
THE REITH LECTURES 2020: HOW WE GET WHAT WE VALUE
Reith Lecturer: Dr. Mark Carney, former Governor of the Bank of England

Lecture 2: From Credit Crisis to Resilience
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Anita Anand: Welcome to the second of the 2020 BBC Reith Lectures with the former Governor of the Bank of England, Mark Carney. Now, his series focuses on the way financial values have come to dominate human values and where that leaves us, and what we might do about it.

Today, Mark Carney is going to take us back to the near total implosion of the banking system in the autumn of 2008. He's going to argue that a deeper crisis in our values underpins that unforgettable lurch towards the abyss and, more than a decade on, he's going to examine how we can prevent another financial meltdown. This second lecture is called: From Credit Crisis to Resilience. Please give a very warm welcome to the BBC's 2020 Reith Lecturer, Dr Mark Carney.

(APPLAUSE)

Dr Carney: It's hard now to remember how different things were in August 2007. The New World Order promoted by the United States had delivered seemingly effortless prosperity. The Washington consensus, centred on free markets, free trade and open capital markets, reigned supreme. The United Kingdom was in its fourteenth year of uninterrupted growth and Central Banks were congratulating themselves on delivering the Great Moderation. In the financial sector, bankers saw themselves as masters of the universe. Risk was thought to have been spread evenly across the globe to the miracle of subprime securitisation. Light-touch regulation projected trusting, if somewhat envious, citizens, and then, a couple of obscure European synthetic credit funds stopped dancing to the music and though few recognised it at the time, the worst financial crisis since The Great Depression had begun.

Jean-Claude Trichet, then President of the European Central Bank, was fond of telling a story of his fellow central banker who was then taking a long scheduled walking holiday in Scotland. With his Blackberry having run dry and anxious for the news, this central banker went into a local shop and asked the woman behind the counter, "Do you have the Financial Times?" "Yes, sir," came the reply. "Would you like yesterdays or todays?" "Well, Madam, I'd very much prefer today's."

"Well, then come back tomorrow."

But Trichet’s colleague couldn’t wait. He had to go straight back to Frankfurt to join an unprecedented initiative by the European Central Bank to pump billions and billions of euros of liquidity into their money markets, because he knew that a quick tug on the loose threads that started to appear that August didn’t just unravel a sweater but a whole wardrobe, and not just any wardrobe but a walk-in closet, positively Kardashian in its expanse.

Within a year, a series of storeyed institutions, from Northern Rock to Lehman Brothers, had failed or been rescued by the State and the world economy was in freefall. The future arrived with a bang, from great moderation to great recession, from boom to bust, from confidence to mistrust, and the consequences were severe. A lost decade. Real household incomes in the United Kingdom did not grow at all over the following 10 years. The worst performance since Karl Marx was scribbling the Communist Manifesto in the British Library. There was growing fragmentation of the global economy. The third wave of globalisation crested with that financial crisis and since then, growth in trade and capital flows have slowed sharply and the multilateral trading system has been unwinding, and there’s been growing mistrust of experts.

A financial system, lauded by most economists and policy makers, as well as all bankers, came crashing down on the heads of ordinary people, some of whom are still suffering the consequences, and they, like Her Majesty The Queen, wondered why did no-one notice it? The fault lines these experts missed would have been familiar to students of financial history, too much debt, excessive reliance on markets for liquidity, Byzantine complexity, regulatory arbitrage and misaligned incentives. Most economists, financiers and policy makers missed these growing vulnerabilities because they were involved in the great project of completing the financial market universe with the precision of physicists. You see, economists, myself included, generally suffer from physics envy. We covet its neat equations and crave its deterministic systems, and this inevitably leads to disappointment. The economy isn’t deterministic. People aren’t always rational. Human creativity, frailty, exuberance and pessimism all contribute to economic and financial cycles.

As the great physicist Sir Isaac Newton lamented, “I can calculate the motions of celestial bodies, but not the madness of people.” Newton’s exasperation came after he’d lost a fortune investing in the South Sea Company or, more precisely, after he had speculated on one of the greatest financial bubbles ever. Newton would have benefited from something I learned early on in my career in finance from a gentleman named Bob Hurst, who was then one of the partners at Goldman Sachs. Bob’s rule was if something doesn’t make sense, it doesn’t make sense. Beneath the sort of Popeye-esque tautology was real wisdom. His point was that if someone explains something to you in finance, such as a flashy new product or why a company’s valuation should be orders of magnitude higher than others in their sector and it doesn’t make sense, ask the person to repeat the rationale, and if that response still doesn’t make sense, you should run. Newton didn’t run, an inertia all too common throughout history, because something that starts as fundamentally innovative ends up being pushed to ridiculous extremes. Belief turns to madness, momentum is everywhere, value loses touch with fundamentals and everything becomes relative.

And so it was in the run-up to the global financial crisis. The new era of thinking in the first decade of the millennium was grounded in very real boost to prosperity from global integration and technological innovation. Now, that initial success bred complacency and the infrastructure of markets didn’t keep up with innovation. Increases in the buffers of banks lagged behind the explosive growth in their balance sheets. Few masters of the universe focused on the longer term consequences of their actions. Market failures and human frailties were ignored. Moral sentiments turned into market sentiments. This was not merely a technical failure. This was a crisis of values, as well as value. The pre-crisis era was an age of disembodied finance where markets grew far apart from the households and businesses they ultimately served. See, in most professions people see the real impact of their work. Teachers witness the growth of their students, farmers that of their crops. When bankers become disconnected from their ultimate clients in the real economy, they have no direct view of their impact. Before this crisis, traders began to see the numbers on their screen as a game to be won, ignoring the consequences of their actions on hundreds of millions of mortgage holders and company borrowers.

Value was relative and values suffered. Markets built on markets were not just financially but ethically fragile. See, financial history rhymes all to frequently with enormous costs. Eight hundred years of economic history teaches that financial crises occur, roughly, once a decade. In finance, institutional memories are short. Lessons that are painfully learned during busts are gradually forgotten as new eras dawn and the cycle begins anew, and this is a depressing cycle of prudence, confidence, complacency, euphoria and despair, and it’s a cycle which reflects the power of the three lies of finance. The first lie is the four most expensive words in the English language, “This time is different.” This misconception is usually the product of an initial success, with early progress gradually building into blind faith in a new era of effortless prosperity. Several factors drove the debt super cycle in the run-up to the financial crisis, including demographics and the stagnation of middleclass real wages, that itself a product of technology and globalisation. Households had to borrow to increase consumption. “Let them eat cake,” became, “Let them eat credit.”

Financial innovation made that easier and the ready supply of foreign capital made it cheaper. Most importantly, and this is the lie, complacency amongst individuals and institutions, complacency fed by a long period of macroeconomic stability and rising asset prices, made this remorseless borrowing seem sensible. A deep-seated faith in markets lay behind the new era thinking of the Great Moderation. Captured by the myth that finance can regulate and correct itself spontaneously, authorities retreated from their regulatory and supervisory responsibilities. This leads to the second lie, the belief that the market is always right. This has two dangerous consequences. First, if markets are efficient we can identify bubbles or address their potential causes. Second, if markets always clear they should possess a natural stability, and evidence to the contrary must be the product either of market distortions or incomplete markets, and such thinking dominated the practical indifference of policy makers to the housing and credit booms before the crisis. Much of financial innovation springs from the logic that the solution to market failures is to build new markets on old ones, an attempt at progress through infinite regress.

