“ The crypto boom has only just begun - read this book **NOW** ”
if you want to reap the enormous rewards to come!

- World famous analyst and investor Eoin Treacy

CRYPTO REVOLUTION

BITCOIN, CRYPTOCURRENCY AND THE FUTURE OF MONEY

How to make YOUR FIRST MILLION buying & holding cryptocurrencies

SAM VOLKERING

Crypto Revolution: Bitcoin, Cryptocurrency and the Future of Money

Foreword

> *Man is born free, and everywhere he is in chains. One man thinks himself the master of others, but remains more of a slave than they are.*
>
> – Jean-Jacques Rousseau

I bet you've probably heard the first part of this quote but not the second. It's so often the case that the sound bite which gets repeated is often a trite quip while the rest, of what in this case Rousseau had to say, is infinitely more important.

The reality is that we live in a society where a small group of people think they know better than we do how we should live our lives. They don't ever seem to realise that the power and wealth they surround themselves with is only possible because of the quiet acquiescence of the majority.

Very occasionally there is a turning point where the silent endurers rise up and shake off the shackles they have been forced to bear by sanctimonious know-it-alls and reassert their right to freedom of thought, expression and control of the fruits of their labour.

Cryptocurrencies and Sam Volkering came along at just the right time. We have been through a torrid decade and more, where living standards have declined but we are constantly told this is one of the longest running economic expansions in history. It's as if we truly live in George Orwell's *1984* and the powers that be speak a form of doublespeak.

When they say employment is at a record high they fail to say wages have been going down in real terms for decades. When they say it's the longest expansion since they started measuring, they fail to say it was because the economy was coming off its knees and every point of growth was bought by robbing savers of their income. When they say we are producing more energy from renewable sources than ever, they fail to say North Sea oil is in decline and we are importing more energy than ever.

You get the picture. We are constantly being told how great everything is but we know in our bones it's not true. But it could be and through technology it will be.

There is only one answer to political and financial problems that assail us. Step outside the circus.

That's where cryptocurrencies come in. The good news is they cannot be lent into existence. There is limited supply and the uses to which they are being put are growing at an exponential rate. Did I mention they offer a secure form of transferring or recording ownership of your assets and they function completely independently of governments?

That's why this is an important book. Sam has done a great job of laying out why you need to know more about this rapidly evolving sector. I first met Sam shortly after joining the Southbank Investment Research team and I was impressed by his resolve to do his very best for our clients as we attempt to guide you to a more profitable future.

However, the truth is that cryptocurrencies represent one of the biggest bull markets in history and this boom is the only thing that comes close to the California gold rush. Back in the 1840s the '49ers traipsed across the US to get their piece of the golden bounty that lay beneath California's hills. Today a similar trend is driving the desire of many people to both own and mine cryptocurrencies.

Rather than leave the comfort of your home, with a powerful computer and ample electricity you can create your own mine and get your piece of this bull market. It's totally egalitarian. You don't need a degree or qualifications and it doesn't matter who you know or what school you went to. Cryptocurrencies are open to everyone and that is why the monetary authorities are so wary of them.

Cryptocurrencies wrest control from the grasp of the financial elite because they cannot control supply. That's the equivalent of setting up a new standard for value, which we might argue is appropriate for a modern age. The gold standard functioned for millennia, or for as long as we were dependent on extractive

resources to generate wealth. Isn't it worth considering that it is time for a digital asset in a world where value is increasingly tied to data and how it is manipulated?

Even if you never end up buying a bitcoin, Ethereum or Ripple, you have to know that other people will. Understanding what motivates individuals to seek radical freedom is important because as the market grows, it will make its way into the public sphere and if you are not up to date you will be left behind. That's reason enough to read and enjoy this book.

Eoin Treacy
Investment Director, *Frontier Tech Investor*

June 2017

PART ONE: Lifestory

Your first thing to do: make a choice

Mania. Hysteria. Chaos. Confusion. Turmoil. The end of the world as we know it. GFC 2.0.The world you live in today has never been as tense, as volatile, as scary or as pessimistic in any time prior.

Every night on the news you hear of terror attacks, bombings, death, destruction and the erosion of your free world. Countries are turning away from each other and into themselves. Globalisation is giving way to isolationism and nationalism.

We're more politically correct than ever before. We must not offend. We must not step outside the 'norm'. We must abide by what our elected officials deem are the rules of the game…except those rules are tilted to their favour and not the average person who just wants to make their way in the world.

Meanwhile the 'establishment' continues to grow in power and wealth. They pay less tax than you. They break the rules more than you — but get away with nothing more than a slap on the wrists, if they even get caught. They gather the wealth of the world more than you.

They built the game and the game rewards them handsomely. But what has the game ever done for you? While the rich get richer, the power brokers get more power, where does that leave someone like you?

Think about it. When have you ever seen tangible benefit from the financial system that's built around you? Do you still toil away nine-to-five to put food on the table, pay the mortgage and enjoy a semblance of a fun and happy life?

Do you bust your back to try and get ahead in the world, all the while seemingly having a huge chunk of your wealth taken away by the government, the actions of erroneous fund managers, bankers and the welfare state? Money that you'll

never see a dime of?

You only need to answer yes to just one of those questions to be in a position that, at the end of this book, might be radically different.

Right now you are sitting through the most significant revolution in finance, economics, investment, wealth and social architecture in the history of the world.

You're alive at a moment in time that we'll likely never see again. A once-in-a-lifetime situation, when everything the establishment has built to benefit themselves comes crashing down around them.

But this isn't some almighty global financial crisis (although that might be a factor). This isn't a situation where you should worry, be scared or feel under threat. In fact, quite the opposite.

This is an opportunity where the average person, someone like you, has a chance to get involved in a revolution of wealth and finance that destroys the traditional conventions of wealth, investment, savings and even the very definition of money, currency and power.

You're alive in at the beginning of the 'crypto-revolution'. The birth and growth of the cryptoeconomy, cryptocurrencies, cryptoassets, digital assets — the biggest technological advancement since the internet.

You're alive in a time of incredible opportunity, optimism and an environment for growth that you'll probably never see again or have another chance to capitalise from.

Today is the time when you can take a chance, roll the dice. Be smart, shrewd and focused on the enormity of opportunity in front of you. Today is the day you immerse yourself in all things 'crypto' and open your life, wealth and future to the possibilities that the establishment doesn't see, doesn't understand. And when they wake up to it, they will be petrified of it.

Today is your chance to 'stick it to the man'. To stick it to the

establishment. Today is the day you make a choice. It's a simple choice. And it's a choice you'll never get again.

Choice 1: Read the rest of this book, word-by-word, line-by-line, chapter by chapter. Maybe even read it a few times to understand it all. And by the end of it be prepared, armed, educated on the crypto opportunity.

Choice 2: Read this book in part. Probably skim through, and don't read it all. Dismiss the ideas, facts, concepts as a fad, a bubble or simply worthless. Put the idea of anything to do with crypto aside. But in doing so possibly come to regret your decision for the rest of your life. And *I know* what that regret can feel like.

So choose.

If you're not prepared to open your mind to the potential in the world of crypto, then close up now. Burn this book, or delete it if you're reading a digital copy, and best of luck to you. Have fun trying your best but never being able to beat the elites at their own game. Have fun trying to build wealth and exist in a financial system that's designed for you to fight with one hand tied behind your back while others play with entire teams of the world's best.

Or are you with me?

Are you on board for what I believe will be the most exciting, exhilarating, risky and incredible ride you'll ever take in your financial life? Are you ready to consider your future, taking a punt on something new, breakthrough, revolutionary? And give yourself a chance to create a fortune that you would never have seen otherwise?

And I'm not just talking about a good chunk of money.

If this is as transformational and revolutionary as I predict, then we're talking about generational wealth. Wealth that could stand the test of time for centuries to come.

If you're ready for that journey, then buckle in. We're about to take you through everything you need to know about 'crypto'.

From the origins of Bitcoin and its importance through to the unique global environment of cryptocurrency and the ICO boom.

There's a lot to cover. A lot to understand. Sometimes it's going to get a little technical. Sometimes a little dry — hopefully sometimes a little funny. But at the heart of it all, you need to continue to remember this is the beginning of something incredibly new and exciting. Something that's never existed before, and should be seen in its own right for what it is — not in direct comparison to the 'traditional' concepts you might already know of.

I'm here to open your mind to the potential on offer should you embrace and immerse yourself in the world of crypto. To open your world to the revolution taking place. To *educate you*, make it simple for you, ease you into a world that you're unfamiliar with, maybe a little scared of and definitely interested about.

And by the end of it all if you're not absolutely convinced that there's an opportunity here for you, that's fine. Not everyone will see the opportunity.

But if you get even just one thing from all this, let it be the opening of the gate to a path that leads you into the world of crypto.

This could be the smartest and best value financial purchase *you'll ever make*.

So let's go. Let's take you through everything there is to know about crypto and the world you're about to step into.

And to do that we need to head into the past. We need to head back to the years before cryptocurrencies like Bitcoin, Ethereum, Litecoin or Ripple even existed.

It's important to understand the environment, the conditions and the mistakes of centralised authority to understand why cryptocurrency even exists.

You need to understand the past to understand the present. And then when you can understand the present, you will have a much better concept what's coming in the future.

Under the ruling thumb of central authority

The bubble burst. It wasn't even like the instantaneous explosion that you see in real time when you might pop a balloon with a pin.

It was the slow motion version, the version captured on a 1,000+ frames per second slo-mo rig. You could see the moment the pin broke the surface tension. You could see the entire surface recoil and explode in all its glory. And then you were left with the sheer terror, realising that underneath it all was nothing but air.

It was brutal. It left scars that people still suffer from to this day. It was so vicious, so harsh that the toll wasn't even just financial; it even sparked the loss of human life. Nothing, absolutely nothing can capture how bad the 2008/2009 global debt crisis was. Nothing can be said except that the situation was avoidable. Every major financial crisis is avoidable — but there are common themes with every recent crisis. Often it's debt, greed, and the thirst for power by centralised organisations, authorities and law makers.

But as bad as the debt crisis was, from the aftermath came a surge, actually more like a tidal wave, of growth and prosperity. But the question is, 'Is it real prosperity? Is it real growth? Or is it the same old thing repackaged and played again?'

We'll see when we look at this in more depth. But for all the devastation of the 2008/09 debt crisis, it certainly wasn't the first time the world had seen financial pain like this.

Just 10 years earlier the same thing happened. It was also an enormous event — albeit more specific to the technology industry. But this earlier crash in the 90s was more like 'the crash we needed to have'.

For all the pain it created, it was the exact kind of crash needed to filter out the rubbish. It was exactly the medicine the market needed to let the strong, stable and genuinely revolutionary companies flourish — and flourish they did.

The tech-bubble, or 'dot-com' bubble, was one of the most devastating market crashes since Black Monday. And Black

Monday had been the most devastating crash since Black Tuesday, 1929. And Black Tuesday had been the worst crash since…well, you get the point.

For as long as markets, central financial authorities, Wall Street elites, the global financially powerful, the 'establishment' have existed, there have been market crashes. None of it the direct result of people other than those that sit in their ivory towers and determine the way the world turns.

But back to the dot-com bubble…

The 1990's had seen an incredible surge in value of tech-related companies. It had seen indices like the NASDAQ rise from around 330 points in 1990 to over 5,000 points by March 2000 .

That's an eye watering 1,415% gain in a decade from an *index*! That's unheard of. Well it was unheard of until it happened. And of course it didn't continue. It all came crashing down as companies like pets.com, Infospace, Kozmo and Boo.com went from being worth hundreds of millions or billions in some cases, to being worthless and shutting their doors.

They were the ultimate zero to hero to zero stories. And in a potential history repeating itself scenario, right now in the world of crypto something eerily similar might be happening…read further on to see exactly what.

However, as bad as the dot-com crash was, from the ashes of the tech-bubble of the 90s and early 2000s came companies like Google and Amazon. These companies were just cutting their teeth as tech companies, while others around them burnt to the ground. It would have been incredibly difficult times to build the companies they did. But they survived, and went on to become not just big tech companies but some of the most powerful organisations in the modern world.

The likes of Apple and Microsoft were alive well and truly before the tech-bubble. But they too survived. They dominated during the highs, and saw their stock plummet in the crash. It didn't kill them, though. They were too resilient. They had viable companies that were strong enough to make it through. It certainly shook

them to their core, but they survived. And then they rose from the tech-bust ashes, and went on to dominate the world.

But the tech-bubble, for all its glory and its destructive demise, was a necessary evil. And just like Black Monday in 1987 and Black Tuesday in 1929, the tech-wreck left a lasting impression on the world, even to this day.

As we say, the tech-bubble is something to take note of because it might just be a precursor to what we're currently seeing in the crypto world today. But not just for the ability wipe out worthless tech companies, but also to let the strong survive and go on to dominate the world.

After the 'tech wreck' the world markets were battered and bruised. While tech companies bore the brunt of the damage, other unrelated non-tech companies weren't spared either.

When markets tumble, investors typically take flight from *all stocks*, not just ones that might be directly impacted by the particular troubles of the moment.

Look at the FTSE 100 during the tech wreck. It went from a high of 6,930 points in late 1999 to a low of 3,490 by early 2003. The FTSE 250 had a similar fate. The Australian Stock Exchange All Ordinaries went from 3,425 points in June 2001 to 2,844 by September that year. And by 2003 was at 2,715.

That's even with an Aussie market practically sheltered from the tech wreck. Due to Australia being in the early stages of a huge commodities boom, it was almost untouchable for near on a decade. But the tech wreck was powerful enough to shake even that up a little.

And even the Nikkei 225 in Japan topped out at over 20,200 points in early 2000. By early 2003 it had been savaged to just 7,800 points. This was also because of the proportion of technology companies that existed in Japan.

Everywhere in the world felt the repercussions of the tech wreck. It made investing in tech companies a dirty idea. Well a dirty idea for some…

The smart money began to flood back to tech companies. Through the downward spiral and through into the recovery. Visionary investors could see that not every tech company was a dud. Some were diamonds in the rough. It became the dirty little secret that no investor talked about until a visible long term recovery was underway.

After all why would you invest in tech stocks after the carnage of 1999/2000?

But for those who had the capacity to see the forest through the trees, there was a smorgasbord of companies that would go on to reshape our future world. And those that invested early enough and at the right time were able to cash in on some of the most incredible gains ever seen on stock markets.

However, that all looked at risk (again) when 2008/2009 came around.

***

Now cast your mind back to 2008 and 2009. The tech-wreck of 1999/2000 burnt down the house. But for the next eight years the house was rebuilt — supposedly bigger, stronger and fireproof.

But it wasn't. This house wasn't built of bricks. It wasn't built of sticks. It wasn't even built of straw. Heck the reality was this wasn't even a house of cards.

This was a house built on the flimsiest of all material…debt. Packaged products, complicated, convoluted, confusing financial instruments that to this day most people simply don't understand. It was fake. It was money that never existed, 'quality' assets that were junk. It was a house of nothing.

But this house won big. The house always wins remember? It saw incredible wealth — wealth that made fat cat Wall Street bankers and fund managers filthy rich. And guess who was left holding the can when things really hit the fan? People like you, that's who.

While 1929, 1987 and 2000 were horrendous, 2008 was perhaps

the worst of all.

It was simply one of the most significant financial events of all time. In fact, we'd go so far to say it was one of the most pivotal events in the course of human history.

Not only did it shake financial markets to their knees. It also brought some of the world's biggest, most powerful nations back to earth. It crippled global budgets, destroyed global companies, left people broke, homeless — it ended up resulting in the loss of human life, such was the viciousness and devastating impact of the financial event most people know as the 'Global Financial Crisis' (GFC). For ease we'll continue to call it the GFC. But the truth is, it was a crisis of addiction to debt.

For decades prior the world had been leveraging *everything*. While investors and companies leveraged up their portfolios and balance sheets, it was central banks and governments that were the worst offenders. In a boom time that would supposedly last forever, taking on debt was easy. Everyone was confident they could eventually pay it back. That's the idea of debt after all. And this new debt was used to build infrastructure, used to fund welfare, used to balance the budgets. It was the crack cocaine to a government junkie.

Government added debt to balance sheets in a way that had never been seen before. According to the OECD in 2000 the US General Government debt was at 65.1% of GDP. The UK was 48.8%. Australia, 42.8%.

By 2008 the US General Government Debt was 93.1% of GDP. The UK was 63.4%. Australia 35.4% (we had a massive commodities boom, remember).

As we said, you think they'd have learnt that debt is not the answer. Even after 2008/09. But they didn't.

In 2016, the US government debt as a percentage of GDP was 127.5%. The UK was 123.1%. Even Australia's had climbed to 73.8%.

It's simply astonishing. But the scary part is it's showing no sign

of slowing down. And if you think those countries are all bad — and they are — look at Japan.

In 2008 their general government debt to GDP was already 140.5%. By 2008 it was 178%. And by 2015 it was an eye-watering 234%.

Quite simply, over the last decade the world has gone broke.

Another way to think about it is if the world had to pay back every dollar of debt then the world would have — that's right kids — no money left. In fact, it'd owe money. But let's just call it a net zero. Broke and penniless.

Think about the enormity of that situation. Centuries…millennia of wealth built up over time. But over the course of a gluttonous, greedy, debt addicted 20th century, the world is now effectively bankrupt. The world is the new 'Lehman Brothers'. *The world is worthless*.

Thanks to the complexities of global banking, the global financial and payments systems, through layers of debt, financial products and out-and-out confusion, banks and government around the world were able to load up with debt.

That is until some smart guys figured out that it was all ready to implode. And then it did.

The pinprick of the failure in the mortgage backed securities (MBSs) market in the US saw a domino effect that had the US banking system spiral out of control.

Central banks around the world injected funds into the banking system, bailout money — taxpayer money — to save these banks. Some of them barely held on, such as Royal Bank of Scotland, AIG, Freddie Mac and Fannie Mae, Merrill Lynch.

At one point the US Federal Reserve injected $236 billion in bailout money to the banking system. Bear Stearns received an emergency bailout from those funds.

It wasn't just the United States of America, though. Citigroup had

to inject £1 billion to bail out *six* of its own hedge funds.

By this stage Lehman Brothers in the US was on the verge of complete failure. They needed bailout money. But enough was enough. The Fed couldn't chip in any more; they were already up to their necks in it.

Merrill Lynch was in the same boat. But somehow through back room dealing, they were able to get a lifeline from Bank of America — which took them over.

Administrators from PriceWaterhouseCoopers had already dug their trenches at Lehman's as things got worse. AIG was also in flames and burning up fast. From a split-adjusted price of around $1,450 per share in June 2007, by October 2008 AIG was trading at $34.

The head of the US Fed, Ben Bernanke, could handle Lehman's failing…just. But AIG was different. It was too big and too central to America's banking system. So in a nice display of playing favourites, once again the US dipped into their seemingly bottomless trust fund and pulled out another *US$86 billion* emergency loan to defibrillate AIG.

Things continued to deteriorate all over the world. 'Bailout' was the new buzzword. Mainly because every government and every central bank in the world was looking at if not already implementing bailout packages to keep banks alive.

That money of course was taxpayer money. But if you remember 2008 at all — and you should — let us ask you this…did you get a say? Did they ask you if they could bail out the banks, or was it just something they did because they could?

Of course it was to protect investors and savers. The real risk was to your life savings. If these banks did fail, many people would simply lose life savings, investments, their entire livelihood. The worst part is that many did lose out big. Mum and Dad investors, retirees, lost billions in the declining valuations of stock markets.

Plenty of people who worked in finance and banking were now already unemployed as banks began to immediately lay off staff

and sell toxic assets to whoever would buy them…even though they were effectively worthless.

Investors and investments around the world were haemorrhaging money. Retirement savings of millions were in freefall. And the worst-case scenario was a real threat; that cash in the bank was also now at risk.

No financial market, no financial instrument anywhere was safe. Nothing. It was Armageddon. And then the US decided to implement the 'Troubled Asset Relief Package' (TARP). This would, incredibly, buy the toxic assets of the banks, ridding them of the plague that had struck them down.

Only one problem. TARP was funded by taxpayer money.

The fact that TARP even existed is astonishing. Imagine going into a TV store and looking at all the nice new shiny TVs. Then in the corner is one that has a giant hole in the screen, no remote, severed power cord, and is effectively junk.

You wouldn't buy that TV would you? Well the US Fed would. And they did. That was TARP.

Japan copped it in the neck, too. They were already in the midst of the 'lost decade', when the entire 90s saw zero growth in the Japanese economy. They were now facing another 'lost' decade, or two, or three. Maybe the Japanese economy would never see growth again.

Eventually a few banks merged and took over others. Some in Australia, the UK and Europe had enough capital backing that they were never in trouble of failure. And some of the real giants like Citigroup were able to ride out the storm.

But Lehman's eventually filed for bankruptcy. At its peak in 2007 it was worth around US$60 billion in market cap. But it had US$639 billion in assets and US$619 billion in debt. It was the biggest bankruptcy filing in history, bigger than WorldCom, bigger than Enron.

'Too big to fail' became another term bandied about the world.

That's what the top-level execs at Lehman said prior to and during the crisis. They were wrong.

The aftermath resulted in global stock markets, the NASDAQ, FTSE, HANG SENG, NIKKEI, ASX all falling by around 50% and more. It smashed the value of investments and savings of people all over the world.

It destroyed any confidence in the global banking and finance system. And even now, nine years later, we're still feeling the effects of it. You'd think that the world's governments and central banks would have figured out the debt addiction was a road to nowhere. But they didn't.

But with all this going on, something truly beautiful was happening. A true revolution in global banking and finance.

Amongst all the turmoil of 2008/09, there was a groundswell in the digital world. A mysterious developer by the name of Satoshi Nakamoto released a white paper into the world titled: *Bitcoin: A Peer-to-Peer Electronic Cash System*.

It wasn't long. Just nine pages in total (including references). But it would prove to be one of the most defining moments of the 21st century…that no one knew about.

The white paper and subsequent development of this idea would create Bitcoin. But it was really only something that pure technologists, developers, hackers, purveyors of the 'deep web', really knew about.

It was a fun, strangely exciting idea that a digital unit of exchange — separate from banks, government and financial institutions — could exists online.

It gained a small but loyal following. And with the aftermath of the financial crisis still in play, it was the perfect time for its arrival. It was anti-establishment. It was anti-bank, anti-financial institution. It was decentralised, anonymous, private — it was the financial instrument for the people. And it would become the most important financial development since the invention of 'money' itself.

But it gained little attention to start with. It had no mainstream coverage. Most people had no idea about it, and the number of actual users tallied in the few thousand at best.

That is, until a number of key events (that we'll run you through later on) unfolded across the world over the course of the last seven years. Events which took Bitcoin from the realms of the deep web to the front pages of Bloomberg, Forbes and CNBC.

It would find its way into the discussions of the US Congress, Australia's Parliament, to the forefront of mind for investors, banks and financial institutions who had all been decisively caught asleep at the wheel.

As the financial crisis dissipated and the markets began to turn and recover in 2009, things seemed like they might all be right in the world again. But they were not. And over the next four years the centralised power across the world, central banks, governments, major financial institutions continued to perpetuate their addiction to debt...until 2013, when it all came to a head, again.

Can we really be here again!?

2013. The world was again on the brink of financial collapse. Just four short year after the devastation of the 2008/2009 debt crisis. We had already seen markets plummet, investors lose trillions, people lose their homes, jobs, livelihoods, families and…lives.

Only now was the idea of recovery from the GFC starting to be a possibility. Even though many companies were still languishing at levels well below the peak of 2008.

The world was still feeling its way out of the GFC darkness. And the only way for government and central banks to deal with it was with more debt. Simply more and more and more debt.

And back in 2013, just four short years after the worst of the 'GFC' had ended, the markets were again fearful of the inevitable, impending doom. Here we were *again,* teetering on the brink of financial Armageddon.

How on earth did we get here again? Was it something you said, something you did? Didn't you work hard enough? Didn't you save enough? Didn't you pay down your debts like a good boy or girl?

No, once again it had nothing to do with you. It was the excess, greed and addiction to debt that the world's governments hadn't been able to shake. They needed to go cold turkey. Instead they went back to their dealer, and asked for heroin this time instead of crystal meth.

But in 2013, while the world was still battling their debt addiction, much of the focus was on Greece and Cyprus. Greece was in the middle of their own government-debt crisis, which had seen radical change to the political landscape and major civil unrest. Unemployment levels were skyrocketing. In February 2013 unemployment hit 26.4% — the highest in the European Union. By April youth unemployment was at an astonishing 60%.

