Chapter 11 -- Millennium Error

The Real Bug was a Little Late

It was close to midnight on December 31st, 1999 and many people were holding their breath. Of course, some fools were partying like it was 1999, to celebrate the new century, but across the world thousands were watching carefully for the first signs of disaster. Airplanes falling out of the sky, heart pacemakers abruptly stopping, nuclear power stations running amok. Who would be the first victim of the millennium bug?

For months, IT professionals had been desperately trawling through thousands of systems looking for anything that was date dependant because the millennium bug, or Y2K bug as it was also called, was all about how dates were stored in computer systems. Many systems stored dates in the short six-digit American format MM/DD/YY, with the last two digits representing the year. 1900 would be stored as 00 and 2000 would also be stored as 00, leading to all sorts of confusion. If you booked a holiday for the following year in 1999, you would be gutted to find, when you came to take it, that you had already had your fun in the sun one hundred years before.

The popular press picked up on the story and all sorts of nightmare scenarios were laid out, up to the complete collapse of civilisation. Thankfully, social media was in its infancy or who knows what fake news and conspiracy theories might have taken hold. In the event, apart from a few minor hitches, the new millennium came in with computer systems still ticking merrily over. Of course, many systems were improved as a result of someone taking a cold hard look at them and the more progressive captains of industry started to take a bit more interest in the opaque alchemy that was computer systems development, but the most important take away from our economic viewpoint is the fact that solutions to the problems resulted from a huge public / private co-operation exercise that was initiated well before disaster was due to strike.

Across the world, Government agencies, academic institutions, professional bodies, commercial companies and enthusiastic amateurs all worked in reasonable harmony to a common purpose. The potential economic consequences were recognised and contingency plans to avoid them were largely in place by the time the bug could have struck.

Seven years after the millennium and its bug, when the biggest financial crisis since the great 1930s depression arrived, things went slightly differently. In November of that year, Queen Elizabeth II opened a £71m new building at the London School of Economics (LSE). During a briefing by academics on the turmoil in the financial markets, she asked them why nobody noticed it coming. It was a good question, but she was fobbed off with this answer by Professor Luis Garicano, director of research, "At every stage, someone was relying on somebody else, and everyone thought they were doing the right thing." What he didn't mention was the that a lot of people wrongly thought that they were doing the right thing because of what they had been taught at places like the LSE.

It was not just academics who were caught wrong-footed. The International Monetary Fund said that financial markets had never been safer as an investment opportunity and the Bank of England failed to recognise the possibility that there might be a recession even when the economy was already in one. Not only was there no prediction of what might happen from mainstream economics, but there was little coordinated effort at first to solve the resulting problems. There was slow co-operation between countries, few contingency plans, no joint effort from government and private companies until it was almost too late, just many a shrugging of the

shoulders, as though the whole thing was some act of a mischievous god. In the end the financial system of the western world was rescued by taxpayers across the globe taking on billions in future debt from the private banking system.

They weren't actually asked if they would undertake this unselfish act of course, about two dozen shadowy figures, a mixture of central bank governors and government officials decided that the financial system was "just too big" to fail. Lehman Brothers bank, somewhat unfairly, was made a sacrificial lamb and the rest of the finance industry got a nice big pay-out from the public purse to help them back on their feet again. The profits that the finance industry had made up until 2008 stayed private and the losses made when the bubble burst were fobbed off onto the public, leading to years of austerity.

The difference between response to the millennium bug and the financial crisis could not have been more marked and the reason for the difference in response was down to the movement of western economies from industrial activity to service activity and, in particular, to the development of the financial services industry in the late 20th and early 21st centuries. However, the causes of the crisis lay much deeper in the heart of how unregulated capitalism works. It does exactly what it says on the tin. It tries to maximise short-term profit and, in doing so, doesn't give a damn about market self-correction, nor does it tend to equilibrium. It does whatever it takes to generate more immediate profit and to hell with the consequences. This is what had worried Adam Smith back in the 18th century and why he had said that the government must set the moral playing field for free market capitalism.

