BANK OF ENGLAND

Speech

When expectations meet the future

Speech given by
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The subject of this symposium is “The Next Great Crisis” by which I think we mean financial crisis.

One of the defining characteristics of humans is our ability to imagine the future, as I shall discuss later. But though we can imagine the future, we cannot know it. And I am a cautious central banker. So I will not today give you my prediction for the origin, shape and extent of the next great crisis.

I am however prepared to make one prediction with confidence. Whatever the trigger and the financial services and instruments most affected, the next crisis will have, somewhere at its centre, losses from an overextension of credit and an adjustment in asset prices.

And, for me, as Deputy Governor at the Bank of England responsible for Financial Stability, an equally if not more important question is not what will the next great financial crisis look like but whether the next and subsequent financial crises will actually be ‘great’.

Will the correction of asset prices and the losses on credit be amplified by the financial system and cause the economic and social loss we saw 10 years ago? Or, losses notwithstanding, will the system absorb them without material dislocation to the economy?

I can make the prediction that the next ‘crisis’ will have somewhere at its centre the overextension of credit and asset price adjustment because it is not a particularly bold one.

Since its invention in the temple organisation of bronze age Mesopotamia, interest bearing debt – or credit if you want to see it from the other side of the coin – has had the property of being able to grow beyond the ability, or sometimes the willingness, of the economy to repay it. Debt contracts are essentially claims on the future and the future, when it arrives, does not always honour them.

The origin of debt and credit are fascinating but unclear. It may have been an evolution of the reciprocal gift giving social obligations of early tribal societies. The etymological evidence suggests rather an evolution from the system of fines and compensation for injuries prevalent in such societies.[1] It has also been suggested that the foundation of debt is the belief that man is born with debt to the heavens and creation and debt between members of society is an extension of this idea.

In economic terms, the early debt systems and the debts themselves, painstakingly recorded in the ledger systems of the temples of bronze age Mesopotamia, appear to be primarily about what we would now call working capital and overdraft facilities in agrarian societies that produced little economic surplus – credit to tide farmers over until the harvest or through bad harvests with the debt repaid in standardised units of agricultural produce.[2]

[1] See chapter 4 of Hudson (2018)
[2] See Graeber (2011). An interesting example is Mesopotamian alehouses which seem to have been run on a seasonal credit system that would put to shame the average pub’s willingness the run a tab. See also, Item 15, ‘clay writing tablet’ in MacGregor (2010).

This stock of debt periodically got beyond society's willingness or ability to repay.[3] We know this because of the practice of Mesopotamian rulers declaring debt amnesties to wipe the debt slate clean.[4]

Much has been written on the debt amnesties and Jubilee mechanisms of ancient near eastern societies. That such reset mechanisms existed and were used is clear. The motivation may have been a moral one. It may have been a way of rulers preventing large numbers of the population falling into destitution and debt bondage and as result being unable to fulfil other necessary societal functions. Or simply a way to reset the balance of economic power in society before it was reset in a more violent way.

Whatever the motivation, the point is that debt in its early life had a tendency to grow beyond what in the end turned out to be the ability to repay or to repay without profound social or economic change.

The more recent historical record shows similar examples of major adjustment of debt when the future turned out to be unable or unwilling to pay. The trigger for the adjustment was often an unforeseen or 'exogenous' event that changed the economic fundamentals.

The re-imposition of long forgotten constraints on the ownership of land seems to have triggered the great financial crisis of AD 33, leading to fire-sales and a crash in land values, default of leveraged landowners and a credit crunch throughout the Roman Empire.[5]

The default by King Edward III of England on the massive amounts he had borrowed from the leading Florentine banking families contributed – along with a bank run by the Neapolitan nobility and the bankruptcy of the Florentine Commune – to the Florentine credit crunch of the 1340s. Edward borrowed to finance what became the Hundred Years War and defaulted when it became apparent that he could not win the war and capture the revenues he needed to repay the debt.[6]

The adjustment has sometimes been triggered from within the financial system itself. Charles Kindleberger's seminal work on financial crises documents a number of credit-fuelled investment manias and bubbles in which the trigger was simply a change in sentiment about the value of the asset leading to the drying up of credit or greater fools prepared to finance further speculation.[7]

[3] This may well have been because debt with compound interest grew much faster than the productive capacity of agrarian economies. See Hudson (2018).
[4] A similar debt reset mechanism for the ancient Israelites, was provided by the Jubilee set out in the Old Testament. And when debt and credit technologies subsequently transferred to ancient Greek societies, similar problems emerged. See Graeber (2011) and Hudson (2018).
[5] See Frank (1935)
[6] See Cipolla (1982)
[7] These are documented in the appendix of Aliber and Kindleberger (2005).