Greece was looking like they couldn't repay their debts. Picture yourself in that position. What happens if you can't pay the debt on your home? Quite simply the banks take it off your hands.

If you can't pay, they take it away. And you're left with nothing, even though you've already forked out money to cover the repayments. When you can't pay your debt, you can also file for bankruptcy. That means you have to sell off all your stuff and pay back people you owe money to. But if the value of your stuff doesn't cover the debts, well bad luck to anyone who lent you money. They just don't get it back — they shouldn't have lent you money to start with, should they have?

So if a government can't pay its debts, it's a similar situation. They have to find a way to pay. That means selling off assets to raise money — often privatising major public industry. That means raiding the war chest…sometimes it might also mean raiding the financial institutions. Remember, the government can do as they please when push really comes to shove.

But still, if they can't pay it all back, if they don't have enough 'stuff' to cover the debt, they go bankrupt. They default. And anyone they owe money to doesn't get it all back.

Imagine if a country like Greece did that. Sure, they don't have a big economy. But if they can't pay their debt, then countries that lent them money don't get their money back. And that hurts them and their ability to repay other countries that they owe money to.

It's one big, scary downward spiral when countries begin to default on their debt. And Greece was on the brink of default. But even then, that was just the tip of the iceberg.

Cyprus was also going through their own financial crisis requiring an 'emergency liquidity assistance' (ELA) program from the European Central Bank (ECB). This was a bailout – just like the bailouts the banks received in 2008.

The idea was to prevent all out collapse of the financial system in Cyprus. They had to do something because there was a 'bank run'. That means depositors were withdrawing all their money from the bank, based on the fear that the bank might become insolvent and take all their savings with it.

Heck if I thought my bank was going to go under and take my

life savings with it, I'd be doing the same. I'd be getting it out of that bank, out of the banking system and looking for somewhere else, somewhere the banks or government couldn't get to it…that is an important point.

There were people queuing up at ATMs trying to withdraw their money from the Cypriot banks. It became a mad rush, mania, and hysteria in order to get money out as fast as possible. The banks had to shut down their ATMs. They had to put a stop to withdrawals.

A bank run is bad because it becomes a self-fulfilling prophecy. When all the money goes, the bank has no deposits, no capital, no liquidity, and no ability to stay alive. And they fail. And when they all fail, the system fails. And that spreads like a virus to other countries that held Cypriot debt. Or Greek debt.

If these two were to default, it would bleed out to the global banking system. Again, this would likely result in a systemic failure, which would probably result in another GFC.

It was an incredibly tense, albeit brief period where it really did look like GFC 2.0 would strike. It was looking like another banking system collapse in Europe, triggered by Cyprus, fuelled by Greece and then swiftly caught by the rest of the world.

This was all while countries like Iceland, Ireland, Italy, and Spain were all *still* reeling from the first GFC. And the US their attempts to stave off another crash and crisis on home soil was resulting in levels of money printing by the US Fed like it was Monopoly money.

Just to make it all worse, earlier in 2013 the US had passed legislation called the American Taxpayer Relief Act of 2012 to try and avoid falling off the 'fiscal cliff'.

This was a potential situation where expiring tax cuts and cuts to government spending would send the US into further economic decline, into a recession, and further damage an already broken down system.

While they avoided the fiscal cliff, things weren't rosy for the US

in 2013. The US government debt ceiling is a law created by US Congress. And in 2013 the debt ceiling was at US$16.4 trillion.

But in 2013 the US was on track to hit their debt ceiling. If they hit the ceiling then it would effectively shut down government. President Obama made note they would not be able to pay wages to government employees, and the government would default on its obligations.

Obama and Ben Bernanke, (amazingly, still) Chairman of the Federal Reserve both pushed for the debt ceiling to rise, to allow the government to continue to function. The debt ceiling did get a lift in May, to US$16.7 trillion. But they quickly approached it again.

Estimates were that around October/November the US government would stop paying their obligations and they too would default. And in case you don't remember, the US government actually went into partial shutdown mode on 1 October because they couldn't pay their bills or keep the figurative and literal lights on.

If the Greeks and Cypriots defaulting was going to be bad, imagine what it would be like if the US defaulted KABOOM! Goodbye global finance, goodbye markets, goodbye 'traditional' wealth. Again this caused for major concern amongst savers and investors, who were now getting desperate looking for alternative ways to store their wealth.

As you know, the US government is still functioning today, albeit barely. But their debt ceiling problem still lingers. And they'll continue to be plagued by it so long as they continue to see their debt obligations rise, and rise and rise. And a Trump led government isn't making it any better.

What's important to know is that in 2013 the world, the global financial system, was on the brink of Armageddon…again.

But as we say, in 2009 a financial phenomenon was taking the digital world by storm at the exact same time. And by 2013 it was starting to gather serious momentum. The conditions were again perfect for a surge in this revolutionary technology.

It was now far more known and accessible than it had been in 2009. It was new, risky, scary, complicated, exciting, and revolutionary — it was an alternative financial instrument that was free from the turmoil of the global financial system. It was a haven outside of the reach and control of central banks and government.

Bitcoin was starting to thrive. And because of its design it was the perfect hedge against financial Armageddon in the 'traditional' banking system.

It was unique, and by 2013 it was providing early stage investors with gains in excess of 1,119,900% returns.

That's right — ***one million, one hundred and nineteen thousand, nine hundred per cent returns*** on their initial investment. Think that's mad? Well it gets even crazier.

The world had seen nothing like it before. But the world was in a historic situation. A period of global financial instability that was unrivalled in history.

It was a perfect conditions for Bitcoin to thrive.

Part of the reason that Bitcoin was becoming more recognised was the fact that it had seen such an incredible rise in price from its genesis.

In 2009 you could 'mine' Bitcoin, get 50 'blocks' and at just a few cents per Bitcoin, you might be lucky enough to have those 50 Bitcoin be worth US$1. By 2010 those 50 Bitcoin would be worth $5, a 400% rise in your investment! Massive. Except by late 2013 at a price of US$1,120, those 50 Bitcoin were now worth US$56,000.

A few cents to the price of an ounce of gold in the space of just three years. No wonder the world sat up and took notice!

In 2013 the world was dealing with major financial troubles. But now the mainstream media began to pick up on the Bitcoin phenomena. It was and is the most disruptive, exciting financial development possibly in the history of banking and finance.

And in 2013 the world wanted to know more about this strange, exciting financial instrument by the name of Bitcoin. The turning point was when one Bitcoin was worth the same as the price of one ounce of gold.

As gold had and still is historically the investment of choice to hedge against financial calamity, sure enough serious 'traditional' investors started to ask, what exactly is going on here? How can something seemingly worth nothing sell for the price of an ounce of gold?

It blew mind in the mainstream — it still does — and that's exciting. And the continued turmoil and trouble of global finance against the backdrop of an ever increasing price of Bitcoin has sent it's awareness globally into the stratosphere.

But from the tech-wreck, the glory days of the 2000s, to the biggest financial collapse in history — the GFC — to the continued debt addiction, to the second coming of financial Armageddon in 2013, to the rising, and rising, and rising debt levels held by central banks and government — it's all created the perfect storm, the perfect environment, the perfect backdrop to the growth of Bitcoin. And this in turn lead, to the subsequent growth of cryptocurrencies and the cryptoeconomy.

But without these key moments of financial collapse and intervention, interference and meddling of the elite and the establishment, we would not have Bitcoin, or cryptocurrency — well not likely.

Yet here we are. Not only is Bitcoin worth twice as much as gold now, but it's also one of the most valuable, most desired assets in the world today. Its popularity is borderline hysterical.

The good news is that it's early money, smart money that's now flowing to Bitcoin. The good news is you're still early to the party, and that's a big opportunity.

When I speak to average people with little to no understanding of the world of finance and investment, they still have no idea about the 'traditional' world of finance and even less idea about Bitcoin and cryptocurrency. But of the two they're far more

excited and interested in Bitcoin and crypto than in the world run by the financial elites.

They know what money is, and they know that governments are drilling them to the wall. They don't like it. In fact many of them loathe the elite and the establishments that run their countries. But many of them don't know there's another way to go around it all. Many of them don't know about Bitcoin or its existence. But when we open their eyes to it, they want to know more. They want to get involved.

And as more people do learn about it and get involved, we see exponential growth ahead for its future.

The ironic thing about the rise of Bitcoin is it's the greed and excess of traditional banking and finance, of central banks and governments, that created the environment for all this.

Their hubris and greed helped to create new alternative financial instruments which will be the ultimate reason for their downfall. It's really a beautiful piece of poetry.

The other thing about it all is that most of the 'establishment' can't see outside their own box of 'traditional' wealth and greed. They don't understand the opportunity, they don't realise what's really at play. They don't see that the average man and woman, the 'everyman', people like you, have a chance to become a part of this new, alternative financial system.

It's the ultimate libertarian movement, it goes around the greed and excess and gives everyone a chance to do something great. To take control of their own financial destiny and do it out of reach of all of those who stuffed it all up so badly for so many years.

So there it is, your history lesson on modern global financial calamity and the mess that it's become. This is an important foundation to understand as it lays the groundwork for the revolution we see today.

Remember, to truly understand why Bitcoin and crypto are so important now you have to understand the failures of the past.

Philosopher, George Santayana said it best,

> '*Those who cannot remember the past are condemned to repeat it*.'

Key to Bitcoin is to understand the failures of the system

There's one more aspect of global banking and finance you need to get under your belt.

You see, to disrupt the existing system you need to also know how the *entire* current system works and why it's primed for disruption to begin with.

There's no future to Bitcoin if the current system works. If it's fair, efficient and works well then what reason is there for Bitcoin to exist, to force change? There's none.

But the current financial and global payments system isn't efficient. It isn't fair. It isn't for the benefit of the many. It's skewed to favour the elite, the already wealthy; it doesn't give the average Joe a chance.

And when you break down the current payments system and understand how that works then you see its deficiencies for all their glory. You see where it's broken, where it fails and the exact reasons why Bitcoin and cryptocurrencies are primed to disrupt the existing system and take it over.

To understand the current payments system you need to think about your own situation...

How do you get paid your wages today? It's pretty fair to assume you, like millions of other people around the world, simply see a number appear in your bank account each week, fortnight or month.

Your employer doesn't just pull you into their accounts department and hand over a wad of cash to you each month. Nor do they hand you an envelope with a cheque inside for your latest pay.

No. It's far simpler than that these days. I know that's how it works for me. I simply log on to my mobile banking app each fortnight and see if there's an extra supply of money in my account. If there is, then I've clearly been paid. If there isn't then

I'm straight on the blower to accounts.

All we see is a number. We then typically use our online banking to shuffle that number around. Some people pay bills, some people send it to a savings account, some send it to another separate account for investment. Some go straight to the pub.

I have a routine where I shuffle my numbers around after each payday. Some goes to bills, some goes to savings, some goes to the day-to-day account, and some goes to a currency exchange market.

This fortnightly shuffle of numbers can be a little disconcerting. For many people we're talking about thousands of dollars going through this 'monetary ballet' from account to account, seamlessly and graciously flowing from left to right, right to left, spinning around jumping and leaping over here and there. Eventually it ends up in a final position where we applaud and cheer for the balletic money shuffle on display.

But at the end of the day, the way in which you receive and move your money around is purely digital. There's no physical handling of cash. The only time you typically ever actually see and feel 'real' money is when you take it out of an ATM and use it to buy goods which you receive in your hands.

Let's get back to the point that today's money, the wages you receive, the income you generate, really are entirely digital already.

Let's say you have a daily account and a savings account with *Bank A*. You want to transfer between accounts. No problem. That's all done in house within the bank's internal systems. It never leaves the bank, it's just an internal shuffle. Simple.

Likewise if you want to transfer $50 to your friend, Brad, who also has an account with *Bank A*. Again it's all done with ease on *Bank A's* internal systems. They simply debit and credit the figures from the accounts. Again, just an internal shuffle and the money never actually leaves the bank's internal system. Also simple.

Now let's say your friend Steve has accounts with *Bank B*. OK, so that's a little harder to do. Things now start to get a little more complex.

Bank A doesn't put your money in a sack and march it over to *Bank B* where they put that money in a big safe. That's not safe or efficient. Sure that might have been the case before electricity, computers and connected systems. But that's not the world we live in today.

Instead *Bank A* reduces the amount from your account ($50) and then increases the amount in Steve's account with *Bank B* by $50. But how do they do this?

Bank A doesn't just have open access to *Bank B's* accounts. That would be a massive security and compliance risk. Instead, what happens is that *Bank A* and *Bank B* share an account with each other. It's like their own little lovely joint account. They shared account set up is called 'correspondent banking'.

So *Bank A* decreases your account by $50. They increase their correspondent (joint) account with *Bank B* by $50. They then notify *Bank B* with a message that the $50 now in their correspondent account needs to be allocated to Steve's account. By reconciling the message with their account, *Bank B* are happy to increase Steve's account. They can see the funds are there in their correspondent (joint) account.

This process is also relatively simple for banks and their existing network of systems. However even in 'developed' countries, sometimes this bank-to-bank transfer can take a working day or two. Which really, in today's instant world, is inefficient and slow. In some countries however this process is virtually instant, which is the way it should be.

The fact that banks can make it instant now is thanks to what's called a 'deferred settlements' system. Effectively this just means they do their little balletic shuffling of money in and out and around the correspondent banking system, but they defer settlement until later in the day. They trust each other enough that the numbers match up, and they reconcile them later on.

Of course sometimes the numbers don't add up. That's when fraud and theft departments start to stick their noses in and figure out what's going on. So even as big and as 'trustworthy' as the banks might be, there's still plenty of fraud and theft occuring in the existing 'traditional' banking and payments system.

But again, these are all domestic ways that banks shuffle your money around from you to other accounts for you, and through merchants, savers and investors.

When we start to go international, well things start to get really manic, really complex, even more inefficient and riskier.

Have you tried to transfer wealth across borders? Have you ever tried to send someone money overseas? Have you ever used your own debit or credit card in another country? Have you ever withdrawn cash from a foreign ATM? If you've answered yes to any of those questions, then you'll know that it can be hard to do.

For all the perceived advances in modern financial technology, the fact is that the system hasn't really changed since the 70s and 80s. Sure, you don't need to carry around travellers' cheques like you used to. And you don't need to withdraw wads of foreign currency before heading abroad. But the reality is it's no different. It's just digital versions of the same thing.

The banks still rip you on exchange rates. They still take a cut of commission form your transactions. They charge you for using ATMs or even just making a purchase that isn't in the currency of your bank account.

They rip and steal funds from you at any chance they can get. But the problem isn't always necessarily your bank. They do sometimes have to charge you these fees, because they get charged these fees by other financial institutions, other intermediaries, middlemen and banks. They aren't going to just wear these costs, so they pass them on to you.

And this is where the whole system shows its true colours. They could all work together as a distributed network, making the whole system more efficient and streamlined. But they don't. They're all in it for isolated gain, to maximise returns to

shareholders and investors.

They're simply there to profit from you. They don't really like you or care about you. You're an instrument in the existing 'traditional' banking and payments system that lines their coffers, makes them billions in profits and pays for their huge bonuses. Without you they don't have a business. But if they could do what they do without you, they would.

Part of the reason that the entire international banking and payments system is so inefficient is thanks to the incumbent interbank organisation they call SWIFT.

The Society for Worldwide Interbank Financial Telecommunications (SWIFT) is the global system that helps facilitate the shuffling of money around the world.

For example if you want to send $1,000 from your account with *Bank A* to your cousin Rodney in the UK with *Bank A-UK* you will need to provide a 'SWIFT code' to ensure the transaction goes to the right bank and the right account.

What happens then is your *Bank A* sends a payment transfer SWIFT message to *Bank A-UK*. When this message arrive, clears and credits the account via their *correspondent banking* account, the process completes. This is time consuming and can take days to complete, and can also be costly.

And this is even when the two banks party to the transaction actually hold correspondent bank accounts with each other.

But not every bank in the world holds a correspondent banking account with every other bank in the world. That means in order to get money from Bank A to *Bank P* in the Philippines, sometimes these payments have to go through financial intermediaries. These are middlemen that help in the processing and transfer of the payments — and they take their clip of fees on the way of course. Which all adds to the complexity and cost of a transaction.

What's also important to know is that SWIFT doesn't actually send payments around the world. They never hold any actual funds. What they actually do is to facilitate payment and transaction

messages (communications) between financial institutions to settle through correspondent accounts.

The actual movement of money is still all digital and between banks, financial institutions, middlemen and intermediaries.

Still with me? Good. This can get overwhelming. But stick with it because, as complex as this is, it's very important to understand how this complexity plays into the hand of Bitcoin and the future of Bitcoin so perfectly.

It's fair to say that the system we use now for local, domestic, and international payments and money transfers is complex, can be expensive and is not easy once you leave one country, crossing a border to another.

And let's not forget that it's not just banks that facilitate payments. Sometimes you simply can't transfer money through the banks. This might be a situation where there's a person who doesn't even have a bank account.

So if you don't have a bank account how can you send money overseas, or even earn money?

Someone without a bank account probably sounds crazy to you doesn't it? In developed countries it's very unusual for someone not to have a bank account. But according to the World Bank, approximately 2 billion people still don't have a bank account. That's roughly 27% of the world who still don't have access to the global banking and payments system.

The thing is these people still earn incomes and still work. The 'shadow economy' is alive and well around the world. For example, a paper published by the Institute of Economic Affairs titled, *The Shadow Economy* explains that the shadow economy makes up as much as 10% of GDP in the UK.

And if you look at the size of the global remittance market, you can further see that the transfer of funds around the world is only growing in size.

Transferwise, a peer-to-peer currency exchange platform says,

> *'In 2014 remittances to developing countries totalled a staggering $436 billion, out of a total of $583 billion worldwide.'*

What this tells us is that the bulk of international remittance goes from developed regions, US, UK, Europe to developing countries such as India, China, Philippines and Mexico. Transferwise also explain, *'in 2012, migrants from China and India sent home a staggering $130 billion.'*

When it comes to the major players in the remittance market, companies like the US$9.10 billion payments giant, Western Union [NYSE:WU] dominate the existing market.

But as we say all of these ways to shuffle money around the world are complex and pass through many hands, adding incredible costs.

For example, again according to the World Bank, using banks to send money costs on average 10.96%. Using a money transfer company (like Western Union) costs on average 6.59%. And even using a post office costs 5.14%.

Across the three that's an average cost of 7.56% to send money around the world. Now if the total remittance market is about $583 billion, that's costs of $44.07 billion. $44.07 that the global payments system rips from the hands of hard working people just trying to make a living and make their way in the world.

We don't claim that the whole system should be seamless and free…or should it?

If you can cut out the middlemen and intermediaries, create a streamlined, simple, easy, borderless, decentralised system to shift money around the world, wouldn't that be a good thing?

In short, payments are hard. And SWIFT, which has allegedly improved the entire global payments system, has only been around since the late 70s. It's taken them 40 year working with banks and financial institutions, governments and central banks to create an incredibly complex web of payment infrastructure.

Without them there wouldn't have been a way to move money

around the world. And that's the problem. You don't have a choice. You want to send money, you must use the system that's been designed for you — and designed to benefit the elite.

We're all heavily reliant on these payments systems to shuffle money around the world. Without it, there hasn't been another way to shift your money about.

But what if there was another way?

Imagine a world with another choice. A choice external to the banks and financial institutions that simply rip people off. And what if we all moved to that new, alternative system? What if we moved because it was fairer, safer, faster, and open to everyone on earth with little fuss?

What would happen to the incumbents in the banking system? How would the establishment look upon this threat to their billions in revenues and business? It's pretty clear that an existential threat to the banking, finance and payments system that's dominated the world for so long will not go down well with the heads of state and powerbrokers of the modern world.

It's fair to say they will fight any threat tooth and nail — unless they realise they can't fight it.

Instead, by conceding change is inevitable, they have a chance to pivot and become institutions that actually put their users first — which in itself would be the biggest change to the banking and payments system ever.

Well, the cryptocurrency ecosystem is a direct threat to the existing system. It's changing and evolving at such a rapid and ferocious pace that banks and financial institutions have no choice but to find a way in — otherwise they know that in the next 10, 20, or 100 years they'll simply become worthless.

However, these institutions still operate using fiat currency. That's currency issued by a centralised controlling entity, often a central bank and government.

So the US has the US Dollar, the UK has the Pound Sterling, Europe

(mainly) has the Euro, China the Yuan, and so on. These central authorities are deeply entrenched in the existing global banking and finance system. They only know one way, their way.

They are only interested in their own currency, their own nation's wealth, they really only want to be more powerful, more wealthy, and more dominant. They do this in the modern world through financial power. In the early parts of the 20th century they did it through military power. But today the dollar has more power than the bullet.

That's why, when the US wants to hurt Russia they don't go straight for the Cruise Missile shelf; they employ financial and trade sanctions on wealthy Russians, the Russian government and Russian companies.

They use their financial clout as a weapon. They do this through currency intervention, manipulation and control. This is the currency war of the 21st century. And it's a war that's alive and well. But as nation states continue to play these currency wars, they lose the faith and trust of their citizens.

As they drive their economies into the ground putting up barriers and manipulate their currencies, they drive the people out to other alternatives. Previously people didn't have anywhere else to turn to. But now they do. And thanks to government meddling, they've contributed to the perfect storm that's allowing Bitcoin and cryptocurrency to flourish.

Thanks to the incompetency of governments, central banks and the existing global banking, finance and payments system, the people of the world, the average Joe and Jill, now have another way to succeed and flourish financially in the world.

The Dark Web and FOMO

Now you know the system inside out, the failures of the past and it's problems. You know the world which gave birth to Bitcoin.

And there's no disputing that Bitcoin was 'the first' meaningful crypto. Without Bitcoin there are no others. Its importance cannot be overestimated. But will it be the most important in the future? We'll see. It will play a role as, will other cryptos. And in my view it will be worth considerably more in the future than it is even today.

But now you understand the world in which Bitcoin started. Now you need to know about Bitcoin itself. Why is it even a 'thing'? Why is it worth so much money — in terms of fiat money that is? Why does it continue to carry such incredible valuations — after all if you subscribe to 'traditional' thinking it has no backing, it's a purely digital instrument, and that makes it worthless, right?

Wrong.

Kitco is one of the world's premier sites for market commentary, live spot prices and retail access to gold and other precious metals.

But in 2013 even Kitco news put out an article that was plastered everywhere from their own website to Forbes, declaring, *'2013: Year of the Bitcoin '*

Why on earth would a gold and precious metals website proclaim 2013 to be 'year of the Bitcoin'? Well for many mainstream pundits, 'Bitcoin' is also known as digital gold.

It carries many similar properties to gold…

There is a finite amount of gold in the world. There is a finite supply of Bitcoin that will ever be in existence.

To get physical gold (without just buying it) you have to mine it from the ground using specialised mining equipment. To get Bitcoin (without just buying it) you have to mine it by solving an algorithm using specialised computer equipment.

And of course you can just buy both if you wanted to.

In times of financial turmoil gold tends to perform well. In times of financial turmoil Bitcoin tends to perform extraordinarily — OK, slight difference there.

The point is that to many pundits, Bitcoin is digital gold. And it's a reasonable argument. In fact, in it's current form, Bitcoin is more like an asset than it is a true currency. And we'll explain that idea as we get a little more technical on Bitcoin.

But the most glaringly obvious difference between gold and Bitcoin is you can touch and feel gold. There's nothing physical about Bitcoin. It's a completely online, digital asset.

That makes is hard for some people to comprehend, but it's what also makes it so incredibly unique — it's what makes it like nothing else before, a whole new asset class.

Back in 2013 this online digital 'currency', as people were also referring to it, had become one of the most outstanding investment performers in the history of the investing.

On the 31st December 2012 one single Bitcoin was worth the equivalent of US$13.51. On Wednesday, 4 December, 2013, one Bitcoin was worth US$1,147.25. And by June 2017 that Bitcoin was worth over US$3,000.

That's a return from 2012 to 2013 of 8,391%. And from 2012 to 2017 of 22,105%. Nothing else in the world has ever provided a return that significant in such a short space of time.

But that wasn't even the beginning of it. For early owners of Bitcoin the returns by December 2013 were actually in the *millions of percent.* In fact in October 2010, if you had been in the know you could have secured Bitcoin for just 10 US cents.

Imagine that. Picking up 1,000 Bitcoin for just US$100. And then in around seven years seeing that US$100 stake turn into US$3million.