What we would see, as the new century got into its stride, was the unregulated incarnation of economic man morphing into a greedy gangster peddling rotgut whisky as the finest vintage malt liquor. He was called in polite society an investment banker and he almost broke western civilisation.

The Life and Death of Bretton Woods

Of course, for a gangster to sell rotgut, he needs a supply of it and some gullible people ready to buy it. Gullible people are easy to find, but to uncover the source of what investment bankers would end up selling we need to go back to the end of World War 2.

In 1944, not wishing to repeat the economic mistakes following the first World War, delegates from forty-four nations met in Bretton Woods in the U.S. under an umbrella organisation called the United Nations (current wartime allies plus invited guests) to try to sort out how to manage the post-war international financial system. What they came up with was a set of rules and institutions designed to stabilise currency exchange rates and prevent speculation. The two major planks of Bretton Woods were exchange rates fixed to a reserve currency, into which every currency would be convertible and an International Monetary Fund (IMF) to smooth out any imbalances and promote free trade. If having fixed exchange rates sounds a bit like a gold standard, it is. It replaced gold with the U.S. Dollar upfront, but tied the Dollar to gold.

John Maynard Keynes was part of the official British team and he wanted the reserve currency to be the IMF Bancor, an invented currency ideologically neutral between countries but the U.S. objected, as the U.S. has always objected to anything which does not have the U.S. front and centre. The Pound Sterling, which had been the World reserve currency up until the first world war was clearly too weak after World War 2, and so the Dollar, de facto reserve currency since the twenties, was adopted. This was pegged to gold at a fixed price of $35 per ounce. All other currencies in the system had initial exchange rates set against the dollar and agreed to keep within

1% of that rate by buying and selling dollars. Countries also agreed that their currencies could be freely convertible to other currencies as an aide to free trade. But; and this is important, they did not have to convert into gold at the fixed rate and there was still a free market in gold. A gold standard, but no standard for gold.

After the war had ravaged Europe and much of Asia, the U.S. was the only economy producing anything in volume, particularly capital goods like trucks, tractors and railway engines. Bretton Woods could not however solve the problem of Europe not having enough dollars to pay for these American goods and Europeans desperately needed help to re-build their economies. The answer came in the form of the Marshall Plan and the International Bank for Reconstruction and Development (Later to become part of the World Bank). Which transferred dollars to Europe, Asia and South America as grants, so that they could pay for goods and services from the U.S.

Of course, the same effect could have been achieved by the U.S. government giving Dollars to U.S. industry and the U.S. industry giving goods and services free to Europe. The problem is that such an approach sounds suspiciously like some form of socialism. Much better to set up a pseudo bank and pretend that we are trading. There was one problem with all this that was not seen at the time. Not all of the Dollars given to Europe were returned to the U.S. as payment for goods and services. Over time, an increasing pile of Dollars was in the wild in Europe. They were later called Eurodollars an we will see their effect on globalisation a bit later.

The other way that trade was generated was for American companies to set up operations in other countries. Again, dollars would be spent in Europe and then spent by Europeans on American goods and services. As a result of all this, the U.S. economy rapidly grew and, because they acquired free capital goods, so did other economies. But it all depended on the dollar staying stable as a reserve currency and all other countries obeying the largely American designed rules.

By the 1960s, cracks had started to appear caused by the very design of the system. The growth of international trade was much faster than the growth in gold supply and the free market price of gold started to drift up from the $35 fixed Bretton Woods price, so the temptation was to make a nice profit by buying gold at the Bretton Woods price and selling it on the open market. Whilst most countries were no longer on the gold standard, the world effectively still was, because of the Dollar's tie to gold, so a change in the free market price of gold effected international trade.