During the Great Moderation this view became an organising principle for financiers and policy makers, and the latter pursued a light-touch regulatory agenda in the quest for a perfect real world of complete markets, first described as “abstract theory” by two economists, Arrow and Debreu. This is a world of rational agents coolly calculating odds over all future possible states of the world, trading contracts with each other that are frictionlessly enforced in achieving mutually beneficial, indeed socially optimal, outcomes.

Of course, markets only clear in text books. In reality, as Newton learned at his cost, people are irrational and economies are imperfect, and when such imperfections exist, adding markets can make things worse. A truth of finance is that the riskiness of an asset depends on who owns it. When markets don’t clear, financial institutions may be surprised to find what – find out what they own and for how long, and when those surprises are or are thought to be widespread, panic ensues. The impossibility of completing markets was not the only practical problem with the pre-crisis approach. Even if markets could be perfected, nature itself is unknowable.

Newtonian mechanics breakdown at the subatomic level and the search for the grand unifying theory of everything that matters persists in physics to this day. Market fundamentalism relies on people being able to calculate the odds of each and every possible scenario. They can trade contracts and insure with each other against risks that they’re unwilling to bear. But a moment of introspection reveals the absurdity of these assumptions compared to the real world. More often than not, even describing the universe of possible outcomes is beyond the means of mere mortals, let alone ascribing subjective probabilities to each outcome. The swings and sentiment that result, pessimism one moment, exuberance the next, reflect not only nature’s odds but also our assessments of those odds, assessments that are inevitably distorted by human behaviour. A successful speculator himself, John Maynard Keynes, argued that people price assets based not on their estimates of fundamental value but, rather, on what they think those values are or, rather, what everybody else would predict the average of those assessments would be. It is the derivative of the derivative of subjective utility, the CDO-squared of utility.

These dynamics can afflict not just sophisticated investors but mortgage lenders and homebuyers, especially during a new era. If house prices can only go up, it’s possible to borrow at large multiples and pay off future obligations with the capital gains that follow. The third lie, that markets are moral, takes for granted the social capital that markets need to fulfil their promise. In financial markets, means and ends can be conflated all too easily. Value can become abstract and relative, and the pull of the crowd can overwhelm the integrity of the individual. Repeated episodes of misconduct in the run-up to the global financial crisis called into question the social licence that markets need to innovate and grow. Financial market participants were found to have knowingly mis-sold to clients products that were inappropriate or even fraudulent. Traders manipulated key interest rates and foreign exchange benchmarks to support their trading positions, while costing retail and corporate clients who relied on those benchmarks billions of pounds. If you read the transcripts of the chat-room discussions that orchestrated these outrages, what’s striking is how completely detached the traders were from the businesses and households whom they were cheating.

So, rather than being professional and open, some critical markets, such as those for bonds, currencies and derivatives, became informal and clubby. Rather than competing on merit, participants colluded online. Rather than everyone taking responsibility for their actions, few were held to account. The global financial crisis reminded us that real markets don't just happen, they depend on the quality of market infrastructure, that means both hard infrastructure, in other words the structure of the markets themselves, such as the design of financial market benchmarks, and it means soft infrastructure, like regulations, codes, and culture that govern behaviour in those markets. It's critical to get this infrastructure right because financial markets serve us all. By financing firms to hire, invest and expand, markets help drive growth and create jobs. By opening up international trade and investment, markets create new opportunities for our businesses and savers, and by transferring risk to those most willing and able to bear the markets help households and businesses ensure against the unexpected, and markets have become evermore important to people as they bear increasingly responsibility – they bear increasing responsibility for financing their retirements and ensuring against risks.

So, it's obviously vital that markets work well and that they are seen to do so. So, this time is no different. Markets don't always clear and we can suffer from their amorality, and the question is what to do with such knowledge and how can we retain it so that financial history stops rhyming? I think the answer starts with the radical programme of G20 reforms that are working to create a safer, simpler and fairer financial system, a financial system that can better serve households and businesses in bad times as well as good, a system that can help support greater inclusion and the transition to a net-zero carbon economy. These pro-market reforms are vital but they are not sufficient in and of themselves. Regulation alone won't break an eight-century cycle of financial boom and bust. To resist the siren calls of the three lies, policy makers and market participants must bind themselves to the mast, and that ultimately means recognising the limits of markets and rediscovering our responsibilities for the system. If the experience of the financial and COVID crises teaches us anything, it's humility. We cannot anticipate every risk or plan for every contingency but we can and must plan for failure. That means creating an anti-fragile system, a system that can withstand both the risks we see and those we don't.

An anti-fragile system requires banks that can stand on their own, which is why banks are now required to hold ten times as much capital as they did before the crisis. An anti-fragile system requires Indian "too big to fail" because perhaps the most severe blow to public trust was the revelation that scores of banks operated in a "heads, I win, tails you lose" bubble. Those banks privatised profits in the run-up to the crisis before socialising the losses when the music stopped at a total cost of $15 trillion in public support. That unjust sharing of risk and reward contributed directly to inequality but, almost as importantly, has had a corrosive effect on the broader social fabric on which finance relies. Now, G20 standards are bringing back market discipline by ensuring that globally systemic banks, or the largest banks in the world, ensuring that they can fail safely in the future. Over time, this can help rebuild social capital and increase economic dynamism. An anti-fragile system must also be as robust to operational failures as to financial ones. In our digital era, systemic shocks can come from non-financial sources, such as cyberattacks, and so to improve firms' defences, the UK's largest banks are now subject to what are called "cyber penetrations tests," and they also have to plan for failure by creating plans to restore quickly their vital services in case a cyberattack gets through.

Finally, an anti-fragile system requires a comprehensive macro-prudential framework. What does that mean? That means encouraging authorities to meet the next challenge, not simply fight the last war. They must explore what could happen, rather than seek the false comfort of being ready for what's most likely to happen. We need to remember that risks are the greatest when they seem that they're the least. The cost of interventions are felt today but their benefits are realised far into the future and, even then, it's difficult to prove. Counterfactuals are hard to sell. "It could have been worse" doesn't quite have the ring of, "You've never had it so good." So, over time, and particularly during good times, these challenges feed a bias towards inaction. When it comes to financial stability, success, not failure, is an orphan.

To re-establish the social licence of finance requires a combination of regulation and true cultural change. In the long history of scandal, response, integrity, drift and then new scandal, the potential solutions have oscillated between the extremes of light-touch regulation and total regulation, and there are problems with each of these. Light-touch regulation led directly to the financial crisis, as I've outlined. Market standards were poorly understood, often ignored, almost always lacked teeth.

Too many participants neither felt responsible for the system nor recognised the full impact of their actions. Bad behaviour went unchecked and proliferated and eventually became the norm. On the other hand, a system reliant on total regulation and punishment after the fact is similarly bound to fail because it promotes a culture of complying with the letter of the law, not its spirit, and because authorities will inevitably lag behind developments in fast-changing markets. More comprehensive and lasting solution combines public regulation with private standards to restore the accountability of individuals for their own actions and for the system, and there are three components of this: aligning pay with values, increasing senior management accountability and, thirdly, renewing a sense of vocation in finance. A lesson of the crisis was that pay schemes that delivered large bonuses for short-term returns encouraged bankers to take on the wrong kinds of risk. It was a world where the present counted for almost everything and the future nothing. So, to better align incentives with the long-term interests of their firm and society, financial institutions in the United Kingdom now must defer a significant proportion of pay for up to seven years. Employees won't get these delayed bonuses if evidence emerges in the future of misconduct, or failures of risk management, or unexpectedly poor financial performance.