The maths is easy to do. That's a 2,999,900% return on investment.

Quite simply *nothing else in history* has done that well. And perhaps more importantly, nothing on earth has ever continued to exist at such high levels, that kind of world-changing growth.

Even today Bitcoin remains steadily over US$2,500 per Bitcoin.

The question on the lips of the world is, 'How?' The smartest minds in finance simply don't get it. I know world-class bankers and economists that I have to walk through this step by step with a guiding hand.

It's incomprehensible to them that this even exists, let alone has the power to change their world and challenge the very existence of the companies they work for, worth hundreds of billions of dollars.

How does a 'digital currency' really go from nothing, from complete obscurity to a legitimate financial instrument in the space of just seven years? How can nothing, and I mean literally nothing but computer code and algorithms, become worth around US$40 billion based on current circulation and prices?

We could also ask how a couple of guys making computer boards in a garage could go on to create the world's largest consumer device company, worth US$800 billion in just over 41 years.

How do a couple of guys developing operating system software for 'personal computers' go from nothing to a company worth US$542 billion in just 42 years?

These are two examples of (combined) US$1.342 trillion worth of market capitalisation that were started from nothing.

People didn't understand Apple or Microsoft when they started. Even up until the turn of the century, people still doubted whether Apple would ultimately succeed. People doubted Gates and Allen. They doubted Jobs and Wozniack.

The establishment thought they knew better. The incumbents thought they couldn't be dethroned. But they were. And if these are just two examples of creating over US$1 trillion worth of value from nothing in just over 40 years, imagine what crypto

can do.

Imagine what's possible now with the technology available. What's possible with a disruptive, revolutionary financial ecosystem that's taking on the establishment, taking on the incumbents.

Imagine being able to invest in Microsoft or Apple in 1980. Well that's the kind of opportunity we're talking about with Bitcoin and crypto — except it could be bigger.

If Bitcoin held a total circulation value now of US$800 billion and Ethereum (which we'll get to later) was $542 billion, they would be worth 21.3 times and 30.1 times more than they are now.

That would put Bitcoin at US$48,904 and Ethereum at US$5,869. The risk here isn't about losing your investment if you decide to get involved in crypto (although that is a real risk you should be aware of). The way we see it the biggest risk is not taking an opportunity, and missing out on the potential to change your financial life.

And it's this fear of missing out which is driving some of the gains in all cryptocurrency and Bitcoin right now. Normally that would concern us — if we were talking about traditional stocks and other financial products. But we're not.

When it comes to Bitcoin and Ethereum a bit of FOMO is good for the cause. But when it comes to other crypto, new, initial coin offerings, (ICOs) and what we like to call 'trashcoins', well, FOMO takes on a whole different tone.

However this is still early days. So fear of missing out (FOMO) with Bitcoin and Ethereum is limited to those who understand the long term potential on offer here. FOMO for trashcoins is pure greed and speculation, wanting to find returns like the millions of percent that Bitcoin saw in the last seven years — and *that* is a worry.

But with crypto that has genuine network value (a concept I'll explain later) it's just smart money going to where the opportunity lies.

FOMO does also worry those thinking about getting into crypto but yet to pull the trigger. Even you might be thinking that FOMO is a risk to the price of Bitcoin or Ethereum right now.

So let's dispel that idea.

FOMO is a bizarre acronym. You might have seen it on social media previously. One of the 'kids' posting #FOMO on their Snapchat, Instagram or Twitter account. Heck we've used the #FOMO on Twitter before — and I'm by no means one of the 'cool kids'.

You might have just casually come across it in conversation but never realised. Believe it or not, FOMO is a legitimate psychological condition. And it's never been as prevalent as it has been since the turn of the century.

With the rise in social media (Twitter, Facebook, Snapchat, Instagram, LinkedIn) the human condition has evolved to all new levels of stress and anxiety.

A research paper in 2016 from the '*Journal of Business & Economics Research, Volume 14, Number 1 – Abel, Buff, Burr ,'* highlights the link between social media and FOMO,

> '*Social media sites play an essential role in the fear of missing out. While it is possible that FOMO has existed for as long as communication channels have existed, there is no doubt that social media's presence in our lives has amplified the need and desire (and opportunity) to know what other people are doing and saying at all times*.'

We live in a world of instant communication. A world where social media and 24/7 news content is in our face all the time. It results in a condition where people are sensitive to the idea that perhaps somewhere, someone else is doing something more fun, exciting, just simply better than what they're doing at any given moment.

It's why people wake up in the morning and the first thing they do is trawl through their social media threads. They want to see and know what everyone else is doing. They want to feel a part

of something better. They want to know that what they are doing or about to do is as exciting as what others might be doing — and they want others to know it.

It's a world that perpetuates its own narcissism and vanity simply through the fact of FOMO.

And it's this FOMO that also drives people to act and behave erratically. It's what causes internet articles, videos, blog posts, pictures and comments to go 'viral'. It's an all-immersive world where people want to share and connect in the digital world and display the successes or perceived successes they might achieve.

So when in 2013 when Bitcoin initially took off in notoriety and price, it's fair to say that the idea of Bitcoin, the mystique of Bitcoin connected at the perfect time as social media was becoming truly all-pervasive. And it then attracted a lot of people suffering from FOMO.

At the time it seemed an artificial inflation of price. And when the price crashed it appeared that was indeed the case. But hindsight tells us that perhaps FOMO wasn't such a bad thing then. FOMO can also 'spread the good word', and in this case the good word was Bitcoin.

The FOMO of 2013 helped fuel an already raging fire, as people saw other people buying Bitcoin and making a bundle of cash along the way.

Not wanting to miss out on this incredible story saw more people pile in. And as it all went viral, even for a short time FOMO took hold and the digital world piled in to this digital currency. It too became a self-fulfilling prophecy. And the price went up…and up…and up…and up, to that incredible milestone of a one million percent gain in price.

But as we say, the FOMO of the social media world was just the beginning. As news outlets took hold of this incredible story, it hit the headlines worldwide. Forbes, Bloomberg, BBC, and Reuters — every single major news agency in the world was reporting on the incredible rise of Bitcoin.

It was global FOMO.

This saw forward thinking 'investors' sit up and take notice. All of a sudden this mysterious, underground, 'deep web' digital 'currency' was front-page news *worldwide*. This only added to the hype and hysteria. And away it went again.

This was all fuel to a raging fire, as I explained earlier. Which leaves the question, 'what sparked the raging fire to begin with?' If FOMO fuelled it, what started it?

And that all boils down to a secretive online marketplace for drugs, guns, hitmen and fake IDs…

This was an online marketplace where you could buy and sell illegal items. But easily the most popular goods for sale were drugs. Weed, hashish, ecstasy, MDMA, cocaine, heroin…whatever your poison, it was available.

Unlike dialling up a dealer and having to deal face to face with a criminal, people could simply jump onto their computer, order some Class A narcotics and have it sent to them via a dead drop location (if they were smart).

They could do it all online, and importantly with no paper trail and at the time 100% anonymously. Imagine that. Unfettered access to any drug you could think of, and the authorities had *no idea this was going on* right under their noses — at least in the early days.

An illegal community existed online where people could freely buy and sell illegal goods and services. It was all done with complete anonymity and safety, and there was no monetary trail to follow.

It's was the perfect, no, the ultimate system for nefarious characters to operate. And it was real. We saw it. We didn't buy from it, but it would have been easy. This market existed on the 'deep web'. It's name, 'The Silk Road'.

It was in effect the ultimate black market in the deep, dark parts of the internet that most people don't even know (and don't want

to know) exists. And the thing people most wanted to know was how could they get away with it?

But what is this ‘deep web’?

The deep web is the parts of the internet you’ve never seen. It’s the bigger part of the internet, the uncatalogued part, the part you don’t want to know about and don’t want to visit.

It’s place online where websites can exist under the radar, unknown to the masses. Often it’s run through a TOR network. That’s an ‘Onion Router’ network.

Picture an onion. Cut it open. Peel back the first layer, what do you get beneath? More layers. This layering is the framework on which the deep web is built. You can go through one layer, only to find another layer and another and another. Meanwhile the IP address is bounced from server to server around the world.

It’s virtually impossible to find and track down. And sites change location all the time so as to not be found and shut down by the authorities. And even when these kinds of sites are found, two more spring up in their place. It’s this kind of growth and evolution of the deep web that’s made it far bigger than people realise.

Estimates are the ‘visible web’, the web you see through Google or Bing, is around 4% of the information available on the internet. The remaining 96% exists in the deep web.

It’s hard to track, nearly impossible to index. But it exists. It’s deep, it’s dark. It’s incredibly really. At around 500 times the size of the surface web, the deep web is the perfect location to hide an illegal drugs and firearms website.

Mind blown yet?

But what makes the deep web and in particular The Silk Road so fascinating was the ability for it to be anonymous and virtually untraceable. That realisation that someone can go online, buy drugs and have no money trail was astounding in the modern world — but not unexpected.

Most people couldn't get their head around the fact this site could operate as a market yet with no financial institution, no kind of account or 'traditional' payment methods (like cash) attached in order to pay for the drugs and guns.

To buy and sell on the Silk Road, users paid and received 'currency' in Bitcoin.

While many people assume one of the earliest exchanges of Bitcoin for goods was for a couple of pizzas, the reality is it was more likely for drugs and guns in the deep web. But we'll never know for sure. And that was the appeal of Bitcoin on the Silk Road in the deep web. No one was sure of anyone or anything. The only thing known for sure was that a mysterious operator by the handle 'Dread Pirate Roberts' was the main administrator of the site.

It was the ultimate trust-less system, it was the ultimate trust-less currency. There was no bank, no bank account. It was a cryptographic token exchanged from an anonymous wallet address, sent to another anonymous wallet address. Then goods were sent to an anonymous user at an anonymous location working off a computer that could exist in Lithuania one minute, the US the next minute, Germany, Bolivia, the Czech Republic, Bermuda and Kazakhstan, all within the space of minutes.

In the early days around 2010 and 2011, the Silk Road was the poster child for everything the establishment hated about Bitcoin. It still kind of is today as well.

Once authorities got wind of the Silk Road they decided very quickly it was bad news.

Due to its unique property of anonymity (at the time) Bitcoin was clearly the obvious choice for criminal exchange on the Silk Road. But don't forget, before Bitcoin, cash was the king of the criminal world. So for every negative aspect of Bitcoin being the currency of choice for bad actors, just remember cash did the same thing before it — and no one seems to have an issue with cash.

The Silk Road was an incredible, revolutionary operation. Sure it

was illegal, but its very existence helped to fuel the rise of Bitcoin from the deep web into the public consciousness.

It was a salacious story. A mysterious part of the internet, 500 times bigger than what most people realise. A dark, secretive website where anyone could buy drugs and guns from the comfort of their computer. And the unit of exchange underpinning it all, fuelling the fire and making the criminals wealthy, was a new, mysterious digital currency called Bitcoin.

You couldn't write a better script if you were trying to make a blockbuster Hollywood movie.

But for those operating in the deep web and on Silk Road you had access to drugs, guns, fake IDs, human trafficking, hitmen… and worse. It was all there for sale on the 'deep web'. And the 'money' flowing between the buyers and sellers was Bitcoin — all because it helped the buyer and seller operate commerce with complete anonymity.

By the time Bitcoin began to hit its incredible price highs in 2013 it was well known amongst the deep web community. By 2013, the Silk Road had been in operation for two years. It had already made a lot of criminals wealthy. And it had done so accidentally. If it cost $100 for a gram of cocaine in 2011 that would have been anywhere from 100 Bitcoin to 5 Bitcoin.

For a drug dealer who received 100 Bitcoin in 2011 and held on, by 2013 that would have been worth $100,000 — or 1 kilogram of cocaine. You can start to figure out now just how this drew the ire of authorities — for once, they weren't making all the money.

The development of the Silk Road actually started around August 2010. At that point in time one Bitcoin was worth just 7 US cents, and a gram of cocaine would have set you back (based on a $100 price) 1,428 Bitcoin! Fortunately for buyers of drugs, the Silk Road officially launched in February of 2011.

By then the price of one Bitcoin had already increased more than 1,328% to reach the lofty heights of US$1. So those Bitcoin could buy a lot more drugs than they could have done just six months earlier — a great moment for buyers!

All this was going on under the noses of everyone. Until 1 June, 2011.

It was on this date the most significant news articles in the history of Bitcoin was published on the website Gawker, by the author, Adrien Chen. The title of the piece was, '*The Underground Website Where You Can Buy Any Drug Imaginable*.'

The article was an op-ed piece about Silk Road. That was the main focus. But it was the other detail, the new, crazy 'currency' in the article, which really caught everyone's attention. Chen uses a real world example of how easy it was to buy drugs on Silk Road,

> '*Mark, a software developer, had ordered the 100 micrograms of acid through a listing on the online marketplace Silk Road. He found a seller with lots of good feedback who seemed to know what they were talking about, added the acid to his digital shopping cart and hit "check out." He entered his address and paid the seller 50 Bitcoins—untraceable digital currency — worth around $150. Four days later the drugs, sent from Canada, arrived at his house*.'

The article on Gawker went viral. It became one of the most talked about articles of 2011. It received coverage on a few major news sites, but the mainstream was still oblivious to what was going on.

The tech community was abuzz with the uncovering of the Silk Road, but even more so with this '*untraceable digital currency*', Bitcoin. It instantly grabbed the attention of technologists and futurists as many quickly came to realise that this was the early stages of something serious, something transformative, something disruptive — something with the potential to long term completely revolutionise the entire global financial system.

What was even more insane about Bitcoin was the fact that it was 'money' in the digital world that you could actually use to buy things and receive payment for things. And it was untraceable. If you wanted you could convert it back into fiat currency. And you could 'mine' it — in other words you could create it yourself out of thin air.

While not the idea or central premise of Bitcoin, the attractiveness to make some quick cash was all too tempting.

And then just to top things off, it was the impossible made possible.

As a child your parents often tell you that 'money doesn't grow on trees'. This usually comes after you plead for a few bucks to buy something you really want. And as a life lesson they tell you no, money doesn't grow on trees. Well technically they were correct. That is until Bitcoin came along.

Bitcoin allowed users with the right technical proficiency and the right computer equipment to rip that money off the money tree. It was the ability to be your own royal mint, to print your own money.

From the very beginning you could mine Bitcoin. Your reward for solving its algorithm was blocks of Bitcoin. And as each Bitcoin was worth real fiat money, each block was worth something.

People began to realise this in fact was the mythical 'money tree'. You could 'mine' Bitcoin from nothing and instantly by doing this you would have something that was worth real money.

These early days held incredible parallels to the great gold rush era. Those in the know flooded to this 'digital gold' and things got a little crazy.

When Chen published the article about the Silk Road on Gawker, Bitcoin was trading at US$9.21. After hitting US$1 in February, and with the growth of The Silk Road and the deep web awareness of Bitcoin, it had increased a further 821%.

But just 10 days after the release of Chen's article the price of Bitcoin hit US$17.61. That's a 1,661% rise from February and an incredible 25,057% from August 2010.

In just 10 months the price of one Bitcoin had gone up 25,057%. This was the first massive run for Bitcoin. With such a short history it had become a cult hero in the digital world. It had all the hallmarks of the perfect financial instrument for anarchists,

libertarians, anti-establishment movements — it was the ultimate disruption to global finance, arriving at a time when people wanted nothing more than to 'stick it to the man'.

But its rise didn't last.

By the end of 2011 one Bitcoin was again just worth a couple of bucks. Also its rise to incredible price highs, its infamy thanks to Chen's article and its clear links with the illegal online world had already begun to put it on the radar for the authorities and lawmakers.

While the Gawker article was crucial in the growth of Bitcoin, it also hamstrung it, at least for a short time. When you look back at the influence of that article at that time it really served two purposes...

1. It brought the world of the deep web and illegal activity and Bitcoin to technologists and futurists.

2. It brought the world of the deep web and illegal activity and Bitcoin to law enforcement and the authorities.

For all its promise and hope, Bitcoin was also creating enemies. And you can guess where those enemies were coming from. Government, lawmakers, authorities, all those that Bitcoin challenged, wanted to end it.

It was change. It is change. It is so disruptive, such a revolutionary change, that the power of the elite and the establishment wanted nothing more than to quash it.

And for all of 2012 it seemed like they were having their way. In 2012 Bitcoin floundered. Many people believed it was dead on arrival. It would falter and fail before it ever really took off. And all indications were that it would probably remain a niche online unit of exchange for geeks, nerds, and the complicated and complex world of the deep web.

But they were wrong. As we know, while 2012 might have been a year of uncertainty for Bitcoin, this was the financial instrument of the people. And nothing was going to stop it now. It's rise from

2009 to 2010 and into 2011 was incredible. Its fall and perceived demise in 2012 was nothing more than a speed bump.

We know this because 2013 happened. And as we know, it became, '*The Year of Bitcoin*' — and the year that Bitcoin went from obscurity to a viable, legitimate and ultimately powerful revolution.

How Europe and the world will trigger more pain

Remember our earlier talk about the Greek financial system and almost-collapse back in 2013, which sent Bitcoin prices skyrocketing?

Well, Greece is now again on the brink of defaulting on their government debts. The country could once again be looking at financial Armageddon, another major run on the banks.

There's even talk from ministers in the Greek government about dropping their currency (the Euro) and resorting to the US dollar as their currency of choice. That's one of the wildest currency plays we've seen in the last couple of years…or is it?

The currency wars and problems in Europe…the world that is playing out now is exactly part of the reason for the continuing strength in the growth of cryptocurrencies.

Now we know with a failed system and crisis after crisis in the early part of the 21st century that the environment was ripe for Bitcoin to flourish. We know that the failings of government and central bank helped to make this alternative financial system a haven for people who simply had nowhere else to turn to keep their wealth out of the grubby hands of the establishment.

But today what's happening in the world is going to fuel that fire even more. The failings of central banks and the instability and extraordinary actions of governments are simply destroying wealth in countries across the world. With people now aware of alternative stores of wealth like Bitcoin, there's a huge power shift out of the 'traditional' systems and into the new cryptoeconomy.

And when you have a clearer understanding of the difficulties of the payments system and the world's manipulated and corrupt currencies, then you'll be able to understand why Bitcoin is the solution to the world's problems. And the biggest opportunity in finance that has ever existed.

Currency woes

For example, when I have a dollar and I want to take that and buy another currency, say British Pounds, I have to exchange it.

That means I sell my dollar into a currency market where another party will buy it from me using pounds at a rate that the market decides is fair. For example, say one Australian Dollar is worth around 0.6 British Pounds.

I get 60 pence for my Australian dollar — except there's one caveat on that exchange rate. That's the *wholesale* exchange rate. In reality, if I'm exchanging my Aussie money using my Aussie retail bank and I want to buy British Pounds and I sell my dollars to my bank, who give me Pounds in return, I'm using their *retail exchange rates*. This means added fees and commissions, and I end up with far less than the wholesale rate.

For example, the Aussie Bank retail rate might be just 0.57 British Pounds for my Aussie dollar. That's a 5.2% difference between the wholesale rate and the retail rate. In other words, 5.2% is what the bank makes just for the courtesy. Sound fair? Not really.

That's bad enough as it is. But then there's also the meddling of the central bank in Australia and the central bank in the UK, who can push those rates wider apart or closer together. Either way someone on one side of the trade loses out at the influence of the central bank and political policy.

To give you an idea, historically one Aussie dollar has got as little as 30 British pence and as high as 70 British pence. Now that kind of international currency fluctuation is solely the result of the influence of centralised power. I never get to influence how that changes, it's all at the hands of the establishment, the financial elites.

This is just one aspect of the difficulty and added expense of exchanging currency from one country to another country.

And perhaps the most significant factor influencing currencies is the actual exchange rate itself.

A country's currency value is dependent on supply and demand factors from international money markets. The supply and demand is influenced by a range of economic factors. For instance, the value of the Australian dollar and its supply and demand is influenced by factors including:

- The cash rate set by the Reserve Bank
- Imports and Exports
- Economic growth (or lack thereof)
- Other countries' cash rates and whether they are high, low, moving up or moving down
- The volume and speed of money flow through an economy
- Other countries demand (or lack thereof) for Australian exports
- Overall economic stability
- Political stability
- Banking system stability
- Debt that a country holds or issues to and from other countries

Most significantly however, is the ability for a country to manipulate their currency by getting their central bank to moving the cash rate. These influencers are typical of a free-float currency like the Aussie dollar, US dollar or British Pound.

However some currencies (and Australia's used to be like this, prior to December 1983) are determined using a reference rate, which the country's central bank determines. And sometimes, as in the case of China, they can overnight decide to change that reference rate to sharply devalue or appreciate the value of their currency to suit their needs.

This can, has, and will play havoc on international currency markets.

In fact this combined with currency manipulation such as the Quantitative Easing (money printing) programs from the US and interest rate hikes or cuts used by some of the world's major central banks (US Fed, British BOE, Australian Reserve Bank) all leads to a currency market in the grip of extreme turmoil.

Today in 2017 there are currency wars playing out all over the world because of the difficulties of the global banking system,

piles and piles of government, household and corporate debt and because of trade, military, political and economic tensions between many of the world's countries.

For example, newly elected President Donald J. Trump is seemingly making a game of how many new political enemies he can create in his first year of office. He's singlehandedly turning governments who were once allies against him.

But he's also promised to go on a major spending binge in the US. He wants to spend billions on new infrastructure projects to rebuild America's roads, bridges, railroads, and everything else he possibly can.

And let's not forget about the 'wall'. You know that big 'ol concrete wall dividing the border of the US and Mexico? That 'wall' that Trump promised he would get started on right away.

Well this is all grand, but the problem he faces and the problem that's facing the US dollar is how the heck is he going to pay for it all? There's one solution to this problem. Debt.

Excessive debt leads to a weaker economy. It might provide short term relief, but we all know where it ultimately leads. It leads to problems with currency, problems with the economy, problems with growth, wages growth, inflation — just a lot of problems staking debt on debt.

In the UK, the Tory government calling a snap election in the middle of a Brexit timeline was initially seen as a brilliant strategic political move. Theresa May as Prime Minister was looking to solidify her place at the top and strengthen her government with an overwhelming majority. That's what the polls indicated she would get — although they say that wasn't a factor…yeah right. So she decided to call a snap election — after she had promised she wouldn't call a snap election.

Not a great way to start a campaign. When you launch things on a broken promise, people are smart enough to see that you can't be trusted as a politician.

The problem is she underestimated how much the young, middle

class didn't like her and her robotic ways. And while opposition leader Jeremy Corbyn is more like a year 10 geography teacher than a world leader, he at least provided a distinct alternative option at the polling stations.

And while the Tory government won the election, they did it with a far weakened government. Now with a minority government in 'power', things in the UK are looking increasingly shaky. There is no political stability whatsoever, and this doesn't bode well heading into deep and lengthy Brexit discussions.

Oh yes, remember that? While the Tory government decided to shoot themselves in the foot, they also put the negotiating strength of the UK at risk at the Brexit table.

The powerbrokers in the EU must have been laughing all night long during the UK election coverage. Now the UK has a weak hand. They have a weakened leader and no political clout. The EU on the other hand are determined that they will make the Brexit negotiations as hard as humanly possible.

And the EU, they don't really care — they want to punish Britain. It stems from the fact that Britain never really committed to the relationship from the start. Remember, the UK never actually adopted the Euro as their currency although they became a member of the European Economic Community (as it was called then, now the European Union (EU)) back in 1973. Britain retained the Pound Sterling — which was probably the best decision they ever made regarding Europe.

But even with the UK leaving the EU, there are now concerns over inflation, trade and tariffs, trade agreements, immigration and political instability. All making the pound head sharply lower, making it weaker against other currencies on historic levels.

And the problems in the EU don't stop there either.

Thanks to the UK leaving the EU and the rise of right-wing political parties across Europe, it's looking like others might join in and hand in their EU memberships.

The Netherlands' recent elections saw an uprising in popularity

from far-right parties. Their most controversial politician is the right-wing, anti-Muslim immigration, controversial politician Geert Wilders and his 'Party for Freedom'. While they didn't win the Dutch elections, they saw a rise in popularity. And they're not going away in a hurry.

Perhaps in the next set of Dutch elections Wilders and the 'Party for Freedom' will win the vote in the Netherlands.

If he does, then we could be looking at the Netherlands also leaving the EU — and possibly going back to their own original currency, the Dutch Guilder.