For a number of years, the activities of central bankers managed to keep the Bretton Woods valuation of gold stable. From 1961 through 1968, they operated a gold pool, acting in concert in the gold market to keep the gold-dollar parity roughly stable. They were a sort of de facto world central bank, coordinating the timing of their market activities and sharing all profits and losses. But in 1968 the pool collapsed, the price of gold rose and the whole Bretton Woods scheme started to unravel. An article in The Journal of Economic History, December 2019 by Michael Bordo, Eric Monnet and Alain Naef, argues that it was pressure on Sterling, the second reserve currency, leading to the 1967 devaluation of the Pound, that caused the collapse.

Apart from the gold peg, there was another problem.   As the Marshall Plan wound down, the system could only keep working if the U.S. ran an ever-increasing balance of payments deficit. It had to keep sending dollars abroad. If it didn't, then a lack of dollars would drain liquidity from the system and could even lead to trade grinding to a halt as prices fluctuated. I will explain what liquidity is when we look at the seismic change in investment banking in the nineteen eighties

but, basically, it says that changes in trading volumes do not lead to changes in prices in a liquid market but do if the market is illiquid.

By 1971, the U.S. had had enough of desperately trying to keep the dollar pegged to gold and feed the insatiable demand for dollars as the international trading currency. In August, President Nixon temporarily knocked out the peg holding the dollar to gold and allowed its exchange rate to float freely. At first there was a scramble to come up with alternative mechanisms, but by 1976 the floating dollar was made permanent and the Yen and the EEC currencies were also allowed to float. The international control system that was Bretton Woods was dead. The currency speculators had won their first post-war victory.

The Eurodollar Rules

Whilst Bretton Woods was slowly dying during the 50s and 60s, the great flood of dollars owned by people and countries outside of the U.S. was starting to free itself from the control of the American federal banking authorities. No one really knows when the first Eurodollar transactions took place or why they were called Eurodollars. Some say it was the communists in Russia and or China that first moved their dollar holdings out of U.S. banks and into European and Asian banks. It worked something like this, move your communist dollars from Wells Fargo bank in the U.S. to the Midland bank in London. The Midland bank then deposits them in Wells Fargo bank and gets interest from the U.S., most of which it passes on to you. But because these are now British dollars, they cannot be frozen if there is something like a Korean war or an invasion of Hungary. They were probably called Eurodollars because European banks were involved early. They certainly have nothing to do with the Eurozone or the Euro currency and today they are not just Dollars, there are EuroYen and EuroEuros as well.

Whether the communist Dollar story is true or not, the important point was that the huge Eurodollar market was outside the control of any national or international banking authority, but not outside the control of large multi-national investment banks. One other thing was needed for these rogue Dollars to become a serious speculative force and that was free movement of capital. During the '50s and '60s most governments in the developed world obliged and loosened all the wartime capital movement controls. I am old enough to remember when you could only take £50 out of the Britain if you were travelling abroad. Not that I had £50 at the time, but the movement of money was under the complete control of the government.

The other great change in international financial markets was the amount of American government debt that was held by foreigners. Up until the 1980s, most U.S. debt was held by Americans and Europeans. There was nowhere safer than American government bonds. Then Asia started to gobble up these bonds. First Japan; but the steam ran out of the Japanese economy in the 1990s and their place was taken by the new Asian trading giant, China. By 2005, the largest creditor of the largest capitalist economy was a communist country.

There is some irony that it was the U.S. who provided the most assistance in enabling China to become an accepted world trader and they did it because they thought it would be good for U.S. business, just as it had been when they opened markets in East Asia and Eastern Europe. Donald Trump did not invent the "America First" strategy, it has been in place since the war of 1812, when the U.S. government looked longingly at the vast Canadian prairies. So, as the 21st century started ticking away, American authorities were concentrating on the problem of Chinese ownership of debt and failed to spot the real problem. The ever expanding and unregulated financial services industry.

