary policies. In

short, in the world of the models, **really** bad things cannot happen.

How do we know in practice that there is a fundamental problem with our methodology? The first point is obvious. Bad things have happened. The downturn in 2009 was totally unexpected by most forecasters, including the central banks, as has been the hesitant recovery since. The Fed for example, has had to revise down its next year growth forecast for seven years in a row.

But a second indicator of methodological error is less obvious. I wrote a paper last year called "Is monetary policy a science? Theory and practice over the last fifty years". It was prefaced, by the way, with another Berra quote which I found totally appropriate. "In theory there is no difference between theory and practice; but in practice there is".

A notable finding of my study, confirmed by personal memories drawn from almost fifty years of central banking, was how frequently our ways of conducting monetary policy have changed over the course of the years. Generally, these changes were in response to previous policy measures failing to deliver the results intended, or producing unintended and unwanted side effects. In short, we have systematically got it wrong.

To be more specific, whether it is the objectives sought in the conduct of monetary policy, the choice of exchange rate regime, the instruments relied upon, or the assumptions made about the speed with which equilibrium is restored, these aspects of monetary policy have all changed

continuously over the years. Moreover, in light of the crisis, they could well change again. And the fact that major central banks often conduct their affairs in very different ways (eg the Feds single pillar, ECBs “two pillars” and the BOJs “two perspectives”) further indicates that treating the economy as an unchanging and controllable machine is simply ontologically unsound.

A new approach that is gaining ground is to think of the economy, not as a machine, but as an ecosystem. In the jargon, it is a “complex adaptive system” with millions of agents following simple rules, constantly interacting and constantly adapting to their circumstances. Such systems characterize car traffic, movements of crowds, the spread of crime and disease, social networks, urban development etc. These complex systems are everywhere. Nothing in nature nor society seems linear and stable, so why have we assumed that the economy does uniquely possess these characteristics?

And these complex adaptive systems share key properties that have been well studied by other disciplines. Their findings could inform economic policy makers, not least central bankers, in important ways simply by accepting that the economy is also a complex adaptive system.

First, these systems break down all the time, moreover, according to a Power Law. Bad things happen much more frequently than a Normal distribution would imply. Lesson - be prepared. Neither central banks nor governments were prepared in 2007. Nor was the Eurozone prepared in 2010.

Indeed, the crisis is still unresolved because we still lack the instruments for resolution. Not least, how do we wind down banks that are too big to fail?

Second, the trigger for the breakdown is irrelevant. Lesson - focus on indicators of growing systemic imbalances, in particular the influence of rapidly rising credit, debt and leverage. From my vantage point at the BIS, I can assert that the central banks generally failed to do this in the run up to the crisis.

Third, optimisation is impossible. We do not know enough. Lesson - try to avoid truly bad outcomes. In contrast, central banks pulled out all the stops to resist little downturns over recent decades; in 1990, 1998, 2001 and 2008. They created serial bubbles culminating in the serious problem of debt overhang that we face today.

Fourth, if the system is constantly adapting, trouble will always arise from an unexpected corner. Lesson - expect the unexpected. Why are central bankers always fighting the last war and using the same old weapon of "print the money"?

The basic inference from looking at the economy in this way is that central bankers, indeed all macroeconomists, should be much more humble than they are. Hayek made this point in his 1974 Nobel Prize lecture entitled "The Pretence of Knowledge". Keynes hinted at a similar view, specifically with respect to monetary policy, when he said in Chapter 13 of the General Theory "If we are tempted to assert that money is the drink which stimulates the system to activity, we must remind ourselves that there may be several slips between the

cup and the lip". Interestingly, two of the world's greatest macro economists, commonly described as being at odds, seemed to agree that monetary "overreach" was inherently very dangerous.

It is now impossible to deny that something has gone seriously wrong with the global economy. Moreover, for most economists, it seemed to come out of nowhere and its effects have lingered far longer than most originally anticipated.

These surprises might have been expected to generate a wholesale rethinking of prior beliefs both by central bankers and others. Keynes actually did this in the 1930's. For example, he wrote "We have gotten into a terrible muddle. We have blundered in the operations of a delicate machine, the workings of which we do not understand." He then had the courage to go on to write the "General Theory", which totally repudiated the main conclusions of the "Treatise on Money" which he had written only a few years before. Fiscal stimulus and public investment were the solutions to a Deep Slump, not monetary policy as he had previously believed.

In fact, the rethinking of previous beliefs by central bankers and others, to date, falls well short of being a "paradigm shift" even if some positive changes can be identified. We remain very much in a "muddling through" mode, with no dramatic suggestions for policy reform yet having broad support. There is no appetite for wholesale debt restructuring nor bank restructuring (eg narrow banking or the recommendations of the Chicago School) , nor for

international monetary reform, nor for questioning the net benefits of “still more” easy money after you take the undesired consequences into account.

Why is this so? Even in **normal** times, paradigm shifts are hard to achieve, as Thomas Kuhn pointed out a half century or so ago. Intellectual capital built up over a life time is not easily jettisoned. As Niels Bohr never said “Science advances funeral by funeral”. Both Copernicus and Darwin delayed publishing their work for years because they knew how much their ideas would upset the establishment. Moreover, rethinking by policymakers implies the possibility, or even the outright admission, of previous error. Understandably, they are reluctant to do so.