In Austria the country narrowly avoided the far-right wing 'Freedom Party of Austria' in elections late 2016. In a similar situation to the Dutch, the far-right was beaten, but they will battle on and after gaining significant numbers of votes over their campaign. Next time around they might not be so unlucky.

And perhaps in the next Austrian elections, the 'Freedom Party of Austria' will win as well… Do you see the trend here?

France has also recently seen out an election. This was perhaps the most significant election in 2017. It threw up the same kind of emotive response from the world as the Trump/Clinton elections in the US.

France and Germany are the two most central and powerful nations that make up the current EU. Luckily for the EU, Emmanuel Macron was successful in his campaign. But it was his opposition that again continues this trend in Europe of anti-establishment, right-wing, anti EU parties strengthening.

Marine le Pen is the leader of National Front, a far-right political party in France (the pattern continues). She was locked in a tight battle with two other candidates, one who was on the hook for corruption charges and another who is young, ambitious, charismatic and part of the political elite.

In reality this was a race between two, Le Pen and Emmanuel Macron who leads the incredibly new En Marche! Party. Macron formed En Marche! just one year prior to his victory. That's

unheard of in the political landscape worldwide.

But it shows that France was desperate for change — change that they didn't really get. Macron is the young (he will turn 40 in 2017) charismatic, digitally and technology focused upstart that has all the charisma of former President Obama and the political savvy of a political twice his age.

Another way to look at it was that Le Pen was France's 'Trump' and Macron is France's 'Hillary' (except for the age thing, and charisma thing, and gender thing).

While Le Pen didn't win, the growth and strength of her party was undeniable. Again we see that, while the environment wasn't quite right for these parties now, another bout of the same old, same old might just see the tide finally turn in their favour next time around.

And next time around perhaps Le Pen wins? And then she too wants France to also leave the EU. She also has made statements regarding the country returning to using their previous currency, the Franc.

Imagine that…or perhaps ask yourself this:

With the EU be any different in the coming years? Will it continue to favour the establishment? Will it reward the political elite? Will it continue a soft touch approach to immigration and trade? Will it continue to support and bailout greed from European banks and governments addicted to debt?

Will it change at all? And if you think the answer to that question is no, then there's only one way to play the political instability and turmoil of the European Union.

***

Very simply, over the next decade we see the EU becoming significantly less powerful. In fact we see other countries following the lead of the UK and exiting the EU. France, Netherlands, Austria, Italy…we think they'll all eventually leave, and the EU will disband.

Brexit alone is going to throw the region into an incredibly difficult period of time. If the EU crumbles and falls apart, countries across the continent will return to managing their own individual affairs. Many will end up returning to their own currencies, like the Netherlands and France want to do.

It will create the most unstable, uncertain and dangerous economic times that Europe has seen since the Second World War — which was the very reason the EU was established to begin with.

With the growing far-right political movements across Europe, currency values could plummet, they would almost certainly become unbearably volatile, and it could create a whole generation of turmoil.

Imagine what that would do to the 743 million people that live in Europe? Imagine the flow on effect that would have to markets, to currency markets across the entire world!

The situation in Europe now, and the currency devastation that may ensue over the coming years, are so dramatic that people across the world are looking for alternative options to protect their money.

If a situation like Greece and a run on banks were to occur across all of Europe, it could send the world into another global financial crisis. It could lead to the collapse of the global banking system. It would mean payments, transfers, stores of wealth in the 'traditional' banking system (deposits, term deposits, cash) could become worthless, and screech to a halt.

If the global banking systems shuts down, then how will people be able to facilitate any kind of payment? How will people be able to continue to send money, to buy goods and services, to store wealth in a secure, protected environment where the banks and the government can't get their grubby hands on it while they try and fix the mess they helped create?

There is only one answer, one option to prevent your wealth from disappearing into the ether is the banking system's collapses — and that's Bitcoin.

There is no doubt in my mind that the EU will fall apart. I see countries going back to old currencies; I see the system becoming harder, more complex and more expensive than ever.

And I see a flight away from the 'traditional' banking system. A flight to an 'alternative' banking system. A system that didn't exist during the GFC, but exists today.

While things in Europe are teetering on the edge, there's even more turmoil and currency wars playing out all over the world.

You can also cast your eye over to India, which is going through its own currency crisis. In November 2016 the President went live on TV (unscheduled) to let the country know that in four hours' time — yes just *four hours* — 500 and 1,000 rupee notes would no longer be in circulation and available to citizens — but most importantly, they would not be accepted as legal tender. They *outlawed these bills.*

This stunning move had the intent of trying to eliminate rife corruption, fraud and criminal activity. India has a thriving 'black economy'. That's also known as the cash economy. And many transactions, many unpaid taxes, many holdings of wealth go unreported — they exist, but never officially in the economy.

The BBC reports that ,

> '*In an attempt to curb tax evasion, the government expects to bring billions of dollars of unaccounted cash into the economy because the banned bills make up more than 80% of the currency in circulation.*
>
> *'Some 90% of transactions in India are in cash.'*

This was an astonishing move that — virtually instantly — eroded the cash savings of millions of Indian citizens. Many people across the country held these notes that were now effectively worthless.

This triggered its own state of panic as people crashed the banks to exchange their bills and to withdraw money from their accounts. The fear was that their savings would be further eroded and any

semblance of wealth they had would simply disappear.

This had the effect of crashing the rupee. And when you look at the 10 year currency chart of the INR/USD trade, the Rupee is at decade long lows. India set a war on cash, and are going a long way to destroying the wealth of millions of people.

Japan fares no better. There has been a 30 year long period of economic nothingness. They have not seen growth, they have seen a weak currency, and they have lost the dominance they had in the global economy in the 70s and 80s. Japan's economy has simply fallen away to nothing.

Venezuela is suffering through a period of hyperinflation and a government again running their country's economy into the ground. The Bolivar is becoming increasingly worthless. And it's already seeing a flight to Bitcoin. Venezuelans see Bitcoin as 'safer' than the national currency. They are now using Bitcoin to buy goods and services to then smuggle back across the border.

China understands that this could be the whole future of global finance. And rather than sit on their hands, they're actively getting involved in Bitcoin. They see it as a bridge to get the billions of Chinese connected and into the financial system.

Remember, while China is one of the biggest countries by population in the world, it's still one of the poorest. And China knows this will be a major problem long term.

When you look at (nominal) GDP per capita China comes in at around US$8,100. The United States is around US$57,400. In Australia it's around US$51,800, and in the UK it's at US$40,000.

China has some way to go. But perhaps 'decentralised' distributed ledger technology can bring their 1.3 billion into the new crypto financial system, and get them helping to build China's wealth long term.

Russia is basically in global isolation. They are one of the world's military mighty, but economically are still at the mercy of the US. When they decided to go to war with the Ukraine the US hit them where it hurts most, economic sanctions.

And let's not forget, in 2015 Russia was in recession. With plummeting oil prices, Russia simply can't balance the books. And they too now realise that they must build a resilient economy, divergent from oil reliance and independent enough from the connections to places like the US or UK to enable long term economic prosperity.

And where might they find this potential decoupling from the 'traditional' economic system? Crypto.

Africa's biggest two problems are the sheer weight of 'unbanked' people in the country, and corruption. Imagine if everyday African people in all the various countries like Sierra Leone, Uganda, Somalia, Sudan, Libya, Eritrea that weren't caught up in the civil wars and corruption could break free of the shackles of the regimes that dominate those countries?

Imagine if people that have never had access to banking and finance before could use their phones to access a financial system that could help drag them out of poverty.

While they are some of the most 'unbanked' countries in the world, they're also one of the fastest growing regions for mobile phone and smartphone adoption. If those phones can become part of a global network, a blockchain, then perhaps crypto can pull them up and out into some level of prosperity and future.

And then there's Venezuela!

The Venezuelan government are running the economy into the ground and their currency, the Bolivar, is suffering from hyperinflation. Many Venezuelans are turning to Bitcoin as a way to keep their money safe and to buy goods and services. The Venezuelan government also restricted access to other foreign currencies, fearing a further flight from the Bolivar.

Hyperinflation makes the cost of something as simple as bread becomes almost unaffordable overnight. But with restrictions, controls and government interference, people are turning to Bitcoin. They can find some stability in the digital currency, which the government can't stop or control.

As Bitcoin is free from third party controllers like banks and government, they simply can't touch the Bitcoin and blockchain. It's completely independent of them.

This of course has drawn the harsh hand of the Venezuelan government, as they began to shut down local Bitcoin exchanges. But the power of the blockchain can't be stopped, and Bitcoin has now become the 'people's money of Venezuela'.

This is exactly the situation that makes the whole idea, and ideals of Bitcoin so appealing. It is free. Its freedom puts the power and control of money back in the hands of people and the wider distributed, public network.

It's a big middle finger to government and their inability to serve the people. In regimes of repression and oppression, Bitcoin shines through. And even in more developed 'democracies', Bitcoin has become more than just a digital currency. It's become a movement of freedom from the shackles of the financial elite and a redistribution of power to the people through its decentralised nature.

***

The banking system, the debt addiction, the problems with traditional payments and finance, the political and economic turmoil that's flooding the world — the distrust of government, central banks, the fear of missing out, the rise of decentralised power — you have a seemingly endless stream of perfect conditions that are providing the most incredible environment for something new, revolutionary, transformational to take hold of the world and change the very fabric of society, economies, and the physical world — forever.

Of course, in a time when government and central banks decide on a whim to erode the wealth of citizens, what option do people have to stop it from happening? Well as we know, in the past there was no real way to protect your wealth when a government just decided to take it — that is until people had the ability to shift their wealth out of the traditional banking and finance system, and into an alternative.

And that alternative system is Bitcoin and the blockchain. If there is global financial calamity, there will be a flight to Bitcoin. It will see the value of Bitcoin skyrocket — I envisage that short term the value of just one, single Bitcoin could easily head to US$50,000. And as the turmoil continues and as people realise that benefits of Bitcoin and its future potential, they will flock to it in even greater numbers — pushing the value of just one Bitcoin to well over US$100,000.

If it plays out the way I think — the Europe situation, Brexit, the US' unfathomable spending programs, India's cash war — it will be the trigger point that starts it all again; another major global financial crisis.

If that's the outcome, then buying up as much Bitcoin as you can today could become the most important decision you'll ever make in your life.

The cryptoeconomy is going to change everything. And it's so early in its development, so full of potential to revolutionise the world, that for those who can see and seize the opportunity, it's going to mint more 'crypto' millionaires and billionaires than the internet. More than the app economy, the tech boom, the oil rush, the gold rush, the railroad explosion could ever have imagined.

It starts with Bitcoin and ends with…well it doesn't end. Bitcoin is the first, the most important (for now).

And the key events that triggered this revolution show you exactly how the incompetency of central control for the last decade have lead to the most transformational change the world has ever seen.

Events that Changed Bitcoin Forever

Before completely getting into the nitty gritty of how Bitcoin works, how and why you should get some and what it's future holds, you should also know about the key moments in its history. This moment by moment playbook brings us to where it is today.

Some of the terminology in the 32 key events below might be confusing. Or you simply might not know what they mean. But continue on, as I explain them all in Part 2: Genesis.

Then almost like a 'Choose your own adventure' book, you can revisit these moments and get an even deeper understanding on exactly what it all means and how all the pieces fit together.

That will then bring you to the point we sit at now in 2017 with Bitcoin and the future of the most disruptive financial instrument since the invention of money.

Let's head back to the start...

1. The Genesis Block.

The first ever Bitcoin block as part of the blockchain. This is the 'big bang' of Bitcoin. On 3 January 2009 it all started. If you ever get a chance to properly look through the Bitcoin code, you'll see a nice little 'easter egg' buried in it.

There's a piece of data, a reference text that gives weight as to the reason why Bitcoin even exists. Buried in the data there is a piece of text, a reference to the exact day of creation and the global uncertainty that existed in the world at that very moment. The text reads,'*The Times 03/Jan/2009 Chancellor on brink of second bailout for banks*'.

Now if you check the headline of the *Times* newspaper in the UK on that very day of the first Genesis Block it reads, '*Chancellor on brink of second bailout for banks .*'

There are two things to learn from this. The first is that, clearly, we know the motivations behind Bitcoin. The second and unproven is that perhaps Satoshi Nakamoto is actually British.

But if that Easter Egg doesn't make you smile a little, then maybe Bitcoin just isn't for you!

2. The first known Bitcoin to USD exchange takes place.

Self-proclaimed, '*Anarchist cyberpunk ninja. A.K.A. Sirius*' sold 5,050 BTC for US$5.02 on 12 October 2009. Yes, that equates to just under 1/10th of a cent per Bitcoin. Today that transaction would be roughly worth US$6.26 million. Lots of early users have classic, 'if only' stories (including me), but surely this one ranks up there...but maybe not as much as the next fella.

3. Bitcoin Pizza Day

Laszlo Hanyecz becomes the first known user to purchase real goods in exchange for Bitcoin. He goes on to a Bitcoin forum and asks the community on 18 May 2010 if someone will go and buy him two pizzas. In exchange for those pizzas he will transfer (pay) them 10,000 BTC for their troubles.

The US dollar value of 10,000 BTC at the time was about US$25. Making Bitcoin worth around 1/4 of a cent. Laszlo gets a deal on 22 May, and the transaction completes. Laszlo also becomes infamously known as the million-dollar pizza guy, as those two pizzas (on today's BTC values) would have cost Laszlo US$27 million. I doubt Laszlo has ordered a pizza ever since...

But being an online community, every year on the 22 May the Bitcoin community celebrates 'Bitcoin Pizza Day' in memory of this epic event.

4. Mt.Gox goes live

This is one of the earliest and most well known Bitcoin exchanges from the early days of Bitcoin. Based in Tokyo, it launched in July 2010 and at its peak was handling around 70% of all Bitcoin transactions. This was the first exchange I ever used to buy and exchange Bitcoin.

Mt.Gox also had its fair share of troubles, which we'll get to later. But when Mt.Gox went live and people began to realise this was

a unique financial instrument, price of Bitcoin rose sharply and was then worth 7 US cents.

5. Dollar day

9 February 2011. One Bitcoin is now worth US$1 for the first time since the Genesis block. This marks an already incredible rise in price from merely 1/10th of a cent to the magical $1 mark.

People now start to take more notice of Bitcoin in forums, websites and the deep web. Suddenly ecommerce sites start to pop up supporting the use of Bitcoin for payments. In particular on sites in the deep web, Bitcoin is now being used as the 'currency' of choice, as it has genuine purchasing power.

6. 'The Underground Website Where You Can Buy Any Drug Imaginable.'

Adrian Chen publishes his article about The Silk Road on website, Gawker on 1 June, 2011. It goes viral. All of a sudden major newspapers, news channels and other websites are picking up on this mysterious, unknown and dangerous underworld that exists online.

The whole idea of the 'Dark Web', which is really called the 'Deep Web' amongst technologists, scares the general public. It also gets the attention of the authorities for the first time. It thrusts Bitcoin into the spotlight — making people aware about a digital currency that is anonymous, untraceable and able to be exchanged online for drugs, guns, and any illegal thing you can imagine.

While this has negative repercussions to start with, it also supercharges the price of Bitcoin. And on 8 June the price of Bitcoin smashes though US$30 to peak at US$31.60. However as the notoriety, the criminal links and with central authorities taking notice the price plummets *again*. By 12 June the price is now around US$10. This is the kind of volatility that frightens off a lot of the mainstream from taking Bitcoin seriously.

7. Mt.Gox hack

18 days after Chen's article, Mt.Gox suffers a huge hack. It may be a coincidence that it was hacked after the publication of Chen's article, but that's unlikely. Chen specifically refers to the Mt.Gox exchange and how it's possible to get some Bitcoins to use on the Silk Road.

Opportunistic hackers clearly get wind of some money to be made, and launched themselves at Mt.Gox's servers. During the hack the nominal price of Bitcoin on the Mt.Gox exchange plummets to just 1 cent as the hackers mess with trades and then withdraw Bitcoin to various accounts. The IP address from the biggest theft came from Hong Kong.

The hacker transfers a large amount to himself, and minutes later user-traded values return to normal prices. Still, it causes Mt.Gox to come to a grinding halt. At first the company shifts blame onto users as it became clear the stolen amounts had occurred after legitimate user name and login passwords were used to get access to the site.

Until the company realised their database had been stolen and the hackers were logging in with *real user names and passwords* from a stolen database. Mt.Gox had to roll back all the fraudulent sell orders and restore the market to around US$17.50 per BTC.

8. Bitcoin goes primetime

Bitcoin gets its Hollywood moment on an episode of the US TV Show '*The Good Wife*' called '*Bitcoin for Dummies*'. According to the episode guide,

> '*Alicia's client is being pressured to reveal the name of the anonymous Bitcoin creator so that the government can prosecute him for creating what they believe to be a currency in direct competition with the US Dollar.*'

While this was massive attention for Bitcoin, by this stage Bitcoin had mainly fallen from the mainstream media and there is still little public knowledge or awareness still of what it really is.

Most people I speak to around this time really don't know about it, how it works, other than it's some kind of 'internet money.' And when '*The Good Wife*' episode airs, the price of Bitcoin is languishing at around US$5. The incredible volatility terrifies most people, and the debate about the longevity and relevance of Bitcoin intensifies among the online technology community.

9. 2012, hack-city

While the Mt.Gox hack in 2011 was major, it's nothing compared to what comes during 2012. Firstly in March, Linode is hacked. Linode is a cloud server company that hosted Bitcoin-trading platforms. Online web news portal Ars Technica confirms that 46,703 BTC are stolen in the hack, which were worth around US$228,845 at the time.

By August, Bitcoin Savings and Trust, a company enticing investors with 7% weekly return on investment, and it's lead manager, Trendon T. Shavers manages to defraud Bitcoin users out of somewhere between 82,000–500,000 BTC — no one really knows the exact amount.

The US Securities and Exchange Commission would eventually press charges and convict Shavers in 2013 for operating a ponzi scheme to defraud investors. But with the SEC getting involved in a Bitcoin related case, the questions again start to come to the surface about how regulators and governments should treat Bitcoin.

Is it a currency, an asset, property...? How do they tax it? No one really knows, and there's no one universal solution. The borderless nature of Bitcoin makes it virtually impossible for regulators to manage, and that makes it an enemy of the state.

10. You get...half

At the end of 2012, on 28 November, one of the most significant events in Bitcoin history takes place — the block reward for mining halves.

Instead of a 50 BTC reward for mining a block, miners now get just 25 BTC. This changes the economics of Bitcoin mining *significantly*. All of a sudden the hobbyists at home with a PCs and

a couple of GPUs starts to get pushed out of the mining market with more ferocity. Adding to this is the rise in ASIC (application specific integrated circuit) miners, which are dedicated mining rigs. Furthermore, these ASICs are being bundled together to create ASIC mining pools — basically supercomputers just for mining Bitcoin.

In other words, entire companies are now popping up around the world whose sole aim is to mine Bitcoin for profit. The biggest surge in dedicated miners and mining companies occurs in China. Around this time on 31 December 2012, Bitcoin is again heading north and is trading at US$13.51.

11. 2013 – Greece, the US, Cyprus

We won't delve into this too much more (see earlier chapter). While these major countries debt and default concerns plague global markets, a lot of other events are taking place in the Bitcoin community.

These other events, combined with the global turmoil, create the perfect storm that will see one BTC hit more than US$1,150 by the end of November, 2013.

12. Coinbase tops $1 million

In February 2013 Coinbase, a company built around the processing of Bitcoin payments for merchants wanting to accept Bitcoin, says they sold more than US$1 million in Bitcoin in a single month, with an average price over US$22 per BTC.

13. The banking crisis in Cyprus

This crisis sends Bitcoin skyrocketing. Thanks to a run on Cypriot banks in March, by 1 April 2013 Bitcoin pushes through US$100 for the first time ever.

Nine days later it peaks at US$263.48. Two days after that on Friday 12 April the price crashes hard to just US$67.60. After the insane volatility in 2011 and 2012, this only reaffirms the fear people have of buying and holding Bitcoin as any kind of investment.

Most people simply can't stomach seeing the fiat value of their Bitcoin go up and down so rapidly.

14. Law enforcement gets involved

On 23 June 2013 the US Drug Enforcement Agency (DEA) lists 11.02 BTC as a seized asset belonging to Eric Daniel Hughes. This is assumed to be the first ever instance of a law enforcement agency seizing actual Bitcoins from an individual.

It's also believed that this seizure is in relation to a sting involving The Silk Road. But from the end of April through to the end of September, there is not much going on in the world of Bitcoin. And then…

15. The King is Dead

If you went into the Deep Web and found your way through to The Silk Road on Wednesday 2 October 2013 you will not have found what you were looking for. Instead you will have seen two large symbols, one belonging to the US Department of Justice, and another belonging to the US Federal Bureau of Investigation (FBI).

And you will have seen in large, bold text, '*This Hidden Site Has Been Seized*'. At the beginning of October the FBI managed to find the mysterious and elusive alleged owner of The Silk Road, a user by the name of Dread Pirate Roberts — or as the FBI believed it to be, Ross William Ulbricht.

This wasn't some well-organised bust on a suburban house where the Feds kicked down doors and threw in smoke grenades. No, Ulbricht was arrested at the *San Francisco public library*.

The FBI charges against Ulbricht said The Silk Road was, '*the most sophisticated and extensive criminal marketplace on the Internet today*. ' The FBI also allege that he has around 600,000 Bitcoins — worth at the time around US$80 million (today worth around US$1.6 billion).

The FBI shuts down The Silk Road and prosecutes Ulbricht. Today he is currently serving a life sentence without possibility

of parole. The Ulbricht arrest and The Silk Road closure sends the price of Bitcoin from US$125.31 to US$84.07 *in just three hours!* By midnight Friday 4 October, the price of Bitcoin bounces strongly back to US$121.29. This shows how volatile but also how resilient this crypto asset is now becoming.

16. The US Senate wants a say

18 November, 2013 the US Senate holds a hearing on Bitcoin, '*Beyond Silk Road: Potential Risks, Threats, and Promises of Virtual Currencies*'. Ulbricht's arrest has put the cryptocurrency front and square with the US authorities and regulators.

They want to figure out how to handle this 'digital currency'. Surprisingly they affirm that they don't want to stand in the way of innovation. But clearly they want to protect the interests of the US dollar, taxation and how people operate in the existing banking system. The links of Bitcoin to criminal enterprise put it in the line of site of authorities.

17. Even China weighs in

20 November, the price of Bitcoin is now trading upwards around US$645 per BTC. The hype is continuing to build. People are meeting in cafes to exchange Bitcoin through their smartphones. There's even a Bitcoin ATM in downtown Vancouver.

Then the People's Bank of China (PBoC) weighs in on the Bitcoin debate. And they decide to give it the green light. They declare, '*that people should be free to participate in the Bitcoin market*'. For such a tightly controlled regime to open the floodgates to such a disruptive financial and economic instrument sends the price ballistic.

18. US$1,000 and beyond

The culmination of the US debt ceiling, fears of another banking crisis, trouble in Europe, bailouts, bail-ins, and threat of all-out financial Armageddon strike again. This, added to China and the US laying a favourable eye to people's involvement in Bitcoin, and things go nuts.

Bitcoin turns up and heads north with such ferocity that every major news outlet in the world once again begins to cover Bitcoin. The speed and veracity of its price movements make it akin to 'Tulip Mania' in renaissance Holland. On Thursday 28 November, 2013 one Bitcoin becomes worth more than US$1,000. Two days later on Saturday 30 November the price of Bitcoin peaks at US$1,156.

19. China says yes, China says NO!

In an astonishing about-face on 5 December, China decides that it's now going to impose restrictions on Bitcoin. They declare that it's not a currency and prohibit all financial institutions in China from dealing with, exchanging, trading, or offering any kind of services related to Bitcoin.

At this point Bitcoin has been highly volatile and trading around US$1,000 for about a few days. After the Chinese announcement it plummets to US$909. By 18 December the price of Bitcoin is now back to US$522.

20. Mt.Gox disappears

After Mt.Gox rose to such dominance as an early market platform for Bitcoin, it came to as just an abrupt halt. On 14 February, 2014 Mt.Gox simply vanished. Users couldn't log into the site, there was nothing anyone could do.

People with Bitcoin sitting in online wallets within the Mt.Gox system simply couldn't access their account to even move their Bitcoin out of the Mt.Gox system. Mt.Gox went bankrupt, and the company lost over 744,000 BTC.