These measures reinforce the responsibilities of individuals for the longer term consequences of their actions and they make them more accountable. They also establish, clearly, the responsibilities of senior managers for training their employees and overseeing their performance, creating the right sense of solidarity within their organisations. Now, in parallel, many banks have, rightly, developed codes of ethics or business principles but given their generality, it's fair to wonder whether all those traders, their traders will absorb their meaning, and if it's not realistic for traders to apply Aristotelian principles to fast moving markets, a complimentary approach is to rely on traders' intuitive understanding of what constituents a true market. So, in order to guide that understanding, authorities have developed principles of fair and effective markets, and the private sector has designed new codes and standards to bring those principles to life. Now, as I said a moment ago, codes are of little use if nobody reads them, follows them or enforces them, and this is where the senior managers' regime comes in. It gives teeth to voluntary codes by having firms embed them and by re-establishing the link between seniority and accountability.

Ultimately though, social capital is not contractual. Integrity can neither be bought, nor regulated, it must come from within and it must be grounded in values. All market participants should recognise that market integrity is essential to fair, financial capitalism. To build a sense of responsibility for the system as a whole, business ultimately needs to be seen as a vocation, an activity with high ethical standards which, in turn, conveys certain responsibilities. Having a sense of vocation begins by asking the right question: whom does finance serve? Itself, the real economy, society, and to whom is the financier responsible? Herself, his business, their system? The answers start from recognising that financial capitalism is not an end in itself but a means to promote investment, innovation, growth and prosperity. Banking is fundamentally about intermediation, connecting borrowers and savers in the real economy, and the foundation of this approach are boards and CEOs defining clearly the purpose of their organisations and promoting a culture of ethical business throughout them. It also means employees being grounded in strong connections to their clients and their communities, and it means bankers seeing themselves as custodians of their institutions, improving them before passing them along to their successors.

The G20 reforms since the crisis are creating a stronger, simpler and fairer financial system, and with time and continued service it can regain people's confidence. But as I said, the challenge will be that when it comes to financial stability memories fade, complacency sets in and pressure to compromise re-emerges. So, we must be vigilant. Resist the three lies of finance and reinforce some core financial truths, because the next time won't be different. Authorities and market participants must therefore try to anticipate new risks, from cyber to crypto, while building an anti-fragile system that can withstand those risks, those risks that we don't anticipate. Because markets aren't always right and can overshoot in both directions, Central Banks need to adapt their roles as lenders, not buyers of last resort, and because markets aren't inherently moral – aren't inherently moral, they can distort value and corrode values if they are left unattended.

We need to promote the values of responsibility, solidarity, integrity and prudence as best we can through pay, through codes and regulations, while recognising that these can only be fully lived through culture and practice. So, while authorities must continue to put in place the infrastructure to make markets work, there is no simple unifying formula to break the destructive cycle of financial history. Physics won't save finance. Promoting a system in which all its participants live society's core values will.

Thank you very much.

(27.18)

(Applause.)

Q and A

Anita Anand: Thank you so much, Mark. Let's open this up now for our audience. But first if I may start.. You talk about the G20 reforms, you talk about taming traders you talk about tempering that pendulum swing, the mood swing of the market, but isn't that just tinkering around the edges?

Dr Carney: I disagree with that. I think at the core these markets are central to our prosperity, The challenge with them are, the markets in particular, financial markets, is they move to extremes and it's in those extremes that great risks lie. So, the markets have to be resilient, not break when they move to those extremes. Those in the markets can't feed on those, should not be brought in to feed on those extremes in terms of, quite frankly, corruption of their behaviour, which one has seen in the past, and that's what those reforms are bringing in but at its core what we want is those markets so that our companies can access capital so they can invest and grow jobs..I can get a mortgage for a house, and our friends can insure against risks that they face.

Anita Anand: There were parts of your lecture, and I wanted to wrap them round myself like a – like a comfort blanket, you know, talking about anti-fragility…that we have to make a system that is – that is not fragile, but how can you possibly do that when you have situations which are like meteor strikes? The subprime mortgage, no-one saw that coming..?

Dr Carney: Some people did see it coming but those who were in authority tried to convince themselves that it was unlikely to happen, as opposed to asking the question what happens if it happens? I remember I was part of these meetings in the run up to it, and the view of most US authorities was, well, house prices never go down nationwide in the US, so it won't happen, therefore we don't have to worry about it. Eisenhower had a phrase which is that, "Plans are useless, planning is essential." So, a lot of what the authorities now do is plan for or do planning for bad things happening and think about what the system needs to have in order to withstand it. Now, what actually happens is "comes from a different direction," we just saw that with COVID.

Anita Anand: What is brilliant about having you doing these lectures is that you are the man in the room where it happened. We also have others who were in the room where it happened. And I'd like to turn to Alistair Darling who is with us, so very much in the room where it happened, Chancellor of the Exchequer during the crash. Do you sometimes wake up in a cold sweat thinking, "My God, I was in the middle of all of that."

Mr Darling: I do remember it and I remember just about everything that Mark was talking about because we worked very closely together and Mark's dead right, that the problem will arise when a new generation comes along, when the last person who was around 10 years ago disappears and the collective memory is lost.

Anita Anand: How close were we, Mr Darling, to a total collapse of the system?

Mr Darling: Well, we were actually about three hours away from it. I vividly remember the call I got from the then Chairman of RBS, then the biggest bank in the world. In size, it was bigger than the UK economy, and there was a massive run on the bank at the beginning of October of 2008. He rang me and said they were haemorrhaging funds and what was I going to do about it, and, you know, we had a plan and we were ready to go, and I said, "How long can you last?" and he said, "Well, we're going to run out of money this afternoon." When you think about it, if the bank had gone down, the machines, cash machines had gone off, people couldn't get their cash, Northern Rock would have looked like a quiet, sunny afternoon. It would have been absolutely disastrous, not just for the UK but for the system right across the world.

Dr Carney: Yeah.

Mr Darling: That's how close we came, for all the reasons that Mark has set out.

Anita Anand: Mr Darling, you have a question for Mark Carney?

Mr Darling: Yes. Mark. you'll remember that 10 years ago, crucial to our efforts to stop the banking system from a total collapse and, crucially, rebuilding the economy afterwards, was international cooperation.

Dr Carney: Yeah.

Mr Darling: You'll remember we sat round the table with the Republican-led America, Communist-led China, ourselves, countries right across the world, and if it hadn't been for that international cooperation, frankly, I doubt if it would have succeeded. Looking at the world today, which is far more nationalistic, far more protectionist, you know, the humility you referred to in your lecture, it seems to me to be in rather short supply, but I'm just wondering how you see it because it seems to me, whether it's a financial crisis, the pandemic, climate change, if you don't get international cooperation and a recognition that we live in one world, then we're going to struggle.