By the turn of the century, there was a lot of unregulated currency floating about and international controls had been largely swept away. What the finance industry needed now, before they could almost bring the civilised world to its knees, were some serious gamblers and an attractive roulette game which, needless to say, had a crooked wheel. The serious gamblers, the Doc Holliday's of the 2008 financial crash, came from the strait laced, dry and boring world of banking.

Another Big Bang

In Britain, what changed your friendly local bank manager into an international high roller was something called the Big Bang. The first Big Bang was around 13.6 billion years ago, but we had to wait until 1986 for the next one. This was when the staid old British financial services industry was magically transformed from a wood-panelled banking hall, providing investment advice for little old ladies with a nest egg and a provider of payment services for shopkeepers into glass and steel towers full of unregulated purveyors of glamourous (and mysterious) financial products which, whilst they were nothing more than entries in a financial database, could actually add wealth to the U.K. economy. From the point of view of Gross Domestic Product, it was as good to sell derivatives (I'll explain what those are in a bit) as it was to sell motor cars, but without all that messing about with hot steel and smelly tarmac.

The deregulation of the London Stock Exchange and the associated liberalisation of banking activity, enacted by the Thatcher government as part of the push towards "small government", looked, to most of us at the time, fairly boring and technical. The removal of fixed commission rates on financial transactions; getting rid of the barrier between stockbrokers and stock jobbers; removing the rule that disallowed foreign ownership of financial services companies and banks. It was the sort of stuff that sent you to sleep if you read it too carefully, so nobody did.

The removal of the barrier between stockbrokers and stock jobbers was the most important big bang change, as it led directly to the rapid growth of large investment banks, first in London and then in New York and Chicago. Before 1986, stock jobbers were the market makers of the London Stock Exchange and without market makers, the buying and selling of stocks and shares would be a much slower and more cumbersome affair. Think of them as the wholesalers of share trading. The description goes something like this.

I tell my stockbroker that I want to sell 1000 IBM shares. He could contact loads of other stockbrokers to see if anyone wanted to buy exactly 1000 IBM shares, but it is much easier to trot down to a wholesale share warehouse, a stock jobber, where they are always ready to buy any quantity of any share from a stockbroker at some sort of price and likewise sell any quantity of any share to a stockbroker at some other price. So, before the second big bang, the market making activities of the stock jobber provided an essential lubricant to the market. They increased what is called its liquidity.

Financial market liquidity is an important but quite simple idea. A liquid market is one where things can be quickly sold without much affecting the price that they can be sold for. Liquidity can also be applied to assets. Cash is a very liquid asset in that you can move it round without changing its price, whilst buildings are much less liquid because if you start selling buildings the price will change because other buildings cannot be easily produced. A liquid company is one which has enough liquid assets to pay its way, usually because it has a good cash reserve or some popular and therefore easily sold stock of product.

After 1986, stock jobbers quickly disappeared into the offices of investment banks, along with some of the stockbrokers. Much more efficient surely to have all your banking and investment needs met by a single organisation and, as anyone could now own an investment bank, these efficient engines of economic growth quickly became multi-national engines of economic growth. Of course, this was not just a U.K. phenomenon. It had originated in the U.S., where depression era banking restrictions were swept away by the Reagan administration. But London, by throwing off all the shackles and implementing a "light touch" government supervision of the industry, in other words no supervision at all, soon became a trading hub for investment banks from all over the world.

The other great change that came at the same time, but may have had independent causes, was the change of ownership of investment, stock-broking and trading companies and indeed, of the exchanges they used to carry out their business. New faces and new money appeared. Newly minted billionaires from the old Soviet bloc and China, tech titans from California, looking for diversified profit and sovereign wealth funds from oil rich states. Rich gamblers looking for high stake games.