I had a nominal amount of Bitcoin in a Mt.Gox wallet that had been sitting in there for a year or two, but it just vanished — along with others who probably held far more than I did. Eventually, CEO Mark Karpeles would be arrested and charged in Japan. He was released from prison on bail in July 2016, but must remain in Japan — on 'Japan arrest'.

21. The US gets it all so wrong

The US government had been trying to figure out exactly what to do about Bitcoin for over two years by 2014. Eventually in March 2014 the Internal Revenue Service (IRS) decided that Bitcoin is not a currency, but instead is 'property'. The idea was that they could treat it in the same way they treat stocks and barter transactions.

Needless to say, this decision baffles many, and goes against the fundamental purpose of Bitcoin. For example, if you buy a $5 sandwich using Bitcoin and those Bitcoin cost you $2, you would have to pay capital gains tax on the $3 differential. Make sense? Of course it doesn't. This proves central authorities simply have no idea about Bitcoin.

But this decision sent the price of Bitcoin from US$586 plummeting down to US$360 by 10 April 2014 as people in the US are bamboozled by the government's interference.

22. Dell and Microsoft think maybe this is OK

The real potential of Bitcoin starts to bubble to the surface during 2014. This is emphasised by more and more merchants accepting Bitcoin as payment for goods and services. In particular computing giant, Dell decides they will accept Bitcoin as payment. Dell uses Coinbase as their Bitcoin payments processor.

Then in December 2014 the biggest of all merchant announcements comes through…Microsoft says they will accept Bitcoin as payment for apps, games and content online through Windows and Xbox online.

23. Size matters

Perhaps the biggest ongoing debate around the inner circles of Bitcoin development is the size of Bitcoin blocks. As the blockchain system gets larger and larger, more transactions need processing every day. The current block size is 1MB. And there is a division amongst developers over whether it should be 2MB, or even larger.

This kicks off in 2015 when Bitcoin XT — a hard fork from the Bitcoin client system — goes live. This fork (an alternate version of the same thing that runs parallel to the original) has the Bitcoin community divided. If the blocks stay at 1MB, it lends itself to a natural market for transaction fees. But the system simply won't be able to globally scale while maintaining speed and ease.

If the block is larger it will speed up transactions but make the fees less, which doesn't incentivise miners (nodes) as much as higher transaction fees would. But more users mean more transactions and ultimately more fees.

In short, to scale Bitcoin to billions of people and billions of transactions per day it must get faster. Otherwise it ends up more like a digital version of physical gold. When this debate started back in 2015 (and is still going) it sent the market into a panic about disagreement and dissent among Bitcoin's core developers.

It was during this initial turmoil within the community that Bitcoin traded at its lowest since right before the hype and peak in 2013. Two years later in 2015, Bitcoin had gone through the kinds of volatility that no financial instruments has ever seen, survived, and come out stronger at the other end.

The end of 2015 and start of 2016 would see stability begin to creep into Bitcoin, even with the 'scaling debate' never really going away. Soon wiser heads and more unemotional views surface with the idea that perhaps this really could become an alternative, global payments system. And the driving idea is that the blockchain technology that Bitcoin is founded upon could be the most influential technology of the 21st century.

24. The trust machine

The potential of the blockchain as a disruptive financial technology is highlighted when *The Economist* publishes a front-page article on Bitcoin titled, 'The Trust Machine' in October 2015 . They explain how, '*The technology behind Bitcoin could transform how the economy works*.' It goes on to point out Bitcoin has an unfairly shady image due to its early ties to the deep web and The Silk Road.

It also highlights the fact that, when you really look at the technology and how Bitcoin works, there is tremendous potential to revolutionise how the world's economies and payment systems operate in an increasingly digital and interconnected world.

25. Openbazaar

The ultimate, legal and community minded marketplace goes live — OpenBazaar. This is a peer-to-peer (P2P) program that users download, which connects directly to other people who are looking to buy or sell goods and services. This is like an open source, community focused eBay, Amazon and Gumtree all rolled into one huge P2P platform.

The *only accepted currency* on OpenBazaar is Bitcoin. This is the beginning of widespread ecommerce adoption outside of major corporations. Venture Capital heavyweights, Union Square Ventures and Andreessen Horowitz invested US$1 million to help fund OpenBazaar's development. At the time of launch Bitcoin is worth US$420.

26. You got half, now you now get half of that

It happened on 28 November, 2012. And on 9 July, 2016 it happened again. The reward for mining a block of Bitcoin halves again. At the beginning the reward was 50 Bitcoin. Then it halves to 25. From 9 July it is now 12.5 Bitcoin per block.

As more blocks are mined, the reward will continue to halve around every 250,000 blocks. Eventually, predicted to be sometime around the year 2140, all Bitcoin will be mined and there will be no more Bitcoin rewards. Mining will cease. Miners will instead turn into transaction processors and be rewarded with transaction fees.

27. Trump. Europe. Brexit.

Reminiscent of 2013, the world re-enters familiar territory. Except this time it's government around the world forming from right-wing, interventionist and introspective policy. Trade wars and currency wars seem to be bubbling up to the surface. Politically, the world is in turmoil — and Bitcoin's fiat conversion

price is benefitting. In 2016 and into 2017, with so much global instability, the price of Bitcoin again marches onwards and upwards past US$1,000.

28. Going up

Bitcoin reaches an all time highs, surpassing the highs from 2013. It's now worth more than one ounce of physical gold. Some are again calling a bubble in Bitcoin. But this is the future it's always had the potential for.

This is just the beginning, and as it continues to be the perfect anti-establishment, alternative financial instrument, Bitcoin will continue to rise. If it goes the way I foresee, then US$50,000 and then US$100,000 (and beyond) per Bitcoin will be its longer term purchasing power.

29. The cryptocurrency boom

Bitcoin is not alone. The truth is Bitcoin hasn't been on its own since the start. But in terms of mainstream awareness it wasn't until 2017 that the world stood up and took notice of not just Bitcoin but all cryptocurrencies.

Incredible growth in other 'crypto' such as Ethereum, Ripple, NEM, PivX, Dash and others saw early investors from the 2013/14 days see their investments increase 1,000%, 5,000% 10,000% and more in the space of just a few months. Many call it the 'cryptocurrency bubble', but the truth is the world is only just starting to wake up to the fact that cryptocurrency (not just Bitcoin) is building a whole new financial system, a new social architecture. The most significant and powerful technological revolution in the history of mankind. The crypto revolution started in 2013, but it only really began in 2017.

30. Civil war

Bitcoin's scaling debate comes to a head and two competing factions within the developer and miner communities surface. The debate is how to best implement scale for Bitcoin. There's no doubt that now, with more users, the network is slowing.

Scaling isn't something that just 'should' be done. It must be done. Thankfully, in June 2017 there seems to be consensus as over 80% of the network agree to SegWit2x, a scaling proposal that at least short term will speed up the network. This is necessary to scale Bitcoin, and shows that even though the threat of civil war can bubble to the surface, ultimately the community will come to a consensus. It's in the interests of all to keep Bitcoin going and moving forward.

This is the first sign that trouble internally can be overcome by the network. It's proof that decentralised organisation can organise, mobilise and operate outside of centralised control. This is a significant moment, and proof that long term Bitcoin is heading on the right track for widespread, global adoption.

31. $10,000

In 2018 Bitcoin will breache through the US$10,000 barrier. This milestone was thought to be impossible. But with activated developments to the blockchain and the scaling debate now well past. Bitcoin will be able to grow, scale and bring in more users around the world.

The global 'unbanked' will begin to adopt it and use it to involve themselves in finance and wealth creation. Merchants will come on board, accepting it as payment. Innovative companies will find ways to allow Bitcoin to be accepted as a payment method, just like cash.

The exponential growth of the network will continue to push the price of one Bitcoin higher. And early investors will begin to see the kind of growth and return on investment — and ability to use their Bitcoin in the real world — that they can financially operate outside of the 'traditional' banking system.

32. The future...

Of course point #28 is pure speculation, for now. It's merely a prediction of what's to come for Bitcoin. The truth is, no one really knows how big this could be. How widespread and widely accepted it could become.

My view is that by 2027 Bitcoin will become the world's global reserve currency. You will be able to get paid in Bitcoin. You will be able to spend your Bitcoin in Australia, the UK, the US, Europe, anywhere in the world as it's the first real global currency.

It will be a truly global alternative financial system outside of the influence and control of central authorities like central banks, governments and major financial institutions.

With this kind of widespread adoption, people will talk about the price of goods and services in 'satoshi', part Bitcoin, not in whole Bitcoin anymore. People will be able to buy daily goods and services, groceries, energy, consumer goods, cars…houses with their 'satoshi'.

And those that hold whole Bitcoin will have their wealth multiplied times over as the price of Bitcoin exceeds the fiat equivalent of US$100,000 and pushes on to US$1,000,000. Of course comparison to fiat currency is moot by this point, because there's no real need to use country specific currency. Bitcoin will be so widely accepted that you'll be able to use it anywhere, anytime to operate in the global cryptoeconomy.

Now with Part 1 under your belt, the next big topics to tackle are what exactly is Bitcoin — technically speaking. How do you get it, store it, spend it, sell it and operate in the cryptoeconomy?

PART TWO: Genesis

Part 1 is designed to give you a reference point when you start to consider why the price of Bitcoin is now consistently trading with a fiat conversion value of around US$3,000.

In Part 2 we're going to dig a little deeper into the more intricate details of Bitcoin, including what it *really* is and how it works from a technical perspective (we'll make it as easy and simple for you to understand as possible).

We'll also outline how you can go about getting it, buying it, using it and storing it. And yes, that's right, we absolutely believe you should be buying and storing Bitcoin — we'll explain why in Part 2, also.

But first, to understand Bitcoin's importance and future, you need to understand how the global payments and monetary system works today. This can get complex, and I'll try to keep it simple as I can. But, inherently, the global banking system is complex, hard to understand and difficult to use, which is exactly what makes Bitcoin so full of potential for the world in the coming years.

So let's dive in…

Gold? Stocks? Cash? What is Bitcoin?

The name Bitcoin itself does no favours to people trying to understand exactly what it is. Upon first glance people naturally assume it's a 'coin', a currency that you use.

And in some aspects of Bitcoin's intent and origins, yes it is indeed a currency. But it's more than that. BItcoin is like nothing else the world has ever seen before. And as such, we shouldn't try and compare it to gold, stocks, cash, currency — it's unique in so many ways. That's what we'll explain to you here.

A good place to start with what exactly Bitcoin is, is to simply think about it as nothing. Drop any preconceived idea that it's like gold, stocks, cash or whatever.

Think about it as simply some lines of computer code. Code with extremely tight cryptography principles and mathematics, which make it like no other financial instrument before.

That doesn't make it hard to use. It actually makes it secure. And it makes it pure.

But another good place to start with, to understand why it's so radically different to anything we've seen before, is to understand the basic concepts of currency that we use today.

***

Barter was a system of exchange the people used thousands of years ago.

The basic premise is:

I have an asset that you want, you have an asset I want, and we exchange said assets in a way we both deem to be fair.

For example, you might have a chicken that lays eggs, and I want eggs. Conversely I have a cow and you want milk. We come to an arrangement whereby you give me a dozen eggs I give you four pints of milk.

Simple. But basic. And in that sense your eggs have 'currency' to me and my milk has 'currency' to you.

Now as simple as this is, it works. But when it comes to the exchange of other goods, or the bartering of assets where the two parties can't decide on a fair trade, the system basically falls down.

Bartering was always a system that would fall away in a more complex world of commerce. And in its place came money.

Now, when you really think about it money is simply a device that allows ubiquitous trade amongst people who share and hold different resources. It is by nature a belief system. If I put faith in that currency as worth something, and we all have that same fundamental belief system in place, then it's worth something.

That allows more complex transaction. I might have 20 cows, you might have 20 chickens, and Bob across the road has 20 pigs. You want a cow, I want a pig and Bob wants a chicken.

I'm not giving you a cow for your chicken because I don't want it. And Bob isn't giving me a pig for a cow, as he wants your chicken.

So instead our government decides to issue money. So we exchange this money for those goods. In return for helping us to facilitate our commerce, the government take a clip from us in taxes, penalties, or some other means.

How much money I have to give anyone is dependent on the market value for each of the cow, chicken or pig. I give Bob four coins for his pig. That's the price we deem fair. He now has three coins that he can give to you for your chicken — but perhaps the agreed worth of the chicken is only two coins. But Bob decides to get two chickens. Now you have four coins. And as you want my cow and a cow is worth four coins (like a pig), you give me four coins for my cow.

It's a complex transaction made super-simple. But that's how money flows around the economy. People buy things, sell things, goods, services, skills – in exchange for money, which they go on to use in other parts of an economy.

Let's stop there for a second.

You see, in the physical world, at its core we have been using money/cash for hundreds of years to operate commerce. We work, earn money and then spend it or save it. We spend it to purchase things we need and things we want. We save it to purchase things we need and things we want later in the future.

This cycle of money in and out of our hands is what drives economies and corporations. It's also what funds governments as they tax us, fine us, and take money from us to operate and exercise their will and control.

Now all this money was grand. Until some people decided they wanted something but didn't have enough money for it. So along the way the world also developed this thing called debt. Debt is an 'IOU' to someone to pay them money at a later date. I might want a pig and two chickens but have just four coins. So I go to another person with four coins and say, 'if you give me your four coins, I'll give you five coins next week'. Then I have eight coins to get the pig and two chickens. But I now also have to figure out how to get those four coins and one extra back to that person by next week.

If I don't, they have a right to take my pig (which is worth more than one coin!) because that's the deal we struck.

In modern times most people understand debt because the biggest amount they'll ever take on is to buy a house.

The reason someone uses debt is because they don't have enough money now to buy what they want or need. So they use debt with the view to pay the money to the person (or institution) lending it to them at a later date.

The global financial system we live in has, over time, made it easier and easier to get debt. So much so that, often, debt is used to fund debt. And as more debt is issued the value of your money actually erodes. This is particularly evident when governments takes on debt.

Now, we could write a whole separate book solely about the

banking and financial system, debt, and the mismanagement of economies.

We could write far more about how twisted and deceptive governments are. Books about how the entire financial system is fuelled with debt and how currency wars are building to the crescendo of another giant almighty financial catastrophe…or not.

And we touched on currency wars, political turmoil, the financial system, debt and its root in the origins of Bitcoin, in Part 1. But the trail of destruction that it's all left behind will never be forgotten.

That's fundamentally why, instead of the money that we use to circulate within the borders of our home countries, we now have another option.

With all the debt built up in the world, and central banks printing more money to fund and fuel this debt, they are eroding the wealth of everyday citizens like yourself. What started as a basic concept to enable commerce around the world developed into this all consuming beast we know as the global financial system. It's far too complex, convoluted and corrupt. It's a broken system that needs an alternative…and that alternative is now here.

Think about it like this. Are you're sick of government ripping you off? Are you sick of banks and giant multinational corporations ripping you off? Of the political elites and establishment ripping you off?

Are you sick of this debt addiction from governments that your great grandkids will be left to pay for?

If you are worried, then the answer is Bitcoin.

Bitcoin in its purest description — from the Satoshi Nakamoto white paper — is, '*A purely peer-to-peer version of electronic cash*'. It allows the transfer of payments from one party to another without going through a financial institution.

It cuts out intermediaries and middlemen. It allows people to buy pigs and chickens and cows without a central issuing and

controlling authority.

Its aim is to reduce barriers, cost, and borders of global finance. It was and is for *everyone*, to benefit *everyone*. Not just the elite, not just the powerful and already wealthy. It's the libertarian, anti-establishment, alternative digital financial system.

And (at least to begin with) Bitcoin was also built around anonymity.

It achieves a level of anonymity because its core code is based around cryptography, mathematics and encryption. That's also worth noting. At the end of the day Bitcoin, or any cryptocurrency for that matter, is nothing more than computer code — at least literally.

And to many people the idea that something so intangible can have tangible value is a difficult concept to overcome. But once they do, and once they become a part of the belief system that says Bitcoin *is* worth something and *can* be used as a medium of exchange for goods and services, then it's inherently worth something. This is regardless of there being no physical 'good' to back it. And besides the money you now use, that's really only backed by debt — that's even more intangible than Bitcoin's code.

Remember, Bitcoin is unique in that nothing like it has existed before with the capacity for widespread mass adoption and mass belief.

Continuing on with the privacy aspect. The way in which Bitcoin attains its quasi-anonymity is via the use of what is known as *private keys* (a form of encryption). In that way, only the holder of a private key can have access to the corresponding wallet that the private key opens.

Each wallet also has a *public key*, which is the address that users use to make transactions. But privacy can be maintained as the public keys are unidentifiable to a particular user. And as long as private keys are kept private, then no third party can access a wallet.

By using this method of public and private keys, third parties

and counterparties can be removed from the flow of payments from one to another.

This enable peers (you and I and anyone else)on the network to send payments and make transactions. We can do this with safety and security as the network which records the transactions 'signs' these transactions using public keys to verify the transfer from one 'wallet' to another. And this process of singing and confirming transactions within the network means that the network is 100% accurate and foolproof.

The network itself becomes the trusted source — but as the network is distributed amongst the users, everyone is a part of the inbuilt trust of the network.

In short, with Bitcoin you simply make transactions through its network, which is known as a 'blockchain'. In making transactions through the blockchain from one location to another, no bank, no government, no third party or intermediaries touches it, sees it or has anything to do with it. It is completely peer-to-peer, and it is (mostly) anonymous.

The anonymity of Bitcoin was part of its initial appeal. But this aspect also drew the ire of authorities and lawmakers. This was particularly controversial as Bitcoin was the primary payment method through the deep web and on illegal good sites like The Silk Road. And sure, to this day it's still a form of payment for illegal activity because of this — but so is physical cash.

While the use of public and private keys with Bitcoin allowed the senders and receivers to remain anonymous (and still does), all transactions on the blockchain are still a matter of public record.

For example, I can send you 1 Bitcoin from my Bitcoin wallet. All I need is your public key. All you ever see is my public key. We can't access each other's wallets because neither of us has access to the other's private key. All we see is the anonymous public key.

Now, if I don't know you, then I can't identify you through your wallet address. And vice versa.

However, you and I and the blockchain might not know who we're

dealing with, but the whole blockchain sees that transaction of 1 Bitcoin. It sees how much data is used to make that transaction, it sees the amount of confirmations — it gets enough info in the transaction that it can be verified and even traced back to a particular location or IP address, using some very laborious tracking techniques.

And this is ultimately where Bitcoin has been proved to be almost anonymous — but not 100%.

By monitoring the data transfer from one wallet to another, eventually you can actually identify a wallet and assign it to a particular user. Of course this is an extremely laborious task for a casual user to achieve. It requires being able to monitor data flow from wallets and from IP addresses at any given moment. Pretty complex stuff.

So for most people, using Bitcoin is still anonymous. But if the NSA, or GCHQ or Australian Signals Directorate wanted to track your Bitcoin movements, then they have the resources to likely be able to confidently identify you. Still, as long as you're not doing anything illegal to begin with, then it's unlikely you'll ever appear on the radar of such agencies.

So remember, it's mostly anonymous and private — but if you're a nasty character, or on a wanted list somewhere, watch out!

Of course when it comes to Bitcoin's anonymity, it's core purpose, the ability to exist as a medium of exchange and a store of value and how it can even exists, we do still need to head back to that very beginning — to the genesis block of Bitcoin…

In the years since the publishing the Bitcoin white paper, the real identity of Nakamoto has never been revealed.

In 2016 it was claimed that a man from Sydney, Australia, named Craig Wright, was in fact *the* Satoshi Nakamoto. But there has never been any concrete evidence this is the case. Nonetheless, Wright is still trying to pursue hundreds of Bitcoin related patents in what appears to be an '*intellectual property land grab*', according to Reuters.

Aside from Wright's claim, the real identity of Nakamoto has never been discovered. Nor has anyone officially come forward providing proof of being Nakamoto.

Perhaps we'll never find out who the original Satoshi Nakamoto is. Maybe they're hiding in plain sight. Maybe we don't need to know — or should know. The idea is now bigger than the creator, and that is perhaps the best way for it to stay.

In my view, it's probably best that we never find out, as the mystery adds to the ideal of what Bitcoin could end up becoming.

To help get your head around Bitcoin, one of the best pieces of advice I can give is to read the actual Bitcoin white paper. It's not very long, and its reasonably simple. In reading the complete white paper, it's also important to understand the timing of the release.

Remember, as we explained in Part 1, the whole timing of the Bitcoin white paper came off the back of the global financial crisis and a world addicted to debt, suffering from political instability and turmoil — a world at war, financial war.

When you read the white paper, you'll understand that it is fundamentally anti-financial system, anti-establishment and anti-corporate greed.

It's provides an alternative financial system to the one we currently use to buy things, sell things, transfer money around the world, and build our financial wealth.

As I say, the white paper by Nakamoto is a *must-read*. I implore you to read it after you've finished with this book, and before you go and get some Bitcoins for yourself.

In time, the release Bitcoin white paper will go down as one of the most important global events of all time. It will surpass the significance of any treaty, agreement, law or constitution that exists. It will sit alongside the Magna Carta when people think of significant historical documents.

I also compare reading the Nakamoto white paper to reading

Alan Turing's paper on the Imitation Game. It too is something worth reading if just for its vision of how AI will develop.

Admittedly the Imitation Game is longer and a little more complex. But both are proving to be incredibly important to our high-tech future.

And what Turing's Imitation Game is to computing and artificial intelligence, Nakamoto's paper is to global finance.

But should you not feel like taking the time to read Nakamoto's white paper, let us boil things down to one simple question. 'What is Bitcoin.' The white paper outlines in a nutshell is,Bitcoin is a digital currency.

Nakamoto explains this in the white paper. He writes that it is an electronic coin, by definition, which is just a *'chain of digital signatures'*.

And like a currency that exists in fiat money (USD, AUD, GBP) you can get it, spend it, save it, give it away or even steal it (if you're criminally inclined). The reality is that Bitcoin's design is to be much like any other fiat currency, but for one key difference. There is no central control, and it remains predominately anonymous.

Let's go back again to the earlier example with cows, pigs and chickens. You can simply replace 'money' with 'Bitcoin'. If you want cows or chickens or pigs, the future will enable you to pay for those goods with Bitcoin.

The difficulty that currently exists with Bitcoin as a 'currency', however, is it's comparative fiat value. For example, let's say the current price of one Bitcoin is US$3,000 and I want to buy a US$3 coffee.

Now the smallest denomination of Bitcoin is 0.00000001 BTC. That's also known as one 'satoshi'. So if I want that coffee, then I've got to pay the coffee shop 0.001 BTC or 100,000 Satoshi.

Simple? Not really.

You see, if the price of one Bitcoin the very next day is US$2,500 and I go back for that same $3 coffee then I've got to pay 0.0012 BTC — 120,000 satoshi. In other words my coffee is now 20% more expensive for me to buy.

Now, that doesn't really work in the real world does it?

That kind of volatility doesn't really fly for a 'currency'. At least with a US dollar, Pound sterling or Aussie dollar you know that if you have one today, tomorrow it will still be worth one.

However…things get a little more complicated over time. Because over time, over a year or two even, that USD/GBP/AUD actually isn't worth one anymore. Through the interference of governments and central banks, through inflation and even deflation, that one will change in value over time as well.

The key difference is that it takes a lot longer for a current fiat one to change in value. Bitcoin on the other hand can swing wildly in value not just from month to month, but from day to day — heck, even hour-to-hour the price of Bitcoin can swing dramatically higher…and lower.

A more stable situation would be if the coffee cost say 100,000 satoshi, rather than US$3.So when you walk in they expect you to pay in Bitcoin, not pay in Bitcoin which has to then be converted back to fiat currency.

And therein lies the problem. Bitcoin as a system works wonderfully *if you get complete buy in from an economy.* It's almost like the chicken and egg problem…one of them has to come first?

If you're constantly converting Bitcoin into and out of fiat currency, then it's hard for merchants to justify the wild price swings that pose a risk to business.

If the price of Bitcoin swings the other way and the value of one Bitcoin goes up, then that US$3 coffee becomes cheaper for me, and the coffee shop makes less money. That is, they get less Bitcoin for that coffee than they would have yesterday.

If merchants, employers and users all dropped the comparison to fiat currency, then perhaps we would start to see more stability in the price of Bitcoin. But that's hard when you're in this strange transition phase, when you're paid in and dealing in many different global currencies…while still trying to build a huge, comprehensive, global network and alternative financial system, with a separate, global digital currency.