Dr Carney: It's absolutely right and I should underscore the leadership that Alistair showed throughout these difficult times, including in this crucial meeting which was in the Cash Room, in this glorious room of the US Treasury, probably the darkest meeting they've had in that room ever, and the fact is, by that point, having been through RBS and others, the UK came with a comprehensive plan which, in effect, changed some of the words in – I think they used American spelling instead of UK spelling but, effectively, became the G7 plan and was applied across the G7 and spread through to G20 and that's what arrested the decline. Now, that was possible, partly because of relationships, partly because of an understanding of just how intertwined the system was, and I think there's much less of an understanding or appreciation of that now and it makes it that much more difficult to harness those resources if we were to face something as – similar, and it also means-----

Anita Anand: Difficult or impossible?

Dr Carney: Well, I wouldn't say necessarily impossible. I think the next several years will be very informative about how the system evolves, and I'll finish the point, which is if there's no prospect of international cooperation then you have to put big walls up around your domestic financial system, and that actually comes at quite a cost because you have to protect yourself. I'm not sure if you can fully protect yourself, so you have a sort of false sense of sovereignty and independence.

Anita Anand: It may be tricky but we can still squeak through? I think that's that you were saying, it's going to be..-

Dr Carney: I think there's a – there's a – there's a possibility----- But we have to recognise the risk, yes.

Anita Anand. Let's move on. From Chicago, Deirdre McCloskey is with us, Professor of Economics, History and English at the University of Illinois in Chicago. Welcome to you, Professor..

Professor McCloskey: Well, what's essential to all this is the vocation of the banker. The great German sociologist, Max Weber, spoke about politics as a vocation and science as a vocation, by which he meant exactly what I think Mark means, that an internal ethical control over one's behaviour. But I'm not so optimistic as Mark is that if financial arrangements are creative, and uncertain, and involve occasional black swans, such as COVID, that we're in a position to engineer a smoothness to the financial world. I just don't think that's any more plausible than it is in science or the arts…

Dr Carney: Will we have booms and busts? Clearly, we'll continue to have these cycles we're in the question is whether we can build enough resiliency and diversity in the system.

Anita Anand: Well, let's get a very quick response from Deirdre?

Professor McCloskey: Yes, well, if it were easy to smooth things, you and I could make an unlimited fortune. There is an American proverb that applies, "If you're so smart, why aren't you rich?"

Dr Carney: You don't get rich in public service, Dierdre… You don't want – well – well, some do but that's not – that's not - not in our - our world.

Anita Anand: That is interesting. Actually, I was talking to somebody who knows you rather well who said, "It's very strange about Mark Carney, as a man who has been such a powerful banker, he has very little interest in money," and that seems to be what you've just – you've just said yourself.

Let's take another question now from one of our audience members, Jennifer O'Neill, what does Mr Carney think about the volume of corporate and sovereign debt issuance in the wake of the current interest rate environment?

Dr Carney: It's a necessary response. This is manageable, Jennifer, I think, at this stage, provided we emerge from this - we start to emerge from this - with a direction for the economy. But there will need to be a reorientation of the spending.

Anita Anand: Let's cross over now to Dame Helena Morrissey, who has worked in the Bond Markets, is a financier, is a writer, many of us read your work. Helena, what did you want to ask?

Dame Morrissey: Thank you. Well, Mark, I totally agree, and thank you for your emphasis that to break the cycle we need true cultural change, and you listed in your lecture a number of actions and efforts that have been made since the financial crisis to achieve this and yet, since then, and it continues to happen, that there are so many more scandals; the Foreign Exchange Market rigging, gold pricing, a raft of money laundering schemes, the Neil Woodford debacle here. So, doesn't the evidence suggest that all the talk about purpose and about ethics, even about diversity of thought, is just lip service and that greed still prevails, that financial leopards can't or won't change their spots?

Dr Carney: Well, that cultural change does take time.. I do think one of the things that has begun to happen, and really only in the last couple of years, is there have been some scandals, and not just the individuals, you know, who tend to be mid-level or sometimes lower level in the firm who were doing these outrages, but the senior-most people are bearing the cost and the point being, well, you didn't supervise your employee, or you didn't train your employees, or you have a culture in your organisation that tolerates or encourages cutting corners and that has meant – and there's a very recent one where the senior-most people in one of the large global banks saw, Helena, half to two-thirds of their annual compensation taken back from them. Now, we can debate whether that was enough but they weren't involved, personally, at all in it but they had responsibility.

Anita Anand: Aren't the people who enter this field, Helena, you get more Wolves of Wall Street than you do get people who, you know, have some kind of vocational calling to this?

Dame Morrissey: The actual nature of what we do is going to attract people who want to make money often. I do think though that we actually need to get out and explain the social purpose of finance and encourage really bright, really – you know, people who really want to do the right thing for others, to see it as a service and to see that wealth creation for people in their old age and so forth is – is something that adds value to society, and I do think we are making some progress but often people just read the headlines and it does feel sometimes as though it's too slow.

Anita Anand:. We can now talk to Lord Jim O'Neill. Now, Jim, just to remind you, some of you may know him from the House of Lords but also worked for Goldman Sachs as Chief Economist. …a politician once said to me, "Oh, economists, you know, they have predicted five of the last three recessions," and so there is a disconnect between the politicians and the economists, and the economists themselves, I've heard it many times, and maybe you have too, that politics is kind of a breed below..

Lord O'Neill: There is a class below economists…?!

(laughter).

Anita Anand: But does this at all chime, and since you've had one put in each camp, Jim, and who knows, you may well end up having a foot in each camp, I don't know what your future holds for you, Mark, but is that a problem that, you know, there are two sides that don't speak the same language and, perhaps, are a little bit suspicious of each other?

Lord O'Neill: In typical economist's behaviour, I'm going to respond by slightly answering you in a different way than you intend, really, but I want to refer back to one of the things Mark said at the beginning and where he ended. Part of the problem of most of my professional life is people treat economics as a science. Mark described it as "not physics." It's not physics. It is a social science of which many aspects of are very unknown. It has to be somehow brought more into the mindsets of people that want to pursue economic policies and that there are no definitive outcomes from one set versus another, and a bit more humility and open mindedness about potential outcomes I think would play a big role in bridging the gaps between users of economics, whether they be politicians or any others, but also, importantly, for those of us in the profession that try to advocate one solution versus another, to be a bit more humble about the likelihood of definitive success or not.

Anita Anand: Mark?

Dr Carney: It's exceptionally well said but one other thing that comes to mind as you were talking about economists and politicians, is – now I'm going to speak for economists as well, which is there are many situations where there are "multiple equilibria." Said another way, different things could happen, there could be different outcomes or equally possible – let's say they're equally possible, and the question is could there be an intervention that, to use the phrase, I think, of one of the Government's Alistair Darling was in, to make the weather, right, that influences it. Part of that is behavioural, but you could put in place the circumstances that encourage it and then you have to have some element of trust in the market that it will figure a way to get there. That's one element of humility is for economists is not to have everything taped out and put in that, as I said earlier, a deterministic formula. But there are cases, last point, where we need to have the ambition to try to make the weather or to make people healthier.

Anita Anand: I know we're going to come back to that in a future lecture. Ok, we have to leave it there. Next time, in his third lecture of the series, Mark looks at the COVID crisis and interrogates our ideas of value further still. Just how do States calculate the value of a human life and why does that value vary so much in different countries? It really raises some fascinating, often deeply uncomfortable and challenging questions, but for now, my thanks to all of you for listening, for your questions, and especially to our Reith lecturer, Mark Carney.