The big bang and like events in the U.S. did not happen in isolation, they were part of a general move away from Keynesian social market ideas and back towards the older idea that free, unfettered markets should rule everything. Ayn Rand's heroic individual philosophy allied to Milton Friedman's simplistic monetarist economic theory created an appealing idea of low taxation, small government freedom. So, along with financial deregulation came a concerted push to break the power of trades unions and the privatisation of everything, starting with government owned businesses, such as utilities and the post office, but eventually encompassing even public squares and pavements.

Originally, the liberal, small government, free market philosophy had been argued for by Friedrich Hayek and Ludwig Von Mises and it is easy to see why they took such a position. They had both been through the horrors of the 1930s totalitarian revolutions in Europe and were arguing in favour of democracy. But Rand and Friedman took this to extremes. Rand very subtly in writing about a struggle between honest citizens and corrupt corporations and governments and Friedman brutally, by denying any role for government in economic management.

Finance Rises Above the Docks

Since the beginning of the 19th century, the measure of a countries economic power has been the output of its industry and, until the last part of the 20th century most of that would have been physical goods. Pots and pans, furniture, clothes, houses, these were the sort of things that were recorded as making up the income and wealth of a country. Financial services had always existed and had always contributed a reasonable amount to the national accounts, but it really took off as a major contributor to national wealth after the second big bang. For years, people had been wondering what to do with the old and run-down docklands area of London, now that no ships docked there. Since the 60s, the ships carrying real goods had docked downriver, at the new container port of Tilbury. Suddenly there was a fast-growing investment banking industry looking for somewhere to plant some really impressive skyscrapers, to show the world that they had arrived at the top. A marriage made in heaven.

But what were these international investment banks, that had subsumed high street banks, stockbrokers, market makers, re-insurance brokers and a whole host of ancillary trades, going to sell? Certainly not the old fashioned staid and safe wares of banking, nor the more risky but still

unexciting stocks and shares. No, they were going to sell some shiny and exiting new financial instruments, derivatives.

Strange Instruments

Financial instruments are simply any form of financial contract that can be traded and, as such, had been around for centuries. Likewise, derivatives are simply financial instruments that derive their value from some underlying entity and again, at their simplest, they go back to classical Greek times. They had historically been used in agriculture to even out market volatility for the hard-pressed farmer. He could agree a price that he would get for his corn or pork bellies long before they were harvested. The agreed price might be higher or lower than the eventual market price, but it gave him a certainty of income that could then be used as collateral for bank loans or for day to day living. Another example of a free market being circumvented in the real world.

But it was not these simple instruments that were now being offered. Instead, a whole range of new products, carefully packaged to hide the smell of snake oil, were dreamt up by bright young traders in the glass towers of investment banks. Of all these strange new instruments, one in particular was destined to bring the financial world to the point of chaos, mortgage-backed securities, which could be pooled into even more exotic instruments called collateralised debt obligations. It is simple, bundle together a whole load of mortgages and sell shares in the bundle. This sounds like the financial services industry doing what merchant adventurers had done centuries before. Bundling voyages together into companies and selling shares in the company. It spreads risk. The bundles of mortgages were sorted into tiers of risk, with the top tier having first claim on any revenue and thus the lowest risk. Lower tiers were sold as riskier, but more profitable, investments. This is genuinely a good way of spreading investment risk, as long as the underlying mortgages are carefully graded. So, nothing so far to disturb you. But, in reality, the top tier was being sold as low risk even if the mortgages underlying it were high risk. Welcome to a world called sub-prime.

Safe as Houses

Mortgage provision was always the most boring of banking activities. It was long-term, low-yield, ultra-safe business. After all, you could not go wrong with bricks and mortar, "Safe as houses." You just had to check out potential borrowers to make sure that people did not take out a mortgage that they could not afford to repay. If, as an investment bank, you offered securities based on mortgages, then those individuals and organisations looking for a safe bet to invest in would be attracted to them. Insurance companies, retirement funds, people saving for their children's education. These mortgage-based securities (MSBs) looked particularly attractive as they had been given a triple A safety rating by finance industry rating agencies, the highest rating possible. There is a whole book to be written about financial ratings agencies, but all you need to know is that by the 21st century, they were outlaws wearing police uniforms.