More recently, Daniel Kahneman has noted that big shocks to prior beliefs (ie the advent of **non-normal** times) more typically results in a retreat into those old beliefs rather than raising fundamental questions about them. This view is consistent with the current German and eurozone obsession with lowering government deficits and the American obsession with lowering unemployment. In both cases, policymakers are tryng to avoid a repeat of their respective, historical defining moment, hyperinflation in Germany and the Great Depression in the United States.

Perhaps still more important, while everyone is now aware (or should be) of the shortcomings of their previous beliefs, there is generally no agreement yet on what beliefs should replace them. In the minds of academics at least, “It takes a model to replace a model”.

Further, although I have focussed on the beliefs of central bankers tonight, let me emphasize that many other economic agents also had false beliefs that contributed to the severity of the crisis. I repeat, the economy is a complex, adaptive system. Lenders, borrowers, regulators, academics, politicians and even ordinary citizens did some very foolish things on the basis of mistaken assumptions. Unfortunately, I do not have time tonight to get into this any further.

However, the related point I do wish to make tonight is that, when it turns out that many groups contribute to a problem arising, then each agent finds it tempting to accept the view that the root of the problem really lies with others. This is a particular problem for policymakers. The Fed for example continues to insist that regulatory shortcomings were the primary problem in the US, thus implying that its own contribution, through easy monetary policies, was of no great significance.

So in the absence of a paradigm shift about how the economy works and how it should be managed, monetary policy since 2007 has been "still more of the same". It continues to assume that easy money will eventually stimulate demand and that the unintended consequences can be ignored. I think both of these propositions are extremely doubtful. Sadly, this is the point at which I must move on from "false beliefs" to "unhappy endings".

While recognizing the great contribution of central banks to restoring financial stability, early in the crisis, there are good reasons for doubting that monetary policy will prove

effective in stimulating aggregate demand over time. Much of what has been done recently smells of panic. Arguably, by increasing uncertainty, it might even have encouraged people, both companies and households to hunker down and spend less rather than more. What is more certain is that easy money works by bringing spending forward in time. However, by definition, tomorrow eventually becomes today and it is payback time. In short, inciting more spending through taking on higher levels of debt simply cannot go on forever.

And not only has debt accumulation been accelerating for over thirty years, in the advanced market economies, but global debt ratios (nonfinancial debt) have even risen substantially since 2007. Two recent comprehensive studies by the McKinsey Global Institute and the International Centre for Money and Banking in Geneva make this very clear. If the "bust" was expected to be the time for deleveraging, it has not even started yet.

Perhaps worse, half of the increase in debt since 2007 has been taken on by borrowers, largely corporations, in emerging market economies. Moreover, with US interest rates so low and the dollar falling in value (up to mid 2014), much of the borrowing was in US dollars. With the dollar now rising, a mismatch problem could threaten barring an adequate level of prior hedging. Finally, much of the proceeds went into enlarging the capital stock in sectors (like property) where profits are already under strong downward pressure.

In a nutshell, with the recent EME “boom” having turned to bust”, EMEs are no longer part of the solution. They are part of the problem. Now, the whole global economy is threatened. And in a complex and highly interdependent global economy, problems anywhere will soon become problems everywhere. And to make future prospects even more uncertain, it is all too easy to identify specific problems almost everywhere; China, Japan, the euro area, the US, and commodity producers like Canada and Brazil. Each could prove the trigger for a broader systemic crisis.

As for the unintended consequences, we are observing sharp declines in productivity growth almost everywhere and a slowdown in the formation of new businesses. I think it is not implausible that easy money has encouraged the “evergreening” of zombie companies by zombie banks which has led to this outcome. Moreover, we are all aware of how the prices of almost all assets, financial certainly but also property in many cases, have been bid up to levels where potential future losses might conceivably be severe. Who will suffer and what might be the systemic implications? We simply do not know. Monetary policy has led us into truly uncharted territory. Perhaps when (if?) the Fed starts raising rates, we will get more clarity on these issues, though we might not like what we see.

Finally with respect to unexpected consequences, the health of many financial institutions (especially in the advanced market economies) are also under threat. Bank profits, needed for capital accumulation, are being reduced by low

credit spreads and low term spreads. Pension funds and insurance companies, whose liabilities tend to be of longer duration than assets, are similarly threatened and fearful of their longer term solvency. Everywhere, there is the temptation to "gamble for resurrection", again with unknown consequences.

Let me now conclude with another quote, this one from H L Mencken, again an American but a wonderful journalist and philosopher. He once said "Explanations exist; they have existed for all time; there is always a well-known solution to every human problem—neat, plausible, and wrong." We need a debate to highlight the possibility that central bankers might have been holding on to a false belief. Printing the money might be simple and expedient in the short run, but it is not the right answer to solve our problems in a sustainable way. As a corollary, governments then must do what only governments can do, but that is the topic of another speech.

On that note, I thank you for your attention. And I wish all of you good luck. You might just need it.