(APPLAUSE)

END F **Anita Anand**: Welcome to the second of the 2020 BBC Reith Lectures with the former Governor of the Bank of England, Mark Carney. Now, his series focuses on the way financial values have come to dominate human values and where that leaves us, and what we might do about it.

Today, Mark Carney is going to take us back to the near total implosion of the banking system in the autumn of 2008. He's going to argue that a deeper crisis in our values underpins that unforgettable lurch towards the abyss and, more than a decade on, he's going to examine how we can prevent another financial meltdown. This second lecture is called: From Credit Crisis to Resilience. Please give a very warm welcome to the BBC's 2020 Reith Lecturer, Dr Mark Carney.

(APPLAUSE)

Dr Carney: It's hard now to remember how different things were in August 2007. The New World Order promoted by the United States had delivered seemingly effortless prosperity. The Washington consensus, centred on free markets, free trade and open capital markets, reigned supreme. The United Kingdom was in its fourteenth year of uninterrupted growth and Central Banks were congratulating themselves on delivering the Great Moderation. In the financial sector, bankers saw themselves as masters of the universe. Risk was thought to have been spread evenly across the globe to the miracle of subprime securitisation. Light-touch regulation projected trusting, if somewhat envious, citizens, and then, a couple of obscure European synthetic credit funds stopped dancing to the music and though few recognised it at the time, the worst financial crisis since The Great Depression had begun.

Jean-Claude Trichet, then President of the European Central Bank, was fond of telling a story of his fellow central banker who was then taking a long scheduled walking holiday in Scotland. With his Blackberry having run dry and anxious for the news, this central banker went into a local shop and asked the woman behind the counter, "Do you have the Financial Times?" "Yes, sir," came the reply. "Would you like yesterdays or todays?" "Well, Madam, I'd very much prefer today's."

"Well, then come back tomorrow."

But Trichet's colleague couldn't wait. He had to go straight back to Frankfurt to join an unprecedented initiative by the European Central Bank to pump billions and billions of euros of liquidity into their money markets, because he knew that a quick tug on the loose threads that started to appear that August didn't just unravel a sweater but a whole wardrobe, and not just any wardrobe but a walk-in closet, positively Kardashian in its expanse.

Within a year, a series of storeyed institutions, from Northern Rock to Lehman Brothers, had failed or been rescued by the State and the world economy was in freefall. The future arrived with a bang, from great moderation to great recession, from boom to bust, from confidence to mistrust, and the consequences were severe. A lost decade. Real household incomes in the United Kingdom did not grow at all over the following 10 years. The worst performance since Karl Marx was scribbling the Communist Manifesto in the British Library. There was growing fragmentation of the global economy. The third wave of globalisation crested with that financial crisis and since then, growth in trade and capital flows have slowed sharply and the multilateral trading system has been unwinding, and there's been growing mistrust of experts.

A financial system, lauded by most economists and policy makers, as well as all bankers, came crashing down on the heads of ordinary people, some of whom are still suffering the consequences, and they, like Her Majesty The Queen, wondered why did no-one notice it? The fault lines these experts missed would have been familiar to students of financial history, too much debt, excessive reliance on markets for liquidity, Byzantine complexity, regulatory arbitrage and misaligned incentives. Most economists, financiers and policy makers missed these growing vulnerabilities because they were involved in the great project of completing the financial market universe with the precision of physicists. You see, economists, myself included, generally suffer from physics envy. We covet its neat equations and crave its deterministic systems, and this inevitably leads to disappointment. The economy isn't deterministic. People aren't always rational. Human creativity, frailty, exuberance and pessimism all contribute to economic and financial cycles.

As the great physicist Sir Isaac Newton lamented, "I can calculate the motions of celestial bodies, but not the madness of people." Newton's exasperation came after he'd lost a fortune investing in the South Sea Company or, more precisely, after he had speculated on one of the greatest financial bubbles ever. Newton would have benefited from something I learned early on in my career in finance from a gentleman named Bob Hurst, who was then one of the partners at Goldman Sachs. Bob's rule was if something doesn't make sense, it doesn't make sense. Beneath the sort of Popeye-esque tautology was real wisdom. His point was that if someone explains something to you in finance, such as a flashy new product or why a company's valuation should be orders of magnitude higher than others in their sector and it doesn't make sense, ask the person to repeat the rationale, and if that response still doesn't make sense, you should run. Newton didn't run, an inertia all too common throughout history, because something that starts as fundamentally innovative ends up being pushed to ridiculous extremes. Belief turns to madness, momentum is everywhere, value loses touch with fundamentals and everything becomes relative.

And so it was in the run-up to the global financial crisis. The new era of thinking in the first decade of the millennium was grounded in very real boost to prosperity from global integration and technological innovation. Now, that initial success bred complacency and the infrastructure of markets didn't keep up with innovation. Increases in the buffers of banks lagged behind the explosive growth in their balance sheets. Few masters of the universe focused on the longer term consequences of their actions. Market failures and human frailties were ignored. Moral sentiments turned into market sentiments. This was not merely a technical failure. This was a crisis of values, as well as value. The pre-crisis era was an age of disembodied finance where markets grew far apart from the households and businesses they ultimately served. See, in most professions people see the real impact of their work. Teachers witness the growth of their students, farmers that of their crops. When bankers become disconnected from their ultimate clients in the real economy, they have no direct view of their impact. Before this crisis, traders began to see the numbers on their screen as a game to be won, ignoring the consequences of their actions on hundreds of millions of mortgage holders and company borrowers.

Value was relative and values suffered. Markets built on markets were not just financially but ethically fragile. See, financial history rhymes all to frequently with enormous costs. Eight hundred years of economic history teaches that financial crises occur, roughly, once a decade. In finance, institutional memories are short. Lessons that are painfully learned during busts are gradually forgotten as new eras dawn and the cycle begins anew, and this is a depressing cycle of prudence, confidence, complacency, euphoria and despair, and it's a cycle which reflects the power of the three lies of finance. The first lie is the four most expensive words in the English language, "This time is different." This misconception is usually the product of an initial success, with early progress gradually building into blind faith in a new era of effortless prosperity. Several factors drove the debt super cycle in the run-up to the financial crisis, including demographics and the stagnation of middleclass real wages, that itself a product of technology and globalisation. Households had to borrow to increase consumption. "Let them eat cake," became, "Let them eat credit."

Financial innovation made that easier and the ready supply of foreign capital made it cheaper. Most importantly, and this is the lie, complacency amongst individuals and institutions, complacency fed by a long period of macroeconomic stability and rising asset prices, made this remorseless borrowing seem sensible. A deep-seated faith in markets lay behind the new era thinking of the Great Moderation. Captured by the myth that finance can regulate and correct itself spontaneously, authorities retreated from their regulatory and supervisory responsibilities. This leads to the second lie, the belief that the market is always right. This has two dangerous consequences. First, if markets are efficient we can identify bubbles or address their potential causes. Second, if markets always clear they should possess a natural stability, and evidence to the contrary must be the product either of market distortions or incomplete markets, and such thinking dominated the practical indifference of policy makers to the housing and credit booms before the crisis. Much of financial innovation springs from the logic that the solution to market failures is to build new markets on old ones, an attempt at progress through infinite regress.