So, an MSB is simply a way of investing in the housing market without getting involved with houses. An investment bank would buy a load of mortgages from a number of front-line mortgage providers, shuffle them around and make bundles of them, which would then be offered on the market, with the investor at the end of the chain getting at least some of the interest that house owners were paying on their mortgage. The purpose of the bundles was to mix together low risk mortgages with higher risk mortgages and thus spread the risk more evenly across the whole market. Financial regulators, central bankers and economists all thought this was a great idea and all of them wrote screeds explaining how such modern financial instruments would make problems like the 1929 crash impossible.

There are two major problems with this scheme, which turned it into a scam. Firstly, all bundles were treated equally by ratings agencies, so a bundle with one low-risk mortgage and ninety-nine high-risk mortgages would get the same AAA rating as a bundle with ninety-nine low-risk mortgages and one high-risk mortgage. As Adam Tooze says in his book "*Crashed*", "lethal pockets of risk were concentrated in some of the most vulnerable nodes of the shadow banking system." Shadow banking being the term given to companies offering banking type products, but outside traditional banking regulation. By 2008, that was almost all investment banks.

Secondly, the worldwide housing price bubble was leading to more and more high-risk mortgages being offered, thus raising the average risk level of the housing market. In the U.S., the high-risk mortgages were called sub-prime and were offered to people who would not have been seen previously as suitable mortgage holders in the mortgage market. The sales pitch went something like this: "Move in for a Dollar down and low repayments for the first two years. By the time you come to pay higher rates, the house price will have increased so much that you can easily re-finance." How could that work? Traditional mortgages in the U.S. are fixed term, fixed interest rate. 30 years at 5% say. Homeowners also have the option, enshrined in law, to re-finance if the interest rate falls, or they can find a better deal. So, you start off with a sub-prime, variable rate mortgage and then, because the value of your house has risen relative to both your mortgage debt and your income, re-finance with a traditional fixed rate mortgage.

However you do the maths, there is something odd about this. The risk seems to be assessed against the price increase of the house, not your income level. For a while, with house prices rising relentlessly, this worked fine and did genuinely help some low-income families to afford their own home, but like all bubbles, only those who got in early and got out early, by re-financing at a reasonable rate a much smaller proportion of the value of their property, benefited. The later entrants were about to get burnt.

High Tech Smoke and Mirrors

One reason that what was happening in the mortgage business was not studied very closely was that much more exciting things were happening in the computer and telecoms industry. In the U.S. technology stocks are traded on the Nasdaq exchange. Nasdaq started off as an acronym for the National Association of Securities Dealers (NASD) Automated Quotations. It was spun off into a trading exchange company in 2000, at the height of what was to be called the Dot-Com bubble.

Computer use had been growing steadily during the 90s but, with the introduction of web browsers, really took off, as did investment in technology companies. From a level of 1000 in 1996, the Nasdaq index had risen to 5000 by the year 2000. Then, like all bubbles, it burst. Many technology companies went bust and others saw huge falls in their share prices. Amazon, for instance went from $100 at the turn of the century to under $9 by autumn 2001. Last time I looked, in July 2021, they stood at $3415. Every day, newspapers and television screens were full of the life and death struggles acted out is Silicon Valley. Meanwhile, wily investment bankers were in the process of really breaking western economies.

A Slight Hiccup

In the summer of 2006, for the first time in a long time, U.S. house prices failed to rise and in the following couple of months started to fall back slightly. Probably just a slight market correction said the experts, prices will soon take off again. Have another mortgage. If this remands you of what was being said in 1929, you are spot on.