And that's why my view is that, for now, Bitcoin isn't a currency at all. Instead, right now Bitcoin a store of value rather than a currency. And later, in about 127 years' time, it will become a currency.

That's the view I have on it right now. And I believe that, longer term, Bitcoin will become a proper global currency where someone from Sudan can exchange and interact with Bitcoin as easily and efficiently as someone from Australia, the US, UK, Chile, India, Jamaica or Cambodia. And that's the major transformational change we see coming for Bitcoin.

But crucially, when you think of Bitcoin and its future, you need to shake free your preconceptions and comparisons to fiat currencies. Think about things in Bitcoin, not dollars or pounds. Even just try it for a day — and don't think about the value of anything in fiat currency.

Trust me, it's hard. But we'll get there eventually.

But that eventual use of Bitcoin as a 'currency' may be some time away. As it evolves through to the complete mining and distribution of all Bitcoin, it will continue to exist as a store of value. As the overall network grows in size it inherently grows in value. And it's not until the network (the blockchain) is big enough, widespread enough and stable enough that the transition from store of value to currency will take place.

While I think we will easily be able to pay for goods and services in Bitcoin in 10 years, by then it will just sit alongside other fiat currencies. For Bitcoin to completely replace the current global financial system will take 100 years or more — and that's how generational wealth will be created.

And when that transition happens I believe it will coincide with the biggest event in the future of Bitcoin. When all 21 million coins that will ever be 'mined' are in circulation.

Around the year 2140 all 20,999,999.97690000 BTC will be mined. And based on the current value of Bitcoin at the time of writing, around US$2,700, that would give the total Bitcoin network a (fiat comparative) value of US$56,699,999,937.63. Yep, that's right, just US$56.69 billion.

But the *real total circulation* of Bitcoin in the year 2140 will be 2,099,999,997,690,000 *satoshi* in circulation.

That's 2.099 quadrillion satoshi. Now, if you think about it as a widespread global payments system, and instead of talking in whole Bitcoin we consider the standard unit of Bitcoin as a 'satoshi', things become very different.

US$56 billion doesn't even come close to the value of what that global network could be worth. Think about it like this…

That $3 cup of coffee might actually cost 3 satoshi. And if that's the case, and a single satoshi is worth the equivalent of one fiat US dollar, that would give the total Bitcoin network, the blockchain a value of US$2.099 quadrillion dollars.

If that's how it pans out — and by then I think that's exactly how it will pan out — then just one whole Bitcoin would be worth $100,000,000. This is what I mean by long term, generational wealth.

Our technological saviour – the blockchain

With a greater concept of Bitcoin itself, you must understand how the network value is created over time. And to do that, you must know what makes it work. And that's the Bitcoin network.

Bitcoin is one giant distributed network that exists online around the world. That's what gives it value. That's what makes it function. That is the Blockchain.

Imagine if every financial transaction that has ever taken place in the world were to be recorded in one giant book. Imagine a huge notepad style accountant's ledger.

In that ledger, if you buy that $3 cup of coffee the transaction is recorded. Then, when that coffee shop transfers the money at the end of the day into their bank account, that transaction is also recorded. Then when that money is used to pay staff wages, that too is recorded in the giant ledger. And if the money is spent to buy more coffee beans then — you guessed it — that transaction is also recorded.

Now imagine that you have the ability to read that ledger at any time you like. You can just pick it up and see all the transactions that have taken place at any second of any day over the history of all financial transactions. You can jump into that ledger and see the transaction that took place between you and the coffee shop. You can actually trace the origins and pathways of every one of those dollars, where it's been, and where it's gone since it first began life as a dollar.

Right there, etched in history, is the transfer of your US$3 to the coffee shop. You can see that it's accurate, and you confirm as such. There are also others that confirm this transaction. They might have been able to prove the movement of those dollars previously, and so do you, and then onwards from here.

And once there are enough people confirming these transactions, the whole network of people who can see this giant ledger give it the green light and it will exist forever, etched in history, that this transaction took place.

And this happens for *every transaction that ever takes place in history*.

Now imagine that process of transactions and confirmations happening for every single transaction that takes place every second of every day. In the world we live in, that's billions of transactions a day. It's immense. But the entire network validates the transfer and flow of money and transactions.

It's not reliant on a bank, or a clearing house or a payments messaging organisation. The peers on the network, the network itself, validates and confirms everything that happens, without interference of influence. This is a secure, peer-to-peer network operating a digital bookkeeping service — a distributed, public, digital ledger.

In the world we live in today, there's one slight catch with all this. Most people don't want the entire world to know about every transaction they make at any moment, or have it permanently etched in this giant ledger for all of history.

So imagine a situation where every one of those transactions — like that coffee you bought — was encrypted. So the people who verify the transaction can see that it took place, but don't know that it was you, and don't know it was at a coffee shop. All they can see is a digital identity. One that has no links to you, or to anything, because it's encrypted and anonymous.

That way for every transaction that takes place, you can still see the flow of money. You can prove and verify the transactions taking place. But you never know who its flowing from, or who its flowing to. You just see a jumbled mess of letters and numbers (the encrypted transaction).

The added beauty of this is that, in order for it all to work and the transactions to take place, everyone that can see this giant ledger is able to confirm and validate transactions. Without a central authority. And it can be achieved with speed at low cost, while retaining the privacy of everyone who makes transactions.

In essence, this whole process of encrypted transactions is confirmed by the network of users, without a central authority,

and is recorded on one giant all encompassing ledger is the core system on which Bitcoin operates.

This is known as 'The Blockchain'.

The blockchain does what it says on the tin. It's a giant 'chain' of 'blocks', and it's these blocks that make up the ledger of all Bitcoin transactions that have ever taken place.

For example, the Genesis Bitcoin 'block' was mined (we'll get to mining shortly) back in 2009. This resulted in a 50 BTC reward for the miner (Nakamoto) who created it. Theoretically these Bitcoin that make up this Genesis block get spent and transferred, and these transactions are recorded in each block. Every transaction has the time, date, the (encrypted) participants and amount recorded against it — a timestamp.

In order to confirm every transaction 'miners' (also known as nodes) solve complex mathematical algorithms automatically to ensure that every transaction, every block, adds to the previously confirmed blockchain.

Currently for a transaction to be added to the blockchain and approved, it must receive no fewer than six confirmations. If for whatever reason the block is fraudulent or inaccurate and isn't confirmed, it isn't added to the block — it is invalid, and not processed. This process of confirmations is known as 'proof of work' and is vital to ensure that transactions process, as well as preventing a situation of 'double spend' from occurring.

A 'double spend' is the idea that you can send Bitcoin in one transaction (so to pay for a coffee, for example) and before the transaction completes you spend that same Bitcoin again to buy something else.

By confirming transactions, you can't double spend. Or if you tried to, the network, the blockchain — and the nodes that confirm transaction — wouldn't validate the second transaction, and it wouldn't be added to the blockchain.

In order to confirm effectively every single transaction, *every single block must be able to be traced back to the Genesis block*.

That means one huge, giant epic-beyond-proportions blockchain — but because of modern computing power and the relatively small size of the blocks, the actual process shouldn't theoretically take all that long.

However, there is a slight problem — and it comes back to the issue of scaling.

The bigger Bitcoin's blockchain gets the bigger it gets (obviously). That means each block (measured in MB) adds to the blockchain, and the blockchain in total gets larger and harder to process. And eventually, to record all the transactions on every block as it all gets bigger, it simply slows down every transaction.

In other words, think of the blockchain as one giant linked chain piled up on the floor. When you lift the first link off the ground it's easy, and you can continue to lift the chain higher with speed and ease.

But as you lift it higher and higher into the air, the chain gets heavier in your hands. The higher you go the more chain you now have to lift. When you're kilometres in the air that chain is so heavy that you can barely lift it any higher. You can still lift it up, but you're becoming steadily slower.

The only way to lift it as fast as you did with the first few links is to make it all lighter and easy to lift. And if you could make it so easy to lift that you could forever lift it as fast as the first few links of the chain, then I'm sure you would do that.

Well right now Bitcoin as a network is at the point where the chain is extremely heavy, and it's very slow to lift it any higher.

And unless there is change, then the time taken to process transactions will get too slow, until it becomes near on impossible to use. It will no longer be user friendly. And certainly not acceptable for everyday, widespread use in the global cryptoeconomy.

That means people will look to other alternatives outside of Bitcoin. Other cryptocurrencies to perform transactions in the digital and physical worlds. Faster ones, with less friction and

with greater confidence.

A scaling problem is a good problem to have. It shows progress and increasing adoption. However, it must be fixed.

Now to understand how to fix it, you also need to get why it's so heavy to start with...

This 'chain of blocks' is also known as a hash. So for each and every new block, it must include a hash of the previous blocks. This is like having an accountant present at every single transaction that's ever taken place, to ensure that it's legitimate.

And as the Bitcoin network grows, so does its hash rate. And while hash rates are measured in trillions of 'hashes' per second, the most important figure to understand about Bitcoin is its transactions per second.

As it stands, due to the original block size being 1MB, the Bitcoin blockchain can currently handle around *three to seven transactions per second*.

However, compare this to an existing global payments system like VISA. VISA can handle around 2,000 transactions per second. That puts Bitcoin some way behind the eight ball should it reach the masses around the world.

Realistically, the blockchain needs to handle numbers more like 100,000 per second, maybe even 1 million per second to be a true disruption to the major payments systems and companies that dominate the traditional global payments system.

The good news is it looks like Bitcoin will get there. And that's thanks to its decentralised, distributed nature.

Because of the public nature of the blockchain and its widely distributed nature, the entire network confirms transactions and updates the blockchain automatically and continuously. If there is a fraudulent transaction or a corrupt transaction then the widespread nodes will not agree on the transaction, and it will be denied.

That also means changes and updates to the blockchain and system are approved or disapproved by the entire network, developers, nodes, miners, as a consensus. Without majority consensus, the changes don't happen.

While that makes for a free system, it also means decisions, important decisions, can take time. But ultimately, if consensus is reached the entire network, the entire blockchain, benefits.

This means that the blockchain is ultimately the most trusted source. The whole system is self-checking and self-regulating. You can't defeat the power of mathematics and the distributed ledger system.

The blockchain is the revolutionary technology that is changing the global banking system. Bitcoin as a store of value get the headlines, but if you boil the entire cryptocurrency boom down to one single core technology, it's the Blockchain.

While it's still the core, decentralised technology underpinning, Bitcoin, corporations, banks, governments are now experimenting with their own blockchain technologies for new ways to manage payments, transfer of assets, and how they shuffle fiat money around the world.

They're using new platforms to create private blockchains, and in some instances joining forces and creating alliances – as with the Ethereum platform — to see how they can take advantage of this technology.

While Bitcoin was and is the first, the number of cryptocurrencies looking to improve on it has exponentially increased. There are now over 800 different kinds of cryptocurrency in the world. Many of them are based on Bitcoin's core code. Many of them have simply copied Bitcoin, hoping to reach the masses as well.

That also means there are more than 800 variations, extensions, and additions to blockchain technology. A lot of these won't live out the next few years, and are simply attempts to grab some cash from hype fuelled, FOMO laden suckers. But there is also an environment for incredible innovation with blockchains. So much so that some of these innovations, like Segregated Witness

(SegWit) or lightning networks, may be deployable on Bitcoin's blockchain to make it better into the future. That's a good thing.

But the Bitcoin blockchain (for now) remains strong, and is the most accepted and popular cryptocurrency in existence. It is working through its scaling problems for now, and will come out the other side of it stronger.

The wider population is now seeing the potential of Bitcoin and blockchain technology. They now see how it can be used in the real world to fix a broken system.

Smart people know the money tree is real: mines, miners and a digital gold rush

One of the critical infrastructures of Bitcoin and the blockchain are miners — also known as nodes. A Bitcoin miner is a person or business that uses computing technology to 'mine' Bitcoins. They also provide a secondary purpose in being a 'node' on the blockchain. These nodes provide the automated process of confirming (or denying) transactions on the blockchain, enabling the entire Bitcoin system to function.

When you combine miners together they are an incredibly powerful aspect of the network. They also help to provide consensus for changes to the Bitcoin core code, or implementing changes to the network through 'Bitcoin Improvement Proposals' (BIP).

But what is 'mining' and how does it work?

The digital gold rush

To mine Bitcoin you need a computer — today an incredibly powerful computer, nothing like the ones you buy from the local computer store. No, the Bitcoin mining 'rigs' today are more like supercomputers.

But in the early days of Bitcoin, if you had a home personal computer with a powerful graphic processing unit (GPU), you could efficiently and effectively mine Bitcoin, and they would come flooding in.

Early on this meant that anyone with a bit of computer programming knowledge, a couple of NVIDIA GPUs and some time on their hands could mint their own fortune.

Back in 2010 a humble home PC with a decent NVIDIA GPU was all you really needed. The chance of mining a block of Bitcoin was actually pretty good. And if you got a block your reward was 50 Bitcoin — that's right, 50 Bitcoin.

Of course, back then that was worth maybe $20–50. Not the $120,000 it would be worth today!

Anyway, you still needed a high level of technical proficiency to get things up and running.

There were and still are miners that would mine Bitcoin with the sole aim to mine and sell the Bitcoin brining in a tidy little profit.

However, as they mine more blocks, there are fewer left to mine. This is part of the scarcity built into Bitcoin. And more miners on the network with more computing power mean it's harder to get a block.

Also, the design of the Bitcoin system specifies a finite number of coins that will ever be in circulation.

The total coins that will *ever be in circulation* is 21 million. Right now about 16 million are in circulation. And with every 210,000 blocks the mining reward halves.

To mine a block, originally there was a reward of 50 Bitcoin. After the first 210,000 blocks (10.5 million coins) the reward dropped to 25 coins. After the next 210,000 blocks (5.25 million) the reward dropped to 12.5 coins. The reward is currently 12.5 coins. But after another 210,000, the reward will be 6.25. Then 3.175, and so on until all coins are in circulation.

According to the Bitcoin Wiki estimations, all Bitcoins will be in circulation by 7 May, 2140. So there's a while to go still.

But this halving of the reward reminds me of Zeno's paradox of Achilles and the Tortoise…

> '*Achilles is in a race against a tortoise. But he gives the tortoise a head start. Although Achilles is much faster than the tortoise, he can never catch it and overtake it. The reason being by the time Achilles has covered the distance of the head start, the tortoise has moved further ahead albeit perhaps by not as much.*
>
> '*Then as Achilles covers the next gap, by that stage, even though the tortoise is slower, he has again moved further afield. Each time Achilles covers the gap, the tortoise has moved ahead, even if by only a tiny margin. As such Achilles can never catch*

the tortoise as no matter how many infinite times he catches up, the tortoise always moves slightly ahead.'

Try explaining that to a primary school kid…

While Zeno's paradox isn't exactly like Bitcoin mining, it's close. Because even though the Bitcoin mining reward will halve, and halve and halve again until all Bitcoin are in circulation, even then the miners will still be needed to mine, as the system requires the algorithm to continuously be solved in order to maintain transactions, operate nodes and ensure the blockchain continues to run.

Ultimately even past the mining and circulation of all Bitcoin, there are infinite numbers of transactions that will exist on the blockchain. In order for that to infinitely continue, miners are needed to make it happen.

Now in theory that sounds complex. And it is. But in a practical sense it means that to mine, you need a mining rig. And back in the good old days that just meant any old PC with a GPU.

And to set up a rig and in order to mine, you needed to set up your computer with a Bitcoin client (program) that runs continuously to solve a complex algorithm. The algorithm that Bitcoin uses is a cryptography hash known as the SHA-256, applied twice.

A hash takes a large amount of data (all previous blocks) and shrinks it down into a smaller hash value (256 bits). Each block's hash is a 'wax seal' of all the blocks and transactions before it.

Now in order to mine a new block a miner has to solve this algorithm which, when you break it down, involves:

1. Collect the hash from the previously discovered block (easy)

2. Collect a list of potential blocks

3. Calculate a potential hash for these potential blocks with a random number

4. Repeat the calculation until the hash is more than the current difficulty level — in which case you've mined a block. If your calculation is less than the current difficulty level, you keep going until it's more.

It's worth noting that if someone else figures out the algorithm calculation and random number before you, then you all start over again for the next block.

In effect, whoever can solve the algorithm first and fastest gets the block. It's a genuine race between all the miners in existence to mine blocks for reward. The tricky thing is to mine effectively you need IMMENSE computing power.

As I said, earlier in the good old days you could get by with relatively simple computing power. This is because if you were the only miner in existence, the difficulty level would be low, and you would be able to mine with ease. So you wouldn't be in a high-stakes competition with other people to get your hands on a block.

Just like the Californian gold rush days of 1849, early miners were able to mine with ease and little competition, profiting handsomely. As the wider world became aware of the opportunity at stake, they flooded to the fields to mine. Soon enough competition was fierce, and the likelihood of mining that gold decreased.

The same happened to Bitcoin. As more miners flooded to the network, the difficulty in solving the algorithm increased. Eventually a home PC with a high quality GPU or even a couple of GPUs just wasn't good enough anymore.

So people quickly figured out if you can ram as many GPUs together as possible you can get even more computing power. And more computing power means a better chance of figuring out the algorithm and mining a block.

Then dedicated mining 'rigs' came to market. These 'application specific integrated circuits' (ASICs) were pure computational machines specifically running the Bitcoin client just to mine blocks.

The home user no longer had a chance.

Then corporations popped up. Giant networks of servers and GPUs. Basically, supercomputers rolled into town. For someone at home wanting to mine Bitcoin, it was like taking a spade to the gold fields and competing with the likes of BHP Billiton or RIO Tinto with their multi-million dollar mining machinery. The little guy just didn't stand a chance anymore.

But as you would expect, with even more computing power coming online to solve the algorithm, the difficulty continued to shoot higher.

And up until 2013 when Bitcoin really hit the mainstream consciousness and it's price skyrocketed, the difficulty in mining Bitcoin was relatively easy.

At the start of 2013 Bitcoin's difficulty was at around 3,000,0000D (difficulty). This was considerably higher than at the start of 2012, when it was about 1,100,000D — about 2.7 times higher form 2012 to 2013.

But by the start of 2014 the difficulty was at 1,400,000,000D. That a 466-times increase in the mining difficulty. And at the time of writing the current Bitcoin difficulty stands at 678,000,000,000D.

As Bitcoin attracted more miners to the market — just like the gold rush — the difficulty in mining took off. Soon it simply wasn't enough for a recreational Bitcoin miner to compete. You needed serious hardware and serious backing.

Today there are mining pools. They 'pool' the computational input from all their users, servers, ASICs, to help solve the algorithm and mine a block and then distribute the proceeds depending on each users proportional input.

Many of the big boys of Bitcoin mining now operate their pools out of China.

That means you have no chance anymore of mining Bitcoin. Sorry, the money tree is closed for you.

Also, as every 210,000 blocks the Bitcoin reward halves, miners do also end up in a decreasing sum game where you get less and less reward per block, but require increasing amounts of computational power in order to remain competitive against other miners. But because of the transaction fee reward, long term this still proves to be a financially viable enterprise, with widespread mass adoption and an exponentially larger blockchain and billions of users making billions of transactions.

But put simply, if you want to mine for Bitcoin, don't. Running a home PC with even the best consumer grade GPUs from NVIDIA is simply not going to be enough to come close to mining a block anymore.

In 2009, 2010, 2011, maybe even 2012 you had a chance — but those days are long gone. Opportunity missed. Trust me, I know all about missed opportunity (see our final Chapter). So take my advice, mining is important to understand, but fruitless to undertake — unless you're a well funded, deep pocketed Chinese mining pool. Then maybe you could do OK.

We've focused on the mining of blocks here. But we should point out that the more important function of the miners is to operate as nodes.

Miners node best

Eventually all blocks will be mined, and as such it will no longer be profitable or necessary to mine Bitcoin, because you can't. So what incentive is there to keep miners in the network, operating as 'nodes'?

That's where the Bitcoin fee structure and transaction reward comes into play…

In order to actually mine a block your computer has to solve an algorithm. If you're first to achieve it, your reward is the block. I think we've established that. And of course solving any kind of algorithm isn't easy. It's too much computational energy for a human brain.

So, as we've explained, you can only do it with a powerful computer.

Anyhow, once a miner is mining Bitcoin they also become nodes, verifying transactions. As I mention earlier, it's all done through computers and the use of GPUs, as they are able to process all the information much faster than typical CPUs

In order to ensure there are enough nodes on the system, there is incentive to operate and support the network. There is a reward given to 'miners' of Bitcoin. When the system was in its infancy was 50 Bitcoins per block they could 'mine'. But there are also transaction fees paid to miners, to ensure that the entire system stays well oiled and functioning.

Thus if a miner mines a block, not only do they get the Bitcoin reward. They also get all the transaction fees from the transaction information included within that block.

What's important to note is that a user — you for instance — doesn't have to include a transaction fee when making a Bitcoin transaction. And if you do choose to add a fee, it can be as little or as high as you like.

However, if you don't have to add a fee, miners also don't have to process your transaction as a priority. They prioritise bigger fee transactions. This in effect also creates a natural market for transaction fees.

The idea is that transaction fees incentivise miners to continue to operate even after the last Bitcoin has been mined. And transaction fees increase relative to blocksize, scale and priority of transaction. Transaction fees might be relatively expensive now, but that's because of the scaling debate issues. In time, with scale and more users, the fees will theoretically fall as the market finds its feet.

As such, while the Bitcoin reward will halve every 210,000 blocks until all Bitcoin are in circulation, the idea is that transaction fees will make it still worthwhile for miners, as the potential transaction fee reward will outweigh the Bitcoin reward.

So when all Bitcoin are in circulation, it's important to know that miners will still mine — except the Bitcoin reward will be zero. Continuing the mining will keep the blockchain going. But while

a miner who mines won't get any Bitcoin, if they are rewarded in transaction fees, then it's estimated the reward will be just as significant if not more than it currently is from receiving Bitcoin as a block generation reward.

That means there will be a tipping point where the transaction fee reward is better than the Bitcoin reward of mining a block. And, surprisingly, that's estimated to occur within the next couple of years.

In other words, this incentive scheme motivates miners to continue to mine, continue to keep the blockchain going, continue to operate as nodes and ensure that the Bitcoin system continues to work as intended.

Scaling problems and the miners vote

However, all of this starts to become more complex when you take into account the problem of increasing difficulty, more Bitcoin users, more miners, and the whole new global payments system that Bitcoin is becoming.

At the beginning Bitcoin was fast, low cost and efficient. But that's when a few hundred thousand people were using it. Extrapolate that out to millions, tens of millions, billions of people, and things get a while lot trickier.

The biggest problem facing Bitcoin now is scale.

That means as Bitcoin gets bigger and more popular and more people transact with it, the size of the network and difficulty will increase so much based on its current code that things will get slow. So slow and so expensive that it might not make economical sense anymore to use Bitcoin. Instead, other cryptocurrencies may prove to be a more viable global unit of exchange, such as Litecoin or Dash.

Now, fair warning. This might get a little *more* complex as we explain what the scaling problem is in detail.

Let's get into it…

As you can probably tell, I'm incredibly bullish on Bitcoin. And I continue to maintain that position. I still believe that, long term, the purchasing power of Bitcoin will be multiple-times higher than it is now. I've even gone on record saying the cryptocurrency could reach a fiat value of US$50,000 per Bitcoin short term, and longer term we could be looking at a multi-trillion dollar, even quadrillion dollar alternative global financial system — in that case Bitcoin could be as high as $10,000,000 per Bitcoin.

But it's going to be a bumpy road along the way.

What you also need to appreciate is that, while now eight years old, Bitcoin is still incredibly early stage. You should really look at Bitcoin like a brand new start-up. While it carries incredible potential, it comes with risk that you don't find in any other kind of investment market.

Part of this risk is due to the decentralised nature of the system. As there's no overseeing central power, the development of Bitcoin is left to its community and users — the miners (nodes). This is both good, and difficult.

And as we've explained, when something needs to change it needs to carry a consensus of the system in order to work. But what if there isn't a consensus? What if two halves of the Bitcoin community hold opposing views of the development?

Surely that spells trouble?

Well that's essentially the predicament Bitcoin finds itself in today. There's a division in the community, and it's posing a significant short-term risk to the value and validity of Bitcoin.

At the core of this division is the size of the blockchain.

As it stands every 'block' on the Bitcoin blockchain carries a size of 1MB. There's an argument within the Bitcoin community that the Bitcoin block size needs to be larger — 2MB or more.