Whatever the trigger, the point is that widespread correction of debt and asset prices and consequent loss of wealth may not happen often but it does seem to happen periodically. In other words, it is not what today we would call a 'bug' in the system that subsequent improvements will correct. Rather, however unwelcome, it is a feature of the system.

The question for those of us concerned with financial stability is not so much whether we can prevent such adjustments happening. The question is more whether we can identify and understand the drivers of what, when the future arrives, turns out to be over extension of credit and overvaluation of assets. And how, in the light of that, we can ensure corrections can happen without the major economic dislocation that we call loss of financial stability. The underlying driver of course is that expectations about the future turn out to be incorrect.

Human beings are probably unique in being able to imagine the future. I say 'probably' because there is some academic evidence that suggests that some animals may, to a limited degree, share our ability to engage in what has been termed 'mental time travel' – the ability we have in our minds not only to recall the past but also to form expectations about the future.

The development of 'episodic memory', our ability to remember personal experience is linked to our ability to use the past to contextualise the present and imagine what will happen. "Memory allows us to use the past to create the future." [8]

It is an imperfect tool. We can imagine the future, or a range of possible futures, but we cannot know it. And, as research evidence is increasingly demonstrating, what we remember is by no means a perfect or reliable record. Our memory of past experience is malleable and changes in the light of what we are experiencing in the present: "you don't remember what happened. What you remember becomes what happened".[9]

Imperfect or not, mental time travel no doubt evolved because it gave us advantages and is fundamental to our development as a species. It is also fundamental to the development of culture and society. And of course, to the development of our economic life which is inextricably bound up with our ability to envisage the future and our expectations of it. Inter-temporal contracts are helpful given the fact of the life cycle and the time it can take to create economic value.

There are many obvious examples of this. One, dear to the heart of central bankers, is how past experience can affect expectations of future inflation which in turn affect behaviour in the present.[10] Another is the role that income expectations play in demand.

[8] Clayton and Wilkins (2017)
[9] From *An abundance of Katherines* by John Green as quoted in Clayton and Wilkins (2017).
[10] See, for example, Malmendier and Nagel (2015)

There is a lively debate in economics post the great financial crisis on whether the way humans perform mental time travel has any bearing on how we form expectations in the world of economics and financial markets.

The most common framework used in economic models for this is to assume that we are rational. That is, that we know the range of outcomes that might happen and how the economy works and, insofar as is possible, given uncertainty, that we correctly analyse the available information to weight the probability of those.

A famous corollary of this is the efficient markets hypothesis – that it is not possible to systematically 'beat the market'. The stronger form of the hypothesis posits that market prices fully reflect all available information – that the price reflects the likely future revenue streams. But even if the price does deviate from that fundamental level, it may be rational for investors to remain in the market – as Chuck Prince famously put it, to keep dancing so long as the music is playing. The rewards of the game may be worth the risk of being stuck without a proverbial chair at the end. And even if they are not, sitting on the sidelines may not be a winning career move if promotions and funding flow to those with a reputation for high returns. It may be rational to stay with the herd, as Keynes said "it is better for reputation to fail conventionally".[11]

Rational expectations do not mean that the future matches expectations and corrections are avoided – when new information arises, agents react to that. If the information is material for a financial asset, for example a change in Roman property ownership laws in AD 33, the adjustment can be large.

And as Ben Bernanke drew out in 1983, the financial system can amplify those movements, such that relatively small news can create crises for the financial system and it is the impaired financial system that then does the severe economic damage.