During the Great Moderation this view became an organising principle for financiers and policy makers, and the latter pursued a light-touch regulatory agenda in the quest for a perfect real world of complete markets, first described as “abstract theory” by two economists, Arrow and Debreu. This is a world of rational agents coolly calculating odds over all future possible states of the world, trading contracts with each other that are frictionlessly enforced in achieving mutually beneficial, indeed socially optimal, outcomes.

Of course, markets only clear in text books. In reality, as Newton learned at his cost, people are irrational and economies are imperfect, and when such imperfections exist, adding markets can make things worse. A truth of finance is that the riskiness of an asset depends on who owns it. When markets don’t clear, financial institutions may be surprised to find what – find out what they own and for how long, and when those surprises are or are thought to be widespread, panic ensues. The impossibility of completing markets was not the only practical problem with the pre-crisis approach. Even if markets could be perfected, nature itself is unknowable.

Newtonian mechanics breakdown at the subatomic level and the search for the grand unifying theory of everything that matters persists in physics to this day. Market fundamentalism relies on people being able to calculate the odds of each and every possible scenario. They can trade contracts and insure with each other against risks that they’re unwilling to bear. But a moment of introspection reveals the absurdity of these assumptions compared to the real world. More often than not, even describing the universe of possible outcomes is beyond the means of mere mortals, let alone ascribing subjective probabilities to each outcome. The swings and sentiment that result, pessimism one moment, exuberance the next, reflect not only nature’s odds but also our assessments of those odds, assessments that are inevitably distorted by human behaviour. A successful speculator himself, John Maynard Keynes, argued that people price assets based not on their estimates of fundamental value but, rather, on what they think those values are or, rather, what everybody else would predict the average of those assessments would be. It is the derivative of the derivative of subjective utility, the CDO-squared of utility.

These dynamics can afflict not just sophisticated investors but mortgage lenders and homebuyers, especially during a new era. If house prices can only go up, it’s possible to borrow at large multiples and pay off future obligations with the capital gains that follow. The third lie, that markets are moral, takes for granted the social capital that markets need to fulfil their promise. In financial markets, means and ends can be conflated all too easily. Value can become abstract and relative, and the pull of the crowd can overwhelm the integrity of the individual. Repeated episodes of misconduct in the run-up to the global financial crisis called into question the social licence that markets need to innovate and grow. Financial market participants were found to have knowingly mis-sold to clients products that were inappropriate or even fraudulent. Traders manipulated key interest rates and foreign exchange benchmarks to support their trading positions, while costing retail and corporate clients who relied on those benchmarks billions of pounds. If you read the transcripts of the chat-room discussions that orchestrated these outrages, what’s striking is how completely detached the traders were from the businesses and households whom they were cheating.

So, rather than being professional and open, some critical markets, such as those for bonds, currencies and derivatives, became informal and clubby. Rather than competing on merit, participants colluded online. Rather than everyone taking responsibility for their actions, few were held to account. The global financial crisis reminded us that real markets don’t just happen, they depend on the quality of market infrastructure, that means both hard infrastructure, in other words the structure of the markets themselves, such as the design of financial market benchmarks, and it means soft infrastructure, like regulations, codes, and culture that govern behaviour in those markets. It's critical to get this infrastructure right because financial markets serve us all. By financing firms to hire, invest and expand, markets help drive growth and create jobs. By opening up international trade and investment, markets create new opportunities for our businesses and savers, and by transferring risk to those most willing and able to bear the markets help households and businesses ensure against the unexpected, and markets have become evermore important to people as they bear increasingly responsibility – they bear increasing responsibility for financing their retirements and ensuring against risks.

So, it's obviously vital that markets work well and that they are seen to do so. So, this time is no different. Markets don't always clear and we can suffer from their amorality, and the question is what to do with such knowledge and how can we retain it so that financial history stops rhyming? I think the answer starts with the radical programme of G20 reforms that are working to create a safer, simpler and fairer financial system, a financial system that can better serve households and businesses in bad times as well as good, a system that can help support greater inclusion and the transition to a net-zero carbon economy. These pro-market reforms are vital but they are not sufficient in and of themselves. Regulation alone won't break an eight-century cycle of financial boom and bust. To resist the siren calls of the three lies, policy makers and market participants must bind themselves to the mast, and that ultimately means recognising the limits of markets and rediscovering our responsibilities for the system. If the experience of the financial and COVID crises teaches us anything, it's humility. We cannot anticipate every risk or plan for every contingency but we can and must plan for failure. That means creating an anti-fragile system, a system that can withstand both the risks we see and those we don't.

An anti-fragile system requires banks that can stand on their own, which is why banks are now required to hold ten times as much capital as they did before the crisis. An anti-fragile system requires Indian "too big to fail" because perhaps the most severe blow to public trust was the revelation that scores of banks operated in a "heads, I win, tails you lose" bubble. Those banks privatised profits in the run-up to the crisis before socialising the losses when the music stopped at a total cost of $15 trillion in public support. That unjust sharing of risk and reward contributed directly to inequality but, almost as importantly, has had a corrosive effect on the broader social fabric on which finance relies. Now, G20 standards are bringing back market discipline by ensuring that globally systemic banks, or the largest banks in the world, ensuring that they can fail safely in the future. Over time, this can help rebuild social capital and increase economic dynamism. An anti-fragile system must also be as robust to operational failures as to financial ones. In our digital era, systemic shocks can come from non-financial sources, such as cyberattacks, and so to improve firms' defences, the UK's largest banks are now subject to what are called "cyber penetrations tests," and they also have to plan for failure by creating plans to restore quickly their vital services in case a cyberattack gets through.

Finally, an anti-fragile system requires a comprehensive macro-prudential framework. What does that mean? That means encouraging authorities to meet the next challenge, not simply fight the last war. They must explore what could happen, rather than seek the false comfort of being ready for what's most likely to happen. We need to remember that risks are the greatest when they seem that they're the least. The cost of interventions are felt today but their benefits are realised far into the future and, even then, it's difficult to prove. Counterfactuals are hard to sell. "It could have been worse" doesn't quite have the ring of, "You've never had it so good." So, over time, and particularly during good times, these challenges feed a bias towards inaction. When it comes to financial stability, success, not failure, is an orphan.

To re-establish the social licence of finance requires a combination of regulation and true cultural change. In the long history of scandal, response, integrity, drift and then new scandal, the potential solutions have oscillated between the extremes of light-touch regulation and total regulation, and there are problems with each of these. Light-touch regulation led directly to the financial crisis, as I've outlined. Market standards were poorly understood, often ignored, almost always lacked teeth.

Too many participants neither felt responsible for the system nor recognised the full impact of their actions. Bad behaviour went unchecked and proliferated and eventually became the norm. On the other hand, a system reliant on total regulation and punishment after the fact is similarly bound to fail because it promotes a culture of complying with the letter of the law, not its spirit, and because authorities will inevitably lag behind developments in fast-changing markets. More comprehensive and lasting solution combines public regulation with private standards to restore the accountability of individuals for their own actions and for the system, and there are three components of this: aligning pay with values, increasing senior management accountability and, thirdly, renewing a sense of vocation in finance. A lesson of the crisis was that pay schemes that delivered large bonuses for short-term returns encouraged bankers to take on the wrong kinds of risk. It was a world where the present counted for almost everything and the future nothing. So, to better align incentives with the long-term interests of their firm and society, financial institutions in the United Kingdom now must defer a significant proportion of pay for up to seven years. Employees won't get these delayed bonuses if evidence emerges in the future of misconduct, or failures of risk management, or unexpectedly poor financial performance.