Come 2007, U.S. house prices resolutely failed to rise and instead started falling faster. By April, the housing booms in Ireland and Spain faltered and started to collapse and by October the falling price virus had hit the U.K. housing market. But that was not the worst problem by any means. Banks overly exposed to mortgage loans and first line mortgage providers started to fail. But why? Surely, they had sold their snake oil to investors. Well, yes and no. There was so much profit in the scheme that banks who had operated originally in only one part of the mortgage ecosphere had extended their reach into all parts of it. As a result, they ended up with huge amounts of exposure sitting on their balance sheets. A system that had been touted as spreading risk was instead concentrating risk. Did economic theorists push the data through their models and spot the risk? No, they did not. Why? Because the models were still concentrating on paths to equilibrium and anyway, money wasn't important in the "real" economy, as long as you controlled the amount in circulation.

First it was just the small fry that started to fail. Those without much in the way of assets to prop themselves up, but in August 2007, BNP Paribus, one of the leading French banks closed three of its funds, stating that it could not accurately value them. The first of the British financial institutions to fail was Northern Rock Bank.

Northern Rock had started life as a building society, which is a community membership-based savings organisation that lends out its members savings for the sole purpose of funding home ownership, but in the 90s it floated on the stock exchange as a commercial bank, fobbing its members off with a few shares and the promise of future rich pickings. Needless to say, the directors got involved with sub-prime mortgage-backed securities and needless to say, they were bare-assed when that bubble burst and people started to queue to get their money out. The British government responded by nationalising Northern Rock, but Northern Rock was just the start. Now, in Britain, the U.S., Europe and Asia, the big investment banks were beginning to shout help.

At a time when the crisis could have been stamped on, financial authorities across the world sat on their hands but finally Leviathan woke. The response to the crisis differed in detail between countries, but everywhere it involved the pumping of huge amounts of public money into the privately owned and operated investment banking industry to avoid it collapsing completely. In Britain, the Royal Bank of Scotland was nationalised. Of course, it wasn't called nationalisation because that was still a dirty word, but its assets were held at government whim. In the U.S., Lehman Brothers was given up to the market as a sacrificial lamb and the rest of the investment banking industry was shored up by the money market activities of the Federal Reserve Bank.

Of course, all this public support had to be paid for. So, a short-term profit tax maybe? A limit on dividend payments? A cancellation of senior executive bonuses? No, why not cuts in government expenditure on social security and local government activity. After all, you cannot live beyond your means, even if we have spent all your money so that some of us can continue living beyond your means.

Rogue Trading or Just Trading

The term "plausible deniability" was first used by the U.S. Central Intelligence Agency in the early 1960's to cover their illegal activities, but we are interested in when it became the watchword of the investment banking industry in the 21st century. All investment involves some risk and the task of the management team of an investment bank is to control that risk. The problem is that if you control the risk, you limit the reward. The answer? The lone wolf rogue trader. This individual, totally unbeknown to company management, gets their hands on millions in company funds and makes huge risky bets. If a bet comes off, everyone, including management,

trousers the bonuses and if a bet loses millions, then the trader is declared rogue and pushed under the nearest bus.

You might ask the question as to how you can be said to be managing a company if, at any one time, you don't know where millions in company funds are but, in the investment banking world, that question is never asked.

Aftermath

Recovery from the biggest shock to the capitalist system was extremely slow and painful. Living standards across the developed world fell by some estimates as much as 20% and developing countries therefore stagnated. By 2018 most economies had only just recovered to their pre-crash position. On the way to recovery, Greece suffered a huge sovereign debt crisis and the economies of Italy, Ireland and Spain threatened to bring down the Euro as a common European currency. There was one country however that, whilst its growth slowed from a very high level, continued to prosper, China.

China was still making things rather than gambling on financial instruments and had a very firm hand on the movement of its currency. It quickly adjusted to growth rates of around 5% per annum from the highs of 10% to 15% that it had been achieving and continued to lift millions of Chinese people out of poverty. How many people it executed to ensure that its economic policy was followed we will never know. The Chinese communist party would argue that it is better to shoot a few, rather than let many starve and perhaps, if I were a Chinese peasant instead of a pampered westerner, I might think they have a point.