And the rational expectations view of the world is even compatible with purely self-fulfilling crises, triggered not by a change in fundamentals but rather by a change in confidence. The classic model of a bank run is entirely rational; since there may not be enough liquidity to repay all depositors if all of them try to withdraw their money at once, each depositor has an entirely rational incentive to get their money out first if they think there will be a run.[12]

[11] That quote comes from Chapter 12 of his General Theory, another quote attributed to Keynes, but harder to source, is also relevant here: "markets can stay irrational longer than you can stay solvent". Or as Warren Buffet has put it: "As a group, lemmings have a rotten image, but no individual lemming has ever received bad press." Relatedly, Aikman et. al. (2015) develops a model showing how career concerns could motivate rational bankers to make more risky investments when economic fundamentals are good.
[12] Diamond and Dybvig (1983)

But there are many studies showing that the predictions of rational expectations do not hold. Something else seems to be driving expectations. Households, businesses, and investors will often extrapolate the recent past to form their expectations of the future – if house prices have been growing, they consider further growth more likely.[13] Robert Shiller's 2000 book, *Irrational Exuberance*, demonstrated how there had been a clear, *negative* correlation between price to earnings ratios for US stocks in the 20th century and realised returns in the following ten years. At the time of publication, US stock markets had record high price to earnings ratios of more than 40 times – soon to be followed by the dot-com crash.

Asset price bubbles and investment manias are often attributed to such 'extrapolative' expectations.[14] In the first stage investors extrapolate from past performance which pushes up the price of the asset. A bubble dynamic then develops in which investors are drawn to buy the asset not for the extrapolated underlying performance but for the very short term capital appreciation. As the price growth represents demand for the asset based on the past behaviour of its price – and not information about what it will yield in the future – it will not be sustainable. These are of course very different views of how expectations are formed. Where prices in a rational expectations model are fully forward-looking (future performance determines today's price), prices in an extrapolative world are fully backward-looking (past performance determines today's price).

To put it in terms of mental time travel, in the pure rational expectations world memory of past experience, with all its attendant imperfections, does not play a role in the formation of expectations whereas in an extrapolative world it does pretty much all the work.

Some research and casual observation suggest that a mechanical assumption of extrapolative expectations does not fit reality.[15] True, there are many instances of 'momentum' in markets that rational expectations cannot explain.[16]

But there is also plenty of evidence that markets and investors do also factor news into prices. The much criticised theory of rational expectations was a reaction to '[t]he implicit presumption in these … models … that people could be fooled over and over again,' as Robert Lucas said in 1995 in light of winning the Nobel Prize for this work.[17] Lucas was commenting in the context of inflation surprises – but the same holds true for other areas like debt default.[18]

[13] See, for example, Shiller (2007)
[14] I am using extrapolative expectations here in a broad way to mean expectations that are based on the past experience continuing. There is a broader question of whether expectations reflect learning and adapt – that is, learn from the past without assuming that the future will follow the past.
[15] Kahneman and Tversky (1973) famously shows how humans are neither rational nor mechanical in making predictions, rather applying (oft-mistaken) judgment. Williams (1987) reports various experiments testing how market participants form price forecasts, rejecting both rational expectations and extrapolative expectations models.
[16] See for example Lovell (1986)
[17] University of Chicago (1995)
[18] Sovereign defaults are a fascinating example throughout history of the complexity of expectation formation – on the one hand, there are many examples of investors having long memories. Louis XI faced a very high cost of borrowing because of repeated defaults and similar pressure encouraged William III to the creation of the Bank of England. On the other hand, there are many instances of investors lending repeatedly to sovereigns that have defaulted repeatedly.

Pedro Bordalo, Nicola Gennaioli and Andrei Shleifer have recently posited a model of expectations that acknowledges our tendency to extrapolate from the past, but also allows for the use of forward-looking information.[19] It endeavours to integrate insights from behavioural economics into a rigorous economic model. They have embedded the work of behavioural psychologists that shows that while we do use news to form expectations of the future, we have a tendency to over-weight certain types of news. And that the way we remember can lead to certain risks being neglected or undervalued when we project the future.

They use this model to explain the development of expectations in the run-up to the great financial crisis 10 years ago, expectations which they demonstrate were clearly not rational in the light of available information. The economic model they have developed – of 'diagnostic' expectations – is appealing because it starts from research on how humans form beliefs about the future, and how they act on those.

The way in which investors and markets form expectations of the future is clearly an area that merits further research. As I will go on to discuss, it is important to those of us responsible for financial stability to understand what is driving the expectations of the future that underlie risk-taking And what drivers kick in when those expectations meet the future and have to be adjusted.

Macroprudential Policy

As I said at the outset, I expect the next 'crisis' to involve some form of over-valuation of assets, over-extension of credit and losses when this corrects. While infrequent, significant adjustments seem to be a feature of the system. The more important question, in my mind, is whether those adjustments destabilise the financial system and lead to very disruptive economic impacts. Will adjustments lead to 'great financial crises' as they did 10 years ago or will the system be able to absorb the adjustment and perhaps even dampen its impact?