The 1MB limit currently imposed on block size is arbitrary. It's just what Satoshi Nakamoto decided it should be when he created Bitcoin. The problem is that a 1MB limit restricts the transaction

capacity of Bitcoin as it scales.

Still with me? Sorry if this is getting a little technical. I'll get to the crux of things in a moment.

The Bitcoin network is restricted to around seven transactions per second. For it to be widely used and accepted in the same way Visa or MasterCard are, that needs to be up in the hundreds of thousands, maybe millions of transactions per second.

This scalability issue has come to a head as Bitcoin is already pretty close to its limits. Now, half the community wants the blockchain to go through a 'hard fork'. That means a copy of the existing Bitcoin blockchain 'forking off' (excuse the pun) and running in parallel to the original Bitcoin.

The idea here is to hard fork the blockchain size to 2MB, and maybe more, to enable the scaling and mass adoption of Bitcoin. But it's not that simple.

Increasing the block size enhances the reward for being a miner on the blockchain. Transaction rewards remain high, as they require high-level computational power. Hence the driving force behind the hard fork has been huge virtual mining companies, mainly out of China.

There are other options to scale Bitcoin, aside from increasing the block size. That includes compressing the existing blocks, SegWit (which gets rid of unnecessary data in the transactions), or even adopting a 'lightning network', which sets up hubs that users primarily deal with and which occasionally settle on the blockchain.

Of course this doesn't factor in advances in computing power, speed, artificial intelligence and ultimately quantum computing — in which case block size would be a completely redundant argument. And also in which anonymity and the cryptographic foundation of Bitcoin might become an issue.

But back to the issue at hand.

What this all boils down to is that if Bitcoin goes through a hard

fork it could divide the whole thing in two. And some rather harsh words are being bandied about, including speculation that the more 'dominant' blockchain will attack the other and make it effectively useless, should they split.

This has almost become a civil war within the Bitcoin community. And it poses a genuine threat to the value and long term viability of Bitcoin.

Now I want to emphasise, this infighting isn't going to kill Bitcoin. It will ultimately end up in a stronger, more widespread system. And I think they'll calmly sail through this, eventually.

After all, the scaling debate has been going on for years now.

Long term, Bitcoin's potential is as strong as it was yesterday. But we just don't know which version, which implementation of Bitcoin we'll see when this round of the scaling debate comes to an end.

Still, the risk is that a hard fork of Bitcoin could see the price dramatically crash. If there is no hard fork and the system stays calm and carries on, coming to a consensus agreement on how to scale, then it should continue on its merry way.

There's no denying the difficulty involved in trying to reach a consensus when you have a widespread distributed network. This is a *disadvantage* of a decentralised system. But when there is agreement and there's consensus then everyone wins, not just a few — and this is an advantage of a decentralised system.

I think it will play out, and all parties on the network will come to a unified consensus.

There's too much 'skin in the game' now to let is all fall to the wayside. And it's economically better for everyone long term to find a way through the scaling issue. If they do and Bitcoin can scale and reach the billions, then I'm in no doubt that it will become more significant and more powerful than the entire banking and finance system we all rely on too heavily today.

Easy ways to get yourself some Bitcoin

Now you have an understanding of Bitcoin, its origins, its purpose, and its potential, how it works and some of the technical details behind it.

But the number one question I get on a daily basis is *'how do I buy Bitcoin?'*

Here's how...

First off, let's remember this is a digital currency. A bank does not back it, it's not government protected. It is still inherently risky, and there's even risk you'll simply lose it.

I'll explain what to do next. But you must make sure you're aware that if you lose your digital wallet, send Bitcoin to a wrong address, or are physically robbed and have them stolen, you may never recover them. You could lose every cent you put into it. That's high risk. But I think if you're careful and do things properly, then you can minimise those risks.

I also suggest that you start off slowly. Set things up and buy a little bit of Bitcoin. Then get some more as you get more comfortable with the process. Maybe even hold them across multiple wallets to keep them segregated and safe.

By now you may be asking, what is a wallet?

This is the first step to getting Bitcoin. You need a 'wallet'. A Bitcoin wallet is a digital wallet where you store Bitcoin. Simple.

The best resource to get a wallet is on the Bitcoin.org website. In fact, you should use Bitcoin.org as a resource regularly to make sure you're comfortable with everything.

If you go to the link https://Bitcoin.org/en/choose-your-wallet you can find a wallet to store your Bitcoin.

They have a number of choices. Most of them perform the same function. They can receive, store and send Bitcoin. For what it's worth, I use the MultiBit wallet for my Bitcoin.

But I've also used the web wallet at blockchain.info as well. The truth is you can set up a wallet on your computer, on your phone, on any digital device. Even on a USB (which helps keep it safe) and cold storage devices (cold wallets), which I'll tell you about shortly.

Installing a wallet is as easy as installing any kind of program you can download online. Click and wait. Simple.

Or on your phone, go to your App store — iOS, Google Play, Windows…whatever that is (who uses Windows phones anymore?) — and install the Bitcoin wallet app.

But make note, installing a wallet is the first and most important thing to do.

Once you've installed a wallet, open it up. You should also set some security for your wallet. That means a very difficult password with letters, numbers, capitals, and symbols.

With a wallet set up, you're ready to receive some Bitcoin. You will note in your wallet that you have a receiving address. This is made up of a bunch of randomly generated numbers and letters. It might look something like '141ZdQfF6q55ySTC1HXMJLWNoRY4WEbr7qx'.

This is your public key. This is the address that the blockchain will show when you get some Bitcoin and when you send some Bitcoin. While 'public' as you can see, there's no identifier in there to determine that you're the wallet holder.

The reason for the complexity is because Bitcoin also functions semi-anonymously. So while your transaction might be easily found on the blockchain, it would only appear as above. No name, no address, no personally identifiable information.

This is another exciting feature of Bitcoin. While not completely impossible, it's extremely difficult to track transactions to any one individual. This, as you can imagine, causes its fair share of headaches for government and regulators.

But remember, there's nothing illegal about owning Bitcoin.

And most government regulators and taxation departments still barely have any idea of how to treat it. For now that makes it extremely attractive to users while government and central bank try (pointlessly) to catch up.

At this point I'll add that government and central banks are also a risk. Regulation and government interference is a risk for Bitcoin. The ruling hand of government doesn't like what it doesn't understand, doesn't control and can't tax.

We'll touch on this risk a little more. But know they inherently don't like Bitcoin. But again, that's what makes it such a great alternative payment system — it's decentralised, it's anonymous, it's borderless, and it doesn't need the input and interference of local banks, central banks or government.

Now, back to your digital wallet.

You know your receiving address. It's important in your first transaction — and any transaction — to make sure you get this address 100% right.

Now, time to buy some Bitcoin. At this point you will be required to pay fiat money in order to procure Bitcoin. But once you're in the world of crypto, there's no turning back — you'll be addicted!

I've used a number of Bitcoin exchanges to buy and trade Bitcoin over the years. Bittylicious, Coinbase, Cointree, BitTrade Australia, BitPanda, CEX.io, Kraken, Cryptsy (bankrupt and fraud), Mt.Gox (bankrupt and fraud), Bittrex, Poloniex, Livecoin, Exmo, SpaceBTC and Liquito. They all have their positives and negatives.

But for beginners to the world of cryptocurrency, we find Coinbase is one of the more straightforward ways of getting Bitcoin. We might add that Coinbase can from time to time be really slow, sometimes going offline for maintenance. That's all due to a surge in demand for it. But in our view, these are teething problems. They're a big company with major backers, and they run a tight ship.

But like most of them, they require account verification before

they'll sell you Bitcoins. That means providing photo ID, and typically the use of a mobile phone in order to receive a verification code to verify your account. And you'll need to use your real details to register.

Some (like Bittylicious) require that the account you pay for your Bitcoins in is the same name you register your account with — so no dodging this fact by using fake names. It's an unfortunate part of getting into crypto; you still have to exit the traditional fiat money system to enter crypto.

But as I say, once you're in, then you have far more ability to move your funds anywhere anytime without the prying eyes of central authorities.

Now, back to using Coinbase as an example. Once you've got a verified account with them, you simply enter how many Bitcoins you want, or you enter how much in your local currency you want to spend.

Another point here. Coinbase also charges a service fee. And the smaller your purchase, the more relatively expensive the fee. It's steep, but that's the price you pay for one of the easiest ways to buy Bitcoin.

The good thing about Coinbase is they accept payments by most kinds of debit or credit card, and you can also pay via bank transfer. Again, as daunting as this might seem to start with, you must simply view it like the same way you would view setting up a stocks trading account.

In fact you'd have to jump through *more* hoops to buy and sell stocks than you do to buy and sell Bitcoin and other cryptocurrency. When you realise how easy it actually is and have just a modicum of patience with the set up and registration process, then you'll understand just how simple this world is to get involved in today.

With Coinbase, once you determine how much you want, you enter the amount in the buy/sell tab. And then buy your Bitcoin — easy!

What this will do is to hold your Bitcoin in an automatically set up Bitcoin wallet in your Coinbase account.

But with some other sites you're required to enter a *receiving address* to get your Bitcoin. That's why you needed to set up a Bitcoin wallet to start with.

That's how it works on Bittylicious, for example. So when you go to buy your Bitcoin off a site that doesn't set up a wallet for you, and in order to have your Bitcoin purchase sent somewhere, you need to have a Bitcoin wallet.

Get the details of your already set up Bitcoin wallet perfect when you're putting it into a recipient address. **This is *very important to get right*.** You need to make sure you enter your wallet address ***perfectly***!

If you get it wrong, your Bitcoin ends up going to someone else's wallet because you put in the wrong wallet address. And you're the only one to blame in that situation. You'll probably never see the Bitcoin or money again.

This is another reason why I say start with a small amount to get used to the process if this is your first time. Do not just send a huge chunk of Bitcoin in one hit if it's the first time you're sending to a particular wallet or into a new account. Test it out first to make sure it's sound, and then go with the rest.

I do this *every time* I set up a new account somewhere. For example, say I set up a wallet with (fictional) provider 'VolkoCrypto.com'. If I buy from Coinbase I will maybe transfer 0.05 Bitcoin to start with. When it hits my VolkoCrypto wallet, then I know its sound and I'll transfer the rest in one go.

Remember, each transfer takes a transaction fee (to keep the miners well oiled) so don't do too many transfers. Be sure you know where and why you're sending your Bitcoin.

But once you send the Bitcoin, wait, complete the transfer, complete the transaction, and after a bit of time your Bitcoin will appear in your wallet.

At this point a lot of people get worried because the Bitcoin is no longer in their wallet, but not in the new wallet address either. That's because it's working its way through the blockchain, getting confirmations from the nodes verifying it's a valid transaction.

You can also always check your transaction (you'll always get a transaction reference ID) on the blockchain through sites like blockexplorer.com or blockchain.info.

You will then see the transaction and the number of confirmation (or lack of) as it processes through the blockchain. If it's showing no confirmations, don't worry, it will happen. It's just that these days, because of the scaling issues, Bitcoin transactions take little longer than they used to.

The time it takes is getting longer than the early days. That's because of number of factors including the sheer increase in size and number of people now using Bitcoin, but also the size of the Bitcoin 'blocks'.

This does mean that sending Bitcoin from one wallet to another or to an exchange can take as long as a couple of hours to move through. That's not overly efficient and, that's why one of the most contentious topics in Bitcoin right now is the ability for it to scale. But rest assured, when your transaction is in the blockchain and you got your addresses 100% right, then you will absolutely get those Bitcoin in your wallet.

And that's one of the great things about it all. You can see every step of the way where your Bitcoin has come from, gone to and ended up, thanks to the distributed ledger of the blockchain.

Again, don't worry when your purchasing wallet (on Coinbase for instance) and your receiving address (on Blockchain.info for instance) both show 0 BTC. It's coming, just be patient.

So that's it. It's a pretty straightforward process these days. If only it was this easy back in 2011… And if it still sounds scary, I've set up a number of instructional videos on my YouTube channel (just search for Sam Volkering) that can take you through everything step-by-step.

Now, you can set up any number of Bitcoin wallets. They're free to set up and you can do it on your computer, tablet, smartphone… any digital device, really.

You could hold different wallets for different purposes. One to invest, one to trade, one for the kids, once for the grandkids. Maybe even a secret stash for that boat you always dreamed of…

However you decide to set it up, once you've got your Bitcoin in your wallet the next most important thing you need to do is protect them. And that's why now you need to learn how to keep your investment safe from those who want it and will do almost anything to get it.

Risk mitigation: How to store and secure your Bitcoin

In 2014 I was a guest on the Rick Amato Show on US TV network the *One America News Network.* I was there to talk about Bitcoin.

The main reason I was there in the first place was because of the recent (at the time) example of bankruptcy and fraud from a Bitcoin exchange, Mt.Gox.

Mt.Gox was the world's biggest Bitcoin exchange. It was handling around 70% of all Bitcoin transactions worldwide. It was huge! And many people, like me, fell victim to it.

On 14 February, 2014 Mt.Gox simply vanished. Users couldn't log into the site. There was nothing anyone could do.

No one really knew what was going on. But what was clearly evident was that anyone who had Bitcoin or any other 'altcoin' on the exchange was now missing their coins.

Eventually it came to light the exchange had declared bankruptcy. And over 744,000 BTC went 'missing', worth roughly over US$400 million. I had a small amount of Bitcoin in a Mt.Gox wallet. Mine wasn't anything too dramatic to cry about at the time, albeit now it would probably be worth a grand or two.

But it just vanished, along with that of others who held far more than I did. The failing of Mt.Gox teaches us a valuable lesson about the world of Bitcoin — *if you don't control your private key, then you really don't control the safety of your Bitcoin*.

Another example was the demise of Cryptsy, another cryptocurrency exchange. One day, they too suddenly disappeared. Users couldn't log in to accounts, and any and all Bitcoin or cryptocurrency that existed in Cryptsy accounts went missing.

Without access to private keys, users had no way of accessing their crypto or getting it out. And to this day, most people still don't have it. There is a class-action lawsuit against Cryptsy, but the chances of getting anything back are remote.

This is the problem with 'hot wallets' wallets which are continuously connected and accessible online. It's what happens when your wallet is held by a third party, such as Coinbase, Bittrex, Poloniex, Livecoin, or any exchange or third party running a hot wallet. They control the private keys, not you.

So if they go bankrupt, decide to just make off with all the funds or do something that cleans you out of your crypto, there's not a lot you can do.

And trust me, because I've seen Bitcoin and crypto on Mt.Gox and Crypsty disappear. You simply have to live with the fact that you weren't secure enough with your crypto.

Still, you live and learn. And the most important lesion from my Mt.Gox and Cryptsy episode was to make sure that you store your Bitcoin and crypto in a safe and secure way.

But let's focus on Bitcoin here, because at the end of the day it's the easiest to store safely. And anyway, plenty of other cryptos like Ethereum, Ripple, Dash, Litecoin are able to be sorted exactly the same way.

So if you can get it right with Bitcoin, you can pretty much get it right with any crypto.

Albeit for some people this is still a laborious and challenging task. But the good news is that it's so much easier today than it was six or seven years ago.

That is, even for someone with a high level of technical prowess, getting and storing Bitcoin in 2010 wasn't as easy as you'd think. For people with coding and programming background it was reasonably straightforward. But for a humble financial advisor (at the time) it wasn't all so easy.

But now, with seven years of research and experimentation and doing it all ourselves, we're happy to say not only is it easier to store, but it's safer than ever. And in the next couple of years it will get easier again.

But be persistent now and you'll come to thank me later!

Today there are even specific hardware devices you can buy that let you keep your Bitcoin and other cryptocurrency completely offline, so they're not vulnerable at all.

Now before you go another step further, there's another thing to consider. You need to figure out *what you want to do with your Bitcoin*.

For example, if you're buying Bitcoin with a long term goal of holding them anticipating an appreciation in purchasing power, then get your Bitcoin off the exchange, and get it out of the third party application, get it into a 'cold storage' wallet, safe and secure.

That means transferring it into a wallet that exists offline.

However, if you're holding Bitcoin or any other cryptocurrency to actively trade in and out of different crypto, then holding it all in cold storage isn't practical. Not only does it then take time to get your crypto from the wallet to the exchange (potentially missing out on trade opportunities) but you also chip away at your store of value through ongoing transaction fees.

As we say, if you're trading then you'll need to just keep your trading coins in an exchange wallet. We recommend using Poloniex and Bittrex to do this, as they are two of the biggest exchanges in the world. They've been around a long time, and survived the difficulties of the past.

And if you're in this to move about and use it in the real world, then perhaps a mobile wallet on your smartphone is most practical for you.

Let's cover all these options.

First up, cold storage.

I absolutely recommend that you set up your own wallet on your own device, whether that's a computer phone, on a stand-alone device that exists offline. We call that 'cold storage'.

You can do this by installing a wallet client such as MultiBit (which

you'll find on the wallets section of the Bitcoin.org website) on a portable hard drive or separate device that you can disconnect from a computer.

In this situation we would advise that you install it onto a separate hard drive that you can disconnect from your computer. What this does is create an 'air gap' between your Bitcoin wallet and the internet. Therefore, the only time your wallet is at risk of anything is when you connect it back online. But you can effectively keep it offline by doing this.

However, it can be slow. If you've not connected it for a while and reconnect it, it has to download the entire blockchain in order to update itself should you then wish to transfer your Bitcoin around.

This can also be a little tricky for some people to get their head around. So another option, which is what we do and our preferred method of cold storage, is to buy a portable cold storage device such as a Trezor Wallet or a Ledger Nano S.

I use a Ledger Nano S. It's very easy to set up and you can store Bitcoin, Ethereum, Ripple, Litecoin, Dash, ZCash and Dogecoin on it. I expect that more crypto will be added in time.

The way these cold storage hardware wallets work is they have the wallet, public and private key all on the storage device. You plug it into your computer to load it up with your Bitcoin, and then you disconnect it from your computer.

There's no possible way anyone can get at your wallet online. It's separate and not connected. And your private key is safely tucked away, too.

Of course the risk this then presents is the physical risk of losing, accidentally destroying or having your hardware device physically stolen. In that sense most of them come with a 12 to 24-word recovery phrase that is also needed to recover the wallet in the event of one of those disastrous events.

And if you lose those phrases as well, then you're in trouble. Then there's no way to recover your wallet. So it's important you

know where and how to get your hardware wallet at all times. It might even be worth keeping it in a safety deposit box or some kind of secure safe or vault, if you've got enough on there. We like the safety deposit box idea because, again, that's what we do.

But in our view, the safest way to store your Bitcoin long term is by using one of these hardware wallet cold storage devices. We do it ourselves, and we advise you do the same.

Now you will also see that in purchasing these wallets it'll cost you around 80 euros to get one. The prices will eventually come down and there will be more options on the market. But for now, Trezor and Ledger are the two best in our view — and we have no affiliation with either, it's just based on personal experiences.

Also, because of the huge demand for Bitcoin and cryptocurrency, these are often out of stock. You can see months in delays before actually getting one.

In that case there's only one thing to do — set up a wallet online.

While not as completely safe as a cold storage device, it's still a common and reasonably safe way to keep Bitcoin. Although we'd probably not keep all your Bitcoin in one single wallet if you're building up a serious investment amount.

Here's how to set up an online wallet...

Ideally you want to set up a wallet with Blockchain.info. This is after all one of the easiest Bitcoin wallets to set up. And, again, one that I have used personally. You first need to register a wallet on the website. You do this by simply going to the site, click on 'wallet', then click on 'create your wallet'.

You enter an email address and a password and that's it, you have a Bitcoin wallet.

With the online wallet set up you can easily transfer your Bitcoin in. But, again, just make sure you keep a record of all the important details like your wallet-ID and password, because if you can't get into your wallet you can't get your Bitcoin.

Remember, this isn't like the bank. You can't just pop into a branch with multiple forms of ID to reactivate your account. Some wallet providers do provide supports that can help you get back into your wallet, but it's far more difficult to recover lost wallets than the traditional financial system.

This is of course a risk of Bitcoin and cryptocurrency — but also why it's growing in popularity. Because it can actually be even more safe and secure than your existing 'traditional' financial system money.

See that's it, that's not too hard is it to set up a wallet online.

The third and final option that suits people is to simply have a wallet set up on an exchange so you can trade in and out of Bitcoin regularly and quickly.

This is the easiest to set up. All you have to do is register an account on an exchange. Most exchanges only require an email address to get started. Then in the 'balances' section of your exchange account you will find a whole heap of different wallets for different cryptocurrencies.

That means you can set up an exchange account under any name, any email address you have access to. But as you would expect, because it's so easy to set up it's also the least secure.

While most exchanges have multiple points of security like two-factor authorisation (2FA), at the end of the day you are subject to the ongoing viability of the exchange you hold your crypto in.

And as I've seen first hand, if an exchange goes under, quite often so does all the crypto held there, too.

Remember, they hold the private keys, not you, so that is a risk. And that's why I tend not to keep much Bitcoin on any one exchange, because if it did all go under then I wouldn't be too dramatically out of pocket.

But because I do like to trade in and out of Bitcoin and Ethereum just for a bit of fun and play, I do inevitably have to hold some Bitcoin and Ether on the exchanges. And having used Poloniex

and Bittrex for a few years now, I haven't yet had a problem with them.

Although, in times of incredible demand when the prices are flying and hype is building they can sometimes suffer from overloaded servers, slowing down access and preventing entry and exit to positions. Again, this is more a teething problem that an outright concern about the exchange's viability.

With your Bitcoins stored in your preferred way, another important factor to consider is backing up your wallet. This is particularly relevant for using a wallet on a device such as MultiBit.

They allow you to back up your wallet with a single file, so that you can recover your wallet should anything go wrong.

Any time you make a transaction you should do a new backup. But don't just back it up on your computer, though. You need to plan for an event where your computer might crash, be stolen or simply die. If you have your wallet backed up in another location such as a CD, USB drive or external hard drive, you can protect it in the event of your computer going kaput.

You should also encrypt your backup, which again can be performed often through the wallet you use, such as MultiBit. Encrypting it will make it extremely hard for attackers to steal your Bitcoin. The encryption will also require a complex password to decrypt at some point, so you must also make sure you don't lose or forget your encryption password!

Every time you get more Bitcoin, transfer it or even create a new wallet (you can make multiple wallets within the one wallet) you should back up your wallet.

It's worth noting is that, as new forms of storage arrive to market, you should update and backup your wallet onto the new media. For example, no one uses VHS anymore and barely anyone uses CDs. We now have flash drives (USB drives). If newer, better storage technology comes out, back up and update your wallet to that (assuming it's affordable and your existing storage isn't out of date or redundant).

This might all sound a bit scary, but if you take the time to secure your Bitcoin properly you can help minimise your risk of losing them.

Of course, nothing is ever 100% safe. However, just like stocks, bonds or even your 'traditional' cash in the bank, anything can be stolen. The government steals your cash all the time through taxes. At least through cryptocurrency you can store you wealth in a protected, anonymous way that keep it out of the hands of those that want to take it from you.

With the right safety measures in place you can do your best to mitigate these risks. And while these steps are sufficient to get you up and started in securing your wallet, you can also refer to instructional videos on my YouTube channel which visually walk you through it all step-by-step.

Now you've got it, how to spend or sell your Bitcoin

We've covered how to buy Bitcoin, how to protect Bitcoin. But another question I regularly get is, then what?

What do I do with my Bitcoin? Will I ever be able to use it? What's the point of it all? If it's for investment, don't I then have to sell it back to fiat currency at some point?

Well at the risk of repeating myself, my view is that buying Bitcoin now is to speculate on it as a store of wealth so that in the future it will be worth considerably more.

I've always stood by the belief that once you own Bitcoin, you'll never convert it back to fiat currency ever again. That's my view, that's the target I'm setting, and that's what I've always recommended.

For example let's say one Bitcoin is worth US$2,500 today. My view is that in 5–10 years that Bitcoin could be worth (comparative to fiat US dollars) $100,000, $500,000, $1 million or, a few generations from now, the modern comparative equivalent of $100 million.

Now, again, I refer to it in dollars because that would be its *equivalent purchasing power* and it's a reference most people can understand.

But the more accurate description would be to say…

If one Bitcoin can purchase a high end, OLED TV from an electronics retailer, in 5–10 years' time, that one Bitcoin might be able to buy you a new Mercedes or Audi…or maybe even a luxury boat…or even a house.

So the aim is that it's long term purchasing power will increase as the Bitcoin blockchain, the overall network, spreads and propagates around the world. Enabling access to its borderless, seamless system all over the world, to billions of people.