These measures reinforce the responsibilities of individuals for the longer term consequences of their actions and they make them more accountable. They also establish, clearly, the responsibilities of senior managers for training their employees and overseeing their performance, creating the right sense of solidarity within their organisations. Now, in parallel, many banks have, rightly, developed codes of ethics or business principles but given their generality, it's fair to wonder whether all those traders, their traders will absorb their meaning, and if it's not realistic for traders to apply Aristotelian principles to fast moving markets, a complimentary approach is to rely on traders' intuitive understanding of what constituents a true market. So, in order to guide that understanding, authorities have developed principles of fair and effective markets, and the private sector has designed new codes and standards to bring those principles to life. Now, as I said a moment ago, codes are of little use if nobody reads them, follows them or enforces them, and this is where the senior managers' regime comes in. It gives teeth to voluntary codes by having firms embed them and by re-establishing the link between seniority and accountability.

Ultimately though, social capital is not contractual. Integrity can neither be bought, nor regulated, it must come from within and it must be grounded in values. All market participants should recognise that market integrity is essential to fair, financial capitalism. To build a sense of responsibility for the system as a whole, business ultimately needs to be seen as a vocation, an activity with high ethical standards which, in turn, conveys certain responsibilities. Having a sense of vocation begins by asking the right question: whom does finance serve? Itself, the real economy, society, and to whom is the financier responsible? Herself, his business, their system? The answers start from recognising that financial capitalism is not an end in itself but a means to promote investment, innovation, growth and prosperity. Banking is fundamentally about intermediation, connecting borrowers and savers in the real economy, and the foundation of this approach are boards and CEOs defining clearly the purpose of their organisations and promoting a culture of ethical business throughout them. It also means employees being grounded in strong connections to their clients and their communities, and it means bankers seeing themselves as custodians of their institutions, improving them before passing them along to their successors.

The G20 reforms since the crisis are creating a stronger, simpler and fairer financial system, and with time and continued service it can regain people's confidence. But as I said, the challenge will be that when it comes to financial stability memories fade, complacency sets in and pressure to compromise re-emerges. So, we must be vigilant. Resist the three lies of finance and reinforce some core financial truths, because the next time won't be different. Authorities and market participants must therefore try to anticipate new risks, from cyber to crypto, while building an anti-fragile system that can withstand those risks, those risks that we don't anticipate. Because markets aren't always right and can overshoot in both directions, Central Banks need to adapt their roles as lenders, not buyers of last resort, and because markets aren't inherently moral – aren't inherently moral, they can distort value and corrode values if they are left unattended.

We need to promote the values of responsibility, solidarity, integrity and prudence as best we can through pay, through codes and regulations, while recognising that these can only be fully lived through culture and practice. So, while authorities must continue to put in place the infrastructure to make markets work, there is no simple unifying formula to break the destructive cycle of financial history. Physics won't save finance. Promoting a system in which all its participants live society's core values will.

Thank you very much.

(27.18)

(Applause.)

Q and A

Anita Anand: Thank you so much, Mark. Let's open this up now for our audience. But first if I may start.. You talk about the G20 reforms, you talk about taming traders you talk about tempering that pendulum swing, the mood swing of the market, but isn't that just tinkering around the edges?

Dr Carney: I disagree with that. I think at the core these markets are central to our prosperity, The challenge with them are, the markets in particular, financial markets, is they move to extremes and it's in those extremes that great risks lie. So, the markets have to be resilient, not break when they move to those extremes. Those in the markets can't feed on those, should not be brought in to feed on those extremes in terms of, quite frankly, corruption of their behaviour, which one has seen in the past, and that's what those reforms are bringing in but at its core what we want is those markets so that our companies can access capital so they can invest and grow jobs..I can get a mortgage for a house, and our friends can insure against risks that they face.

Anita Anand: There were parts of your lecture, and I wanted to wrap them round myself like a – like a comfort blanket, you know, talking about anti-fragility…that we have to make a system that is – that is not fragile, but how can you possibly do that when you have situations which are like meteor strikes? The subprime mortgage, no-one saw that coming..?

Dr Carney: Some people did see it coming but those who were in authority tried to convince themselves that it was unlikely to happen, as opposed to asking the question what happens if it happens? I remember I was part of these meetings in the run up to it, and the view of most US authorities was, well, house prices never go down nationwide in the US, so it won't happen, therefore we don't have to worry about it. Eisenhower had a phrase which is that, "Plans are useless, planning is essential." So, a lot of what the authorities now do is plan for or do planning for bad things happening and think about what the system needs to have in order to withstand it. Now, what actually happens is "comes from a different direction," we just saw that with COVID.

Anita Anand: What is brilliant about having you doing these lectures is that you are the man in the room where it happened. We also have others who were in the room where it happened. And I'd like to turn to Alistair Darling who is with us, so very much in the room where it happened, Chancellor of the Exchequer during the crash. Do you sometimes wake up in a cold sweat thinking, "My God, I was in the middle of all of that."

Mr Darling: I do remember it and I remember just about everything that Mark was talking about because we worked very closely together and Mark's dead right, that the problem will arise when a new generation comes along, when the last person who was around 10 years ago disappears and the collective memory is lost.

Anita Anand: How close were we, Mr Darling, to a total collapse of the system?

Mr Darling: Well, we were actually about three hours away from it. I vividly remember the call I got from the then Chairman of RBS, then the biggest bank in the world. In size, it was bigger than the UK economy, and there was a massive run on the bank at the beginning of October of 2008. He rang me and said they were haemorrhaging funds and what was I going to do about it, and, you know, we had a plan and we were ready to go, and I said, "How long can you last?" and he said, "Well, we're going to run out of money this afternoon." When you think about it, if the bank had gone down, the machines, cash machines had gone off, people couldn't get their cash, Northern Rock would have looked like a quiet, sunny afternoon. It would have been absolutely disastrous, not just for the UK but for the system right across the world.

Dr Carney: Yeah.

Mr Darling: That's how close we came, for all the reasons that Mark has set out.

Anita Anand: Mr Darling, you have a question for Mark Carney?

Mr Darling: Yes. Mark. you'll remember that 10 years ago, crucial to our efforts to stop the banking system from a total collapse and, crucially, rebuilding the economy afterwards, was international cooperation.

Dr Carney: Yeah.

Mr Darling: You'll remember we sat round the table with the Republican-led America, Communist-led China, ourselves, countries right across the world, and if it hadn't been for that international cooperation, frankly, I doubt if it would have succeeded. Looking at the world today, which is far more nationalistic, far more protectionist, you know, the humility you referred to in your lecture, it seems to me to be in rather short supply, but I'm just wondering how you see it because it seems to me, whether it's a financial crisis, the pandemic, climate change, if you don't get international cooperation and a recognition that we live in one world, then we're going to struggle.