In the first instance, it does not matter whether expectations are rational and are then significantly adjusted because of 'news' or whether they are irrational and extrapolative and get adjusted because reality has caught up. Either way, the costs of financial crises can be minimised and perhaps avoided if the system is resilient to shocks that are possible even though they are very unlikely. And they can be further minimised if we can ensure that when the adjustment and loss occurs, other features of the financial system do not amplify and spread the stress.

The great, post crisis, programme of reform of financial regulation, that is now well into its implementation had precisely this objective. Much stronger prudential rules require banks to have capital and liquidity to enable them to take losses and withstand liquidity stress in excess of the losses and stresses encountered in the financial crisis.

[19] Bordalo, Gennaiolo and Shleifer (2018)

Major UK banks now have capital ratios that are more than three times higher than before the financial crisis and their short-term wholesale funding has fallen from being more than 15% of total funding in 2007 to less than 5% today. In the UK, the Financial Policy and Prudential Regulation Committees of the Bank of England annually test the core banking system against a very severe but plausible stress – a scenario in which banks have to withstand a combination of 'tail risk' domestic and global economic and financial market shocks.[20] The scenario for the 2019 test, announced this week, includes a deep recession in the UK with GDP falling by 4.7 % from peak to trough, house price falls of 33%, falls in commercial real estate prices of 41%, recessions in the Euro Area, the US, and China and market stresses including a 41% fall in equity prices and a nearly 400bps widening of investment grade spreads.[21]

Last year, alongside the annual stress test, we also developed a worst case, disorderly Brexit economic scenario to give us confidence that the core banking system could withstand the losses and stresses that such a scenario would generate.

We have also tackled the features of the financial system that amplified and spread the stress of the original losses. The systemic banks at the heart of the system have been capitalised to a higher standard, not because they are more risky but because of the impact on the rest of the system if they fail. In addition resolution regimes are being implemented to enable banks to fail safely, without disrupting the critical economic functions they provide – and without the taxpayer having to cover the losses.

And firms' derivative exposures are now more robustly collaterised ex ante and in large part cleared through central counterparties to prevent the procyclical spiral of demands for collateral (margin calls) that spread stress throughout the system as confidence in creditworthiness declined. 90% of new OTC single-currency interest rate derivatives are now centrally cleared in the US. And an additional $1 trillion of collateral is now held globally against all derivative trades.

These reforms have been built around internationally agreed standards and other jurisdictions have taken similar steps. While we might not be able to predict the extent, nature and trigger of the next crisis, we have much greater assurance now that the financial system could weather very substantial corrections in credit and asset values without failing in the way it did 10 years ago.

The FPC has also focussed on borrower, as well as lender, resilience. As we saw in the crisis, significant cohorts of over-leveraged borrowers cut consumption when hit by a shock which can deepen and prolong the loss of economic output and, in turn, add to the pressure on the stability of the financial system.[22]

[20] Stress tests might also serve the useful function of reminding bankers, and policy-makers, that tail risks exist and can be very expensive.
[21] The scenario is set out in full in Bank of England (2019)
[22] In 2014, the FPC took action to insure against the build-up of highly indebted borrowers in the UK housing market, see Bank of England (2014), and also Bunn and Rostom (2015) and Mian and Sufi (2014).

In this extremely important sense, we have moved on from an approach that argues that because we are not able to identify when financial sector risk-taking is unsustainable, the best course is to wait until the adjustment happens and vigorously mop up afterwards.

What has proved more difficult has been using macro prudential policy in a time-varying, counter-cyclical way. It is pretty clear, as I have said, that one characteristic of the system is a build-up of leverage, growth in asset prices and risk-taking over time followed by a correction – a characteristic we describe as the 'financial cycle'. It is desirable therefore to increase the resilience of the system, its ability to withstand losses, as risks build up. But it takes time to build up resilience and identifying where we are in the financial cycle, and the risk of a correction, is a very challenging task.

We are not wholly without indicators.[23] Empirical evidence, for example, suggests that rapid debt growth is a forward indicator that a correction is approaching. Research, including recent Bank work, shows that a build-up in credit predicts worse recessions. The level of debt, in contrast, seems to matter much less as an indicator of a turn in the financial cycle, though it does seem to matter as an indicator of the extent of the correction and the consequent damage to the economy.[24]

We also have a wide range of other economic and financial indicators, such as asset prices and credit conditions. We can estimate how far these are above or below an equilibrium value to help us make an assessment of where we are in the financial cycle. And, of course, macroprudential policy makers need to apply their judgment.