Theory Scrabbles to Catch Up

The financial crash certainly discredited the simple monetarist theories of Milton Friedman and the Chicago School. Massive government intervention and strong central bank management was begged for by proponents of free market ideas. Big government was back. Not that it had really gone away. It had been spending big for years, just not talking about it.

Economics students started to question the old equilibrium theories that they had been fed at places like the LSE and asked to be taught in a manner more relevant to the modern world but, as we will see in the epilogue, that would have meant throwing out all the economics professors and bringing in a bunch of anthropologists and biologists so, that is going to be a slow and painful process.

There were some new ideas on money bubbling up with New Money Theory. The first stirrings of what was called the circular economy and talk of stakeholder value rather than shareholder value. The Financial Times started a section titled Moral Money. Economists working in the area of micro-economics (the economics of the firm and individuals) have got somewhat smarter and more judgemental, but economic theory is still hanging on and nothing much has changed yet in the teaching of it.

In the meantime, back on planet Earth we had to go through the long tail of the 2008 financial crash. Just as we had been breathing sigh of relief that it might finally be coming to an end, a tiny virus appeared. Taking advantage of global trade routes, it quickly spread across the world and sent economies spinning once again. Welcome to pandemonium.

Summary of Economic Progress

By 2015, there are roughly 7.3 billion of us, mostly crowded into vast and ever-expanding cities. Each of us is using, on average, 1.6 tons of crude oil per year, but this average is

almost meaningless as oil usage is heavily skewed towards the rich, northern hemisphere countries. As a result of our oil consumption, alongside an increasing use of coal for electricity generation, we are now knee deep in atmospheric carbon dioxide and methane, both of which are heating the planet. We don't seem to be much bothered by this and the coming pandemic will stop us from bothering about it at all.

Our food intake is now totally dependent on a world-wide production and trade network. Thousands of tons of plastic are used to build temperature and humidity-controlled environments for fruit and vegetable production. The volume of cattle being raised is causing a measurable increase in methane emissions. The ratio of total energy available from food against total energy used in its production is falling and we are throwing away about a third of the food we produce, which makes the ratio even worse. However, more and more of us are overweight or obese, so we are eating far too much for the level of energy we expend.

Technology has become a driving force of social and economic organisation and, at the core of this is the World Wide Web (WWW, or Web). The internet, invented to protect communications from Soviet missiles, is a network that allows computers to communicate, but requires specialist knowledge for use by humans. The Web provides a layer on top of the internet, which allows us to easily communicate electronically. Some would say too easily. The Internet, having started off as a technological wild west space, with browser wars regularly breaking out had, by 2015, settled down to reasonable interoperability between Web access devices. The content being loaded onto the web however, has got ever more wild and uncontrolled. Most of us in developed countries are now dependent on Web access for at least some of our administrative and social activities. We shop, find sexual partners, access our bank accounts, book holidays, and argue with people on social media, all electronically.

A whole new class of electronically controlled products is now cluttering up our homes. Computers, largely in laptop and tablet format. Mobile phones, largely used for everything but phoning, headphones, which both enhance and keep out sounds, and small, camera equipped drones, which allow us to snoop on our neighbours without trespassing. Our cars now have an average of 30 electric motors apiece and a touch sensitive control screen to ensure that we are distracted from driving. Many have cameras, radar transmitters and receivers, load sensors, and pressure sensors. All of which means that the increase in engine efficiency over the past thirty years has been almost wiped out by the increase in weight. We have also decided to drive heavier cars, with an increasing proportion of privately owned vehicles being SUVs, pickup trucks, or commercial vans re-equipped to carry passengers.

We have reached the social media age. We can now get wealthy just by being popular and porn producers are saying that amateurs on TikTok and Onlyfans are destroying their business model.

Sources for This Chapter

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