Dr Carney: It's absolutely right and I should underscore the leadership that Alistair showed throughout these difficult times, including in this crucial meeting which was in the Cash Room, in this glorious room of the US Treasury, probably the darkest meeting they've had in that room ever, and the fact is, by that point, having been through RBS and others, the UK came with a comprehensive plan which, in effect, changed some of the words in – I think they used American spelling instead of UK spelling but, effectively, became the G7 plan and was applied across the G7 and spread through to G20 and that's what arrested the decline. Now, that was possible, partly because of relationships, partly because of an understanding of just how intertwined the system was, and I think there's much less of an understanding or appreciation of that now and it makes it that much more difficult to harness those resources if we were to face something as – similar, and it also means-----

Anita Anand: Difficult or impossible?

Dr Carney: Well, I wouldn't say necessarily impossible. I think the next several years will be very informative about how the system evolves, and I'll finish the point, which is if there's no prospect of international cooperation then you have to put big walls up around your domestic financial system, and that actually comes at quite a cost because you have to protect yourself. I'm not sure if you can fully protect yourself, so you have a sort of false sense of sovereignty and independence.

Anita Anand: It may be tricky but we can still squeak through? I think that's that you were saying, it's going to be..-

Dr Carney: I think there's a – there's a – there's a possibility----- But we have to recognise the risk, yes.

Anita Anand. Let's move on. From Chicago, Deirdre McCloskey is with us, Professor of Economics, History and English at the University of Illinois in Chicago. Welcome to you, Professor..

Professor McCloskey: Well, what's essential to all this is the vocation of the banker. The great German sociologist, Max Weber, spoke about politics as a vocation and science as a vocation, by which he meant exactly what I think Mark means, that an internal ethical control over one's behaviour. But I'm not so optimistic as Mark is that if financial arrangements are creative, and uncertain, and involve occasional black swans, such as COVID, that we're in a position to engineer a smoothness to the financial world. I just don't think that's any more plausible than it is in science or the arts…

Dr Carney: Will we have booms and busts? Clearly, we'll continue to have these cycles we're in the question is whether we can build enough resiliency and diversity in the system.

Anita Anand: Well, let's get a very quick response from Deirdre?

Professor McCloskey: Yes, well, if it were easy to smooth things, you and I could make an unlimited fortune. There is an American proverb that applies, "If you're so smart, why aren't you rich?"

Dr Carney: You don't get rich in public service, Dierdre… You don't want – well – well, some do but that's not – that's not - not in our - our world.

Anita Anand: That is interesting. Actually, I was talking to somebody who knows you rather well who said, "It's very strange about Mark Carney, as a man who has been such a powerful banker, he has very little interest in money," and that seems to be what you've just – you've just said yourself.

Let's take another question now from one of our audience members, Jennifer O'Neill, what does Mr Carney think about the volume of corporate and sovereign debt issuance in the wake of the current interest rate environment?

Dr Carney: It's a necessary response. This is manageable, Jennifer, I think, at this stage, provided we emerge from this - we start to emerge from this - with a direction for the economy. But there will need to be a reorientation of the spending.

Anita Anand: Let's cross over now to Dame Helena Morrissey, who has worked in the Bond Markets, is a financier, is a writer, many of us read your work. Helena, what did you want to ask?

Dame Morrissey: Thank you. Well, Mark, I totally agree, and thank you for your emphasis that to break the cycle we need true cultural change, and you listed in your lecture a number of actions and efforts that have been made since the financial crisis to achieve this and yet, since then, and it continues to happen, that there are so many more scandals; the Foreign Exchange Market rigging, gold pricing, a raft of money laundering schemes, the Neil Woodford debacle here. So, doesn't the evidence suggest that all the talk about purpose and about ethics, even about diversity of thought, is just lip service and that greed still prevails, that financial leopards can't or won't change their spots?

Dr Carney: Well, that cultural change does take time.. I do think one of the things that has begun to happen, and really only in the last couple of years, is there have been some scandals, and not just the individuals, you know, who tend to be mid-level or sometimes lower level in the firm who were doing these outrages, but the senior-most people are bearing the cost and the point being, well, you didn't supervise your employee, or you didn't train your employees, or you have a culture in your organisation that tolerates or encourages cutting corners and that has meant – and there's a very recent one where the senior-most people in one of the large global banks saw, Helena, half to two-thirds of their annual compensation taken back from them. Now, we can debate whether that was enough but they weren't involved, personally, at all in it but they had responsibility.

Anita Anand: Aren't the people who enter this field, Helena, you get more Wolves of Wall Street than you do get people who, you know, have some kind of vocational calling to this?

Dame Morrissey: The actual nature of what we do is going to attract people who want to make money often. I do think though that we actually need to get out and explain the social purpose of finance and encourage really bright, really – you know, people who really want to do the right thing for others, to see it as a service and to see that wealth creation for people in their old age and so forth is – is something that adds value to society, and I do think we are making some progress but often people just read the headlines and it does feel sometimes as though it's too slow.

Anita Anand:. We can now talk to Lord Jim O'Neill. Now, Jim, just to remind you, some of you may know him from the House of Lords but also worked for Goldman Sachs as Chief Economist. …a politician once said to me, "Oh, economists, you know, they have predicted five of the last three recessions," and so there is a disconnect between the politicians and the economists, and the economists themselves, I've heard it many times, and maybe you have too, that politics is kind of a breed below..

Lord O'Neill: There is a class below economists…?!

(laughter).

Anita Anand: But does this at all chime, and since you've had one put in each camp, Jim, and who knows, you may well end up having a foot in each camp, I don't know what your future holds for you, Mark, but is that a problem that, you know, there are two sides that don't speak the same language and, perhaps, are a little bit suspicious of each other?

Lord O'Neill: In typical economist's behaviour, I'm going to respond by slightly answering you in a different way than you intend, really, but I want to refer back to one of the things Mark said at the beginning and where he ended. Part of the problem of most of my professional life is people treat economics as a science. Mark described it as "not physics." It's not physics. It is a social science of which many aspects of are very unknown. It has to be somehow brought more into the mindsets of people that want to pursue economic policies and that there are no definitive outcomes from one set versus another, and a bit more humility and open mindedness about potential outcomes I think would play a big role in bridging the gaps between users of economics, whether they be politicians or any others, but also, importantly, for those of us in the profession that try to advocate one solution versus another, to be a bit more humble about the likelihood of definitive success or not.

Anita Anand: Mark?

Dr Carney: It's exceptionally well said but one other thing that comes to mind as you were talking about economists and politicians, is – now I'm going to speak for economists as well, which is there are many situations where there are "multiple equilibria." Said another way, different things could happen, there could be different outcomes or equally possible – let's say they're equally possible, and the question is could there be an intervention that, to use the phrase, I think, of one of the Government's Alistair Darling was in, to make the weather, right, that influences it. Part of that is behavioural, but you could put in place the circumstances that encourage it and then you have to have some element of trust in the market that it will figure a way to get there.

That's one element of humility is for economists is not to have everything taped out and put in that, as I said earlier, a deterministic formula. But there are cases, last point, where we need to have the ambition to try to make the weather or to make people healthier.

Anita Anand: I know we're going to come back to that in a future lecture. Ok, we have to leave it there. Next time, in his third lecture of the series, Mark looks at the COVID crisis and interrogates our ideas of value further still. Just how do States calculate the value of a human life and why does that value vary so much in different countries? It really raises some fascinating, often deeply uncomfortable and challenging questions, but for now, my thanks to all of you for listening, for your questions, and especially to our Reith lecturer, Mark Carney.

(APPLAUSE)

END OF TRANSCRIPT