The Financial Policy Committee of the Bank of England uses all of these approaches to make its assessment of the level of risk or, to put it another way, where we are in the financial cycle. And we use that assessment to inform our stress test of the core banking system so that the test becomes more severe, with higher losses and greater stress, when we judge the risks in the financial system are getting higher.

But we would, in my view, benefit greatly in this area from a better understanding of how the expectations of the future that inform financial sector risk-taking are formed, the ability to use that understanding in modelling the financial cycle and better real-time information on the evolution of expectations.

And such an understanding of what drives the formation of our expectations in this area, might also help us to decide whether, as well as using policy counter-cyclically to build resilience in the system as risks grow and release it as risks crystallise, we should use policy more actively to 'lean against the wind' – to discourage and dis-incentivise any build-up of expectations that appear to have formed irrationally.

[23] See Carney (2019) for an illustration of some key indicators for a range of major economies over the past four decades.
[24] See, for example, Bridges et. al. (2017) which looks at a sample of 130 downturns since the 1970s, across advanced economies While it finds some evidence of a role for the level of indebtedness, credit growth is found to be a more significant predictor, with rapid credit growth predicting worse recessions: longer with lower GDP per capital, higher unemployment, and more lost productivity.

All of this, perhaps, seems very theoretical compared to your essay question of "What will be the next great financial crisis?" So I will try now to relate some of these issues to our current assessment of financial stability risks facing the UK.

UK Conjuncture

The most prominent short-term risk facing the UK today of some financial sector correction is the possibility of an extremely disorderly Brexit. Such an outcome may not be what we expect to happen or what is likely to happen but rather the worst possible case.

The risk has not been generated by the financial sector. But, if it occurred, it would almost certainly lead to a correction in UK asset prices and losses for UK banks.

The task of the FPC has been to ensure that such a correction, were it to occur, would not lead to a UK financial crisis. We have tested the banking system to equal and greater stresses to give us the confidence that while losses would occur, unlike 10 years ago, the system would have the capital to absorb them.

We have required the banks to hold liquidity, in the currencies that they would need, to withstand a liquidity stress greater than that experienced in the financial crisis. And the Bank stands ready to provide liquidity in all major currencies.

And, with other UK authorities, we have ensured that regardless of the Brexit outcome there should not be disruption to the provision of financial services in the UK by EU firms.

The Financial Stability Reports of the FPC over the past 18 months have set out the actions that have been taken. The Record of the Financial Policy Committee's February meeting, published earlier this week, makes clear the Committee's assessment that the core of the UK financial system is resilient to, and prepared for, the wide range of risks it could face, including a worst case disorderly Brexit. And it also made clear that in the event of such a shock crystallising, it would be prepared to release the countercyclical capital buffer (CCyB).[25]

In short we have acted to make sure the system is resilient to a worst case major economic shock from Brexit. That does not mean losses would be avoided. Or that it would be without volatility: financial stability does not mean market stability. But it does mean that the financial system would not contribute to and amplify the shock, and would be able to continue to provide critical economic services to the economy.

[25] The CCyB is one of the major new regulatory tools introduced after the crisis – allowing regulators to vary system-wide bank capital requirements over time. Bank of England (2016) sets out the FPC's approach to setting the CCyB.

It would of course be very valuable to know how markets and investors have formed their expectations of a Brexit outcome and its consequences and how big a correction in any direction might occur if those expectations were not met. But I am not sure it would have changed much how we have acted over the past 18 months.

Brexit apart, the risks facing the UK from a correction of the financial cycle are less obvious and more difficult to assess. The overall level of debt in the economy is high by historical and international standards. But as I and my colleague Ben Broadbent have pointed out, there are reasons to believe that the sustainable level of debt may now be higher than in the past.[26]

We are not experiencing the very rapid credit growth, which as I have noted seems empirically to be a more reliable indicator of an impending correction. Aggregate credit to the household sector is growing broadly in line with nominal GDP, whereas before the crisis it grew for a number of years at double the rate of GDP.

And despite some recent correction, asset prices in international financial markets do appear high, as they have done for a number of years, and are vulnerable to a repricing; and there are potential triggers from other international risks. But the FPC assessment is that the domestic risks are 'standard'.

However, while domestic credit overall is growing at the same rate as the economy and debt to income levels are not rising, there have been signs that risk appetite has been growing quite fast in certain areas.

Unsecured credit to households, 'consumer credit' grew by over 10% in the year to November 2016. How much of a signal should the FPC have taken from this? Consumer credit accounts for a relatively small proportion, less than 15% of household debt and less than a quarter of new lending to households.

Subsequent analysis by the FPC and the PRC revealed something quite suggestive of extrapolative expectations. Lenders were reducing interest rates, that is, their compensation for risk, and at the same time lending to higher risk segments of the market. They appeared to be basing this higher risk appetite on a marked fall in the rate of defaults on consumer loans over the past five years that they attributed to a structural improvement in the underlying creditworthiness of consumers since the crisis. However, the improvement in default rates also reflected the macroeconomic environment over the period of sustained employment growth and low interest rates and lenders appeared to be underestimating the losses they would incur in an economic downturn.[27]

The growth rate of consumer lending has fallen back, very possibly as a result of FPC and PRC action to correct this underestimation of risk.

[26] Broadbent (2019) and Cunliffe (2016)
[27] These findings were set out in full in Bank of England (2017)

We have in recent years seen other signs of growing risk appetite. Spreads on UK mortgages have come down noticeably over the past few years while loan to value and loan to income multiples have gone up.[28]

The increased risk appetite of mortgage lenders has not been matched by increased demand by house buyers. The number of mortgage transactions has remained pretty static over the past few years, one of the reasons why overall credit to households is not growing rapidly. Demand may currently be constrained by Brexit uncertainty. It could accelerate if and when Brexit uncertainty is resolved in which case aggregate credit could begin to grow quickly and the FPC would need to consider how to respond.

One can explain the increase in mortgage lender appetite by fierce competition in the mortgage market, generated in part by changes in the structure of UK banks following the implementation of ring fencing. But should we also infer any signal about sentiment and expectations?

One could ask a similar question about the very aggressive growth in leveraged lending to corporates in the US, which in 2017 spread to the UK.[29] The stock of UK leveraged loans is estimated to have grown by about a third in the year to 2018 thanks to gross loan issuance in that period which was nearly 70% larger than the preceding 12 months. This has been accompanied by a very marked reduction in underwriting standards for these loans, a large proportion of which have been securitised and sold to international investors. Overall, credit to UK corporates is growing pretty slowly and leveraged loans are a relatively small proportion of total lending to corporates; so what does the explosion of activity in the UK leveraged loan market tell us?

A better understanding of what drives the formation of expectations in this area might also help us to decide how to react to these 'pockets' of increasing risk appetites. Should we treat them as idiosyncratic and unrelated and respond to them as such? Or should we view them as or straws in a wind that will increase in force and respond by strengthening our walls and perhaps leaning a bit in the other direction?

Conclusion

Journalists frequently ask people in my dismal profession: "What keeps you awake at night?" They do so, of course, not out of interest in the sleeping patterns of central bankers but because they want to know, quite reasonably, what we fear the next disaster, the next great crisis, will be.

And, of course, at any given time there are vulnerabilities and unknowns that one is concerned about more than others.

[28] According to the FPC core indicator which tracks the mean over the median (that is, the average of the top half of the distribution). It is also true in the sense that the proportion of borrowers with high LTIs and high LTVs have been rising.
[29] Leveraged lending typically refers to loans to non-investment grade firms that are highly indebted (debt of more than four times EBITDA) or are owned by a private equity sponsor.

I might have talked today about the rapid and extensive evolution of market-based finance in recent years such that it now accounts for nearly half of the international financial system. It carries different and perhaps lesser risks than the banking system. But we know much less about how it might respond in stress and have fewer policy tools to address vulnerabilities.

I might equally have talked about cyber risk or the impact of a credit correction in China. It is of course the job of policymakers like me to assess and address potential vulnerabilities like these, and we report on them regularly. But to me the bigger point is that at some point, in some way a correction will be triggered when the future, for whatever reason, does not match up to expectations of those who have lent and borrowed and bought assets. Our fundamental task is to ensure that when that happens, the correction can be absorbed and does not lead to a ‘great crisis’, as it did 10 years ago, with all the social and economic loss that entails.

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