If that's the reach Bitcoin can achieve, then the inherent value of the network will be exponentially bigger than it is today. And in

my analysis, that makes one Bitcoin worth more later than today.

Also, as the network grows more and more merchants will begin to accept it as a form of payment for goods and services.

For example, that today you can use Bitcoin to pay household bills like school fees, electricity and gas. In Australia the Bitcoin payment processor, livingroomofsatoshi.com allows for this.

And in 2017 they let the world know that they had processed over AU$5 million worth of Bitcoin bill payments — so people are clearly using Bitcoin in the real world today.

Now while you might be able to pay for a single term of school fees with one Bitcoin today, in another five years' time you might be able to pay for your child's *entire education* with one Bitcoin.

Or in the coming future car dealerships, real estate agents and major retailers will accept Bitcoin as a method of payment for goods and services.

So the question of 'what can I do with my Bitcoin?' is actually quite simple to answer. You spend it. You can invest in it today with the view to spending it in the future.

In the same way you invest in stocks and property today so that at some point in the future you can use the profit proceeds to live a little, spend a little and do all the things you want to enjoy your life, well the same will be able to be done with Bitcoin.

Investing in it now, while it's growing as a store of value, ultimately relates to using that same Bitcoin in the future to spend in the global economy. Except the global economy of the future won't be powered by multiple fiat currencies issued and manipulated by central banks and government. It will be decentralised, free from interference. It will be a global financial system powered by cryptocurrency and blockchain technology. It will be a cryptoeconomy.

Of course, not everyone has that kind of long-term view or vantage point.

And not everyone shares my view on its long-term purchasing power potential, or the widespread nature that Bitcoin will achieve. Some people just want to invest now and cash out short term to realise some profits in fiat money.

If that's your prerogative, that's fine. And the good news is it's just as easy to sell Bitcoin back into fiat money as it is to buy it with fiat money.

Now I will reiterate, the whole point here is to exit that 'traditional' global banking and financial system. It's to get money into the cryptoeconomy and then use it in that world — and in the real world.

So the aim is NOT to convert it back to fiat currency in the future. But if you must, then the steps you take in buying Bitcoin, you simply reverse.

For example, the major Bitcoin sellers I talked about before also enable you to sell your Bitcoin. Sometimes they buy them, sometimes they simply match you with new buyers of Bitcoin, like a P2P Bitcoin market.

With Bittylicious that's how it works. You jump onto their site and instead of choosing to buy Bitcoin, you choose to sell it. You'll then be given the details of how much to sell, what rate you'll get and the wallet address you need to send it to. You are also asked for the bank details you want the funds transferred to.

It all happens very quickly and securely, and lets you cash out of your Bitcoin.

The same is said for Coinbase. Except here you need to have your Bitcoin in your Coinbase account. So you'll need to transfer it in. Then when it's in your Coinbase account you choose 'sell', and you sell your Bitcoin.

It really is as easy as buying or selling stocks through an online broking account.

Now what about a little more detail on how to spend it in the real world today?

In the early days there was little you could actually buy with Bitcoin. As explained in the 26 key moments that shaped Bitcoin, user Laszlo Hanyecz spent 10,000 Bitcoin on a pizza delivery. While not exactly the most economical decision, it was still an example of using Bitcoin in the real world.

And there are plenty of 'meetups' around the world where Bitcoin users can exchange goods for Bitcoin in person — just like a car boot sale or Sunday market.

But there are many more avenues online to use Bitcoin to purchase real goods. As we've explained, Livingroomofsatoshi.com in Australia allows for Bitcoin holders to pay for bills with Bitcoin.

That includes school fees, electricity and gas bills. Anything that you can bPay (an electronic banking bill payment) you can use Bitcoin to pay. Credit card bill? Use Bitcoin. Mobile phone bill? Use Bitcoin.

What else can you buy now with Bitcoin? Well if you head to Overstock.com, a huge online marketplace, you can use Bitcoin to buy anything from their website too. Household goods, bedding, furniture, jewellery watches, can all be purchased using Bitcoin.

It's just like any other payment method, as you check out with your basket you simply choose to pay with Bitcoin.

These are just a couple of examples of progressive businesses allowing people to pay with Bitcoin. And as we head into the next five, 10 years, we anticipate that more companies like Overstock will begin accepting Bitcoin as a legitimate payment method.

And when a company like Amazon or Apple says they'll accept it, then watch the real explosion in Bitcoin prices as people all over the world begin to fully appreciate the potential to use Bitcoin for everyday items.

There are also companies like BitPay that help companies accept Bitcoin as payment for goods. An example of this from 2017 was reported in Bitcoin *Bitcoin Magazine*, and it shows that not only can Bitcoin be used for major purposes, but also it can also

inadvertently lead to other financial gain.

> '*"We got approached last month by a real estate developer," Singh told Bloomberg Markets. "He had an offer to buy a house, and the purchaser wanted to pay in Bitcoin. And they weren't really sure what that was, so they contacted us."*
>
> '*Singh noted that Bitpay has helped facilitate these sorts of transactions several times over the past few years. "We walked him through how it works and the process," said Singh.*
>
> '*The purchase price of the home in question was roughly $4 million.*
>
> '*Singh went on to explain that the Bitcoin price was at $750 when the transaction to purchase the house was initiated. By the end of the transaction, the Bitcoin price was $1000. "So the buyer actually ended up making about 25 per cent in the currency exchange rate, essentially, in the appreciation," said Singh.*
>
> '*According to the numbers provided by Singh, the buyer of the home was left with an extra $1.3 million after the purchase of the home.*
>
> '*"With that extra money, he went and bought a Lamborghini at Newport Beach, Orange County, which also accepts Bitcoin with Bitpay," added Singh. "He got a house for pretty much 25 per cent cheaper, as well as a free Lamborghini essentially."*'

We see this kind of instance — real estate developers and agents accepting Bitcoin — as a more common occurrence. And should the price of Bitcoin continue to rise over the next five, 10, 20 years, it will absolutely take off.

Ultimately as Bitcoin becomes a widespread, mass adopted unit of exchange, it will be as common to pay with Bitcoin as it currently is with a debit or credit card.

With that point also comes recent advances in cryptocurrency technology to allow for purchases in the real world.

There are a raft of companies, Monaco Card, Token Card, TenX that are all payment cards that you load up with your cryptocurrency and then use in the real world like you would a debit card.

So think about going into a shop — any retail shop — to buy some clothes. Instead of using your debit card you use your 'cryptocard'. And instead of debiting your bank account in dollars, pounds or yuan, it debits your cryptowallet — taking a little bit of every crypto you have on there, proportionally.

You could load your cryptocard wallet with Bitcoin, Litecoin, Dash and Pivx. then when you pay in store for your goods a little fraction of each gets taken as payment, converted to fiat money, and then used as the payment unit of exchange to the retailer.

It's incredible innovation that allows real world use of Bitcoin and cryptocurrency. Something that simply didn't exist even just a year ago. And much of the reason that these kinds of crypto payment functions now is not even due to Bitcoin, it's due to Ethereum. But we'll get to that shortly.

Massive potential or massive hype? The Future of Bitcoin

In late 2013, when Bitcoin hit an equivalent price of US$1,242, the world stood up and took notice. The same day Bitcoin hit US$1,242 the spot price for physical gold was US$1,240. This digital currency was worth more than gold. For many it was digital gold .

And then it fell off the radar. But governments and central banks went on their merry way racking up more and more debt — adding to the debt pile that future generations will have to pay off. There will be kids born this year, the year after and the decade after that will have to pay off the debt that your government racks up today.

Imagine that. Imagine being born into debt that you didn't accrue. That's the situation today. We all have to pay it off. But we didn't ask for it, the government and central banks did it because they chose to. Because they're the central authority.

But with crypto, the world gets another chance to impact their own financial future. Independent, decentralised and free from government and central bank control.

It's a true financial revolution. Even more, it's a social revolution that's been bubbling away under the surface since the 1980s really. One that only came to a head in 2008/09, and only now is starting to find its feet, begin to mature and open up the world to its full potential.

And that means an exciting future.

My position was, and still is, that Bitcoin will be around far longer than you or I will be alive. In fact, I don't envisage a day in the future, ever, when there isn't Bitcoin. Considering all coins won't even be in circulation until 2140, that's a good indication of its longevity.

Bitcoin is, and always has been, a unit of exchange over the internet. It is, in its purest form, anti-government, anti-central bank. It provides the perfect basis of an alternative payment system.

I'm also of the view that the fiat currency value of Bitcoin is unimportant for the future. It matters little long term what Bitcoin is worth in USD, CNY, AUD, GBP or whatever currency you choose. One day you will be able to freely spend Bitcoin as you do today, with the currency you're paid your wages in.

But you'll be paid in Bitcoin. You will be able to work anywhere, for anyone, and have a universal currency. There is of course more economic considerations down the track about the value of goods and services from one country to the next. But cryptoeconomics is something else entirely, which we're still just trying to figure out.

However, there is a transition period to this day of global adoption when the fiat value will be important, giving us perspective as to the purchasing power of Bitcoin. For example while the current price of Bitcoin is US$2,400, long term I can see it being the equivalent of US$50,000, and possibly US$1 million.

Let's see how that's possible.

Well for a start we know if there will only ever be (just under) 21 million Bitcoin in circulation, you can start to get an idea if you think about it as a full global financial system.

In 2015 the World Economic Forum put out a research paper about critical events that could have enormous societal impact.

One of those they expect is that by 2027, 10% of global GDP will be stored on blockchain technology.

The OECD expects world GDP to surpass US$101 trillion by 2027. Now if 10% of that is stored on blockchain technology, that would make the cryptoeconomy worth around US$11 trillion.

And let's assume that Bitcoin remains the preeminent store of wealth of blockchain technology as a unit of exchange in the future. But even let's say Bitcoin is just 30% of the total global blockchain technologies holding that global GDP. That would make the Bitcoin network effectively worth US$3.3 trillion.

Now by 2027 there will roughly 20 million Bitcoin in circulation.

The easy maths then tells us that, at that size, one Bitcoin would be worth around US$157,142.

And remember that's if Bitcoin is just 30% of the global blockchain technologies, which hold 10% of the worlds GDP.

So you have to ask, if you're looking at raw future purchasing power and one Bitcoin is worth US$2,400 today, and could be worth as much as US$150,000 in the next 10 years, is it expensive today or a bargain?

Of course to get to that kind of price point and purchasing power (or more) there's the long road ahead. But it's the trajectory Bitcoin is on now

Or there is a fast route, which could see it hit that kind of price appreciation even sooner.

The likelihood of that outcome coming sooner than 10 years is enhanced if we continue to see more severe, ongoing financial turmoil in economies around the world.

As I said before, it's the perfect alternative payment system. Imagine what could happen if there is a collapse of the current global financial system. If there is another major global financial debt crisis, or more 'Trump shock' in countries like France, Germany, Austria, the UK and Australia.

What if Russia goes to war? What if China goes to war in the South China sea? What if the US finds a way to go to another war?

When that happens there will be a flight of wealth to Bitcoin. People now know that in times of turmoil, one of the safest places you could shift money is out and away from government oversight. And that maybe the cryptoeconomy is a smarter way to store value.

One of the precursors to the immense year Bitcoin had in 2013 was the Greek debt crisis and Cypriot debt crisis in Europe. Furthermore, there was increased awareness and acceptance in China, as well as ongoing global recognition because of the

immense rise in price.

Another debt crisis on a scale even bigger than Cyprus or Greece could send Bitcoin's price soaring again. Complete financial system collapse would likely see it peak and rise with the same (if not more) ferocity as it did in 2013.

But remember, my view here isn't to just get Bitcoin with the aim of selling it back into fiat currency. While you can do that if you choose, my view has and always will be to hold it long term. One day you will be able to use it anywhere, and your purchasing power then should be substantially higher than it is today.

Even if there isn't global financial collapse, I still envisage more and more citizens from countries all over the world turning to Bitcoin, and the blockchain technology it's founded on, to manage global and local payments and exchanges for goods and services.

I could go on and on, but the point is that Bitcoin today has come off the hype and hysteria of 2013. It bottomed, it stabilised, and it's seeing more recognition and acceptance globally as a viable system. It's now achieved a degree of stability in price — although, to many, it's still too volatile.

That puts it in a strong potion for investment. But again, the aim is investment with the view to use it to exchange in the future for far more than what you can get it for today. The idea is not to transfer it back to fiat currency.

Of course, the choice is yours.

I will say it one more time, though. I don't think you should look at Bitcoin as a way for easy short-term money. The aim isn't to buy Bitcoin to sell back into fiat currency. The aim is that Bitcoin will continue to appreciate longer term. And in doing so it will be worth more and more as the network value of Bitcoin increases, and so does its purchasing power.

With more merchants likely to accept Bitcoin in the future, you'll be able to use your Bitcoin much in the same way Laszlo used his, to buy some pizzas. Albeit for a more reasonable price.

If Laszlo held onto his, he might have been able to buy a house, a boat, a car, or several of each. That's the aim for you. To be able to use Bitcoin in the future to buy something extravagant. To provide you with the ability to secure your wealth in the digital world, to pass on to the next generation, for them to use in the world. To do with however you please.

Remember the core premise of Bitcoin in Nakamoto's white paper?

> '*Online payments to be sent directly from one party to another without going through a financial institution.*'

It's anti-financial system. It's revolutionary technology that has the potential to completely change how we think about and manage our finances in the 21st century. And longer term, I think it will have incredibly strong purchasing power.

Which is why I say get some Bitcoin now, with the view to hold it long term and eventually use. In the event that its use isn't as widespread as I anticipate, then there's always the option to sell it back into fiat currency again with the aim of making a profit. Or worst case scenario it all goes wrong and you lose your money entirely. That's the outcome if I'm wrong about all this.

But at least you won't die wondering.

I will remind you one more time, this is not your typical financial investment.

Be aware, Bitcoin has no financial backing, no guarantees. It's not regulated by a centralised power like a central bank or government. There may be taxation consequences in different jurisdictions that the world is still trying to figure out. These are all aspect that will apply differently to each individual.

You should take the time to be sure of any consequences applicable to you.

It's also risky as the comparative fiat value of Bitcoin is volatile for now. As I've said, in the last eight years its gone from a few cents to over US$3,000 and back again. It's seeing some relative

stability now over US$2,500, but that might not last. And you could be at risk of losing it all if the price crashes dramatically in a short space of time and you're unable to sell your Bitcoin.

And then if you lose your wallet, don't back it up, have it stolen, or suffer a cyber attack, you could also lose all your Bitcoin.

Yes, this has extreme potential in my view. But it also carries its fair share of extreme risk. This journey isn't all going to be smooth sailing. There will be peaks and troughs, highs and lows, but it will be a crazy, fun ride.

This is all part and parcel of Bitcoin — it's a revolution in its earliest stages. And that makes it risky.

It makes the scaling problem a risk. It makes government interference and regulation a risk. It makes all these factors coming together a risk, and pushes people away from Bitcoin and into alternative crypto.

And if you're still in doubt then think about the value and future potential of Bitcoin like the telephone…

In the early days, when the first telephone was invented, it was of limited value. After all, what can you do with just one telephone? You can't call anyone else. Its value is limited.

But when there were two telephones, you had a network. Albeit a small network. But instantly the value of that telephone network was increased.

And then 10 people had telephones, and again the network was more valuable than before. It had growth potential. As the number of users increased, the value of the network also grew with it.

And in my view it's this '10 users' theoretical position where I think Bitcoin is today. That might sound a little ridiculous, but the reality is not many people really still know about Bitcoin.

Go down to your local high street and look at all the people walking around. Some might have heard of Bitcoin on the news

or seen it in the paper. But the number of them currently using it, buying it, sending it, selling it, will be minimal. They don't understand it. They don't get it.

But the same situation existed when the telephone started. It wasn't until people actually got one for themselves that they started to truly appreciate its potential.

And then you had 100,000 people with telephones. Then 1 million. Then hundreds of millions. Then billions. And at that point the network value had increased exponentially.

That's what's going to happen with Bitcoin. As the number of people using it, the number of merchants accepting it, the number of companies building businesses based on it, increases, so will the value of the network, of the blockchain — of Bitcoin.

With widespread, mass adoption one Bitcoin will be worth hundreds of thousands of dollars, millions — as a comparative tool. But the reality is you will be able to buy so much more then with one Bitcoin than you can now. Its purchasing power will rise exponentially with the exponential rise in value of the network.

And the world won't be talking in whole Bitcoin. It will be talking in terms of satoshi. Remember, Bitcoin might have 21 million Bitcoin in circulation, but it will really have 2,100,000,000,000,000 (2.1 quadrillion) satoshi in circulation.

And if one day in the future, in 2140 when all Bitcoin are mined and in circulation — well after you and I have left this world — maybe that coffee from the local coffee store will be just 3 satoshi. Maybe that Xbox game will cost 45 satoshi.

Maybe that house you want to buy will cost you 1,000,000 satoshi.

If that's the situation in the generations to come, then theoretically one Bitcoin (100,000,000 satoshi) could be the equivalent of US$100 million.

That's the potential we talk about beyond our lifetime when we say that Bitcoin and cryptocurrency today could be the single biggest generational wealth building opportunity in history that

'everyone' has a chance to be a part of.

Bitcoin has the potential to enable any person on earth with enough foresight to get involved, buy Bitcoin. A chance to mint wealth that you simply would never be able to achieve in the traditional financial system. The system that's rigged towards the already wealthy, the financial elite, the government and their cronies.

But even if those potential futures are still a bit too crazy, a bit too farfetched, then think about its potential *another* way...

Think about something intangible becoming worth so much that it blows your mind. Think about another similarly intangible object, like a computer operating system.

For example, when you look at Microsoft today they are a company worth US$530 billion. And they make all sort of different hardware and software for computers. But when Microsoft began, when Bill Gates and Paul Allen started Microsoft in the 70s, all they did was build an operating system for computers. It was lines of computer code.

And no one, absolutely no one would have been able to predict that in 1974 these two young kids would be starting a US$530 billion company from nothing but computer code.

Consider that today Bitcoin's total network value (the value of all the Bitcoin in circulation) is around US$43 billion. That makes it roughly worth 8% of Microsoft today.

While there's no doubt a company like Microsoft has been important to the advancement of the modern world, the question is will Bitcoin be more influential? Will it reach and impact the lives of more people?

After all, we're not talking about a company here. We're talking about a completely alternative financial system. Not only do I consider that Bitcoin is more important than any company that exists in the world today, it supersedes the entire financial system.

And if Bitcoin does become more valuable than a simple company like Microsoft, then it would far exceed a value like US$530 billion. But even at that level it would see a 12.3-times appreciation in the current fiat-compared value — putting it up at US$33,210.

Again, what would you say then if the current fiat-comparative price of Bitcoin were US$2,700? Expensive? Or cheap and a bargain?

If you're prepared to accept that, and are prepared to enter the alternative financial system, then I see there being only one direction for you when you consider the future of Bitcoin. And that's to get some for yourself.

Familiarise yourself with Bitcoin further. Set up a Bitcoin wallet. Buy some Bitcoin and transfer into your wallet at the available price at the time. Secure and store your wallet safely. Keep your Bitcoin long term for its potential future purchasing power.

Welcome to the world of Bitcoin and cryptocurrency.

Ethereum: the next big thing?

Oh wait, did he say Bitcoin *and* cryptocurrency?

You bet I did. And we've mentioned it a few times already, but there is more than just Bitcoin. We have huge vision for the future of Bitcoin. But there are more cryptocurrencies out there.

And one of them has potential to be as big as Bitcoin. But you must understand its differences, because it isn't like Bitcoin at all.

As we've mentioned a few times now, Bitcoin is really the first crypto 'currency' but it's not necessarily the most important 'crypto' that we'll have in the future.

I think that Bitcoin will be the most important and dominant financial instrument, the most common store of wealth as useable unit of exchange in the future.

But in terms of a crypto that is creating a whole different revolution, you can't look further than Ethereum. Think of this as the better version of the internet — the second internet — the way the internet should have been created in the first place. This is a new social architecture, a new digital infrastructure.

And importantly, Ethereum isn't really a 'currency', so drop that idea from your mind. This isn't the 'next Bitcoin'. Its completely different. It's really not comparative to Bitcon in its purpose. The major similarity is they both use blockchain technology.

Then again, Ethereum isn't supposed to be a unit of exchange. It's supposed to be a digital infrastructure. It's going to be — and already is — the foundation for a whole new generation of digital assets, digital businesses, digital wealth that's being built on the Ethereum blockchain technology.

But what is Ethereum? What's it all about? What does its future look like?

In the late 1980s the World Wide Web (WWW) began to proliferate around the globe. Inventor Sir Tim Berners-Lee had developed

a globally interlinked information system that existed on 'the internet'.

By 1990 a more formal version of the WWW was in development. This resulted in the publishing of the first ever 'webpage' on 20 December 1990.

To think that in just 27 years the WWW and internet has gone from obscurity to being almost as important to the world as electricity. We say 'almost as important' because without electricity there is no power to make the internet and the WWW work.

The energy source that powers the internet, electricity, is as important to its existence as all the hardware and software that actually makes it work. Electricity is the fuel of the internet — it's vital.

We want you to remember this concept of the 'energy' of the internet, as it will help you understand a vital concept about your latest investment recommendation.

The other thing we want you to think about is the opportunity you missed out on. The opportunity you had to invest in the internet and WWW back in the late 80s and early 90s.

Maybe you're one of the smart few that went 'all in' investing in the WWW and internet. Maybe you're already a minted multimillionaire. A fortune built on being an early stage investor in the biggest technological disruption the world has ever seen.

Or, more likely, you're not. That's OK. Most people simply didn't understand the power of the internet at the time. They didn't think that the WWW would take off. No one really could have anticipated things like 'cloud' computing, the 'internet of things' or the incredible connectivity that we now have.

It's no exaggeration to say that the internet powers the world. And it's created an untold amount of millionaires and billionaires. If it wasn't for the internet Mark Zuckerberg couldn't have created Facebook, and he certainly wouldn't be worth around $58 billion.

You only need to glance down the *20 Youngest Self-Made*

Billionaires list in *Business Insider* to see just how significant the internet has been.

- Evan Spiegel cofounded Snapchat — worth more than $1.8 billion
- John Collison co-founded online payment company Stripe — worth around $1 billion
- Nathan Blecharczyk cofounded Airbnb — worth around $3.6 billion
- Lin Qi founded online gaming company Youzu — worth $1.5 billion
- Sachin Bansal cofounded Indian online ecommerce company Flipkart — worth $1.4 billion

These are some of the wealthiest people in the world. And the thing is, they're all under 40 and made their fortune from companies that exist online.

While the internet will still mint a whole generation of new millionaires and billionaires, it's not the only opportunity in town.

Imagine if you had a second chance at investing in the earliest stage of the internet. Imagine if you could do it with the knowledge that just 27 years later — if you hold steady and ride out the peaks and troughs — you could mint yourself a fortune. Maybe even turn yourself into one of those internet millionaires or billionaires.

Well this chapter is intended to show you that you have a second chance. You have an opportunity right now that's in the same phase the internet was in back in the late 80s and early 90s. It's an opportunity that I believe could turn you *at least* into a millionaire.

That's a grand statement to make. But what if you could turn a $1,000 investment into $500,000 over the next 13 years? That would make you 500 times your money — a 49,900% return.

Or with another similar investment you could turn $40 into $100,000. That would see you multiply that initial investment 2,500 times — a 249,900% return.

You probably think I'm nuts. A 49,900% return and a 249,900% return in just the next 13 years. Sounds crazy.

But Ethereum is something very special. Something that we think is going to change the world…one of the biggest tech revolutions we've ever seen. And we'll show you how those crazy returns just might be possible.

Ethereum is a global platform that future industry will exist on. We're convinced it presents you with another huge opportunity for investment — akin to being able to invest in early days of the internet.

What is a cryptocurrency?

You've understand Bitcoin and the blockchain by now. How is Ethereum different?

Cryptocurrencies exist exclusively in the online world. And there are hundreds of them. Bitcoin is one, Ethereum is another. Some of the other cryptocurrencies you can buy and sell and trade include NEM, MaidSafeCoin, Cloakcoin, Ripple, Monero, Dash, Golem and Quantum Resistant Ledger (seriously).

While I've been researching Bitcoin since 2010, I've also been involved in the world of other altcoins (alternative coins) and cryptocurrencies since the beginning of 2014.

After seeing the impact Bitcoin was having on the world I discovered other Bitcoin-like cryptocurrencies that you could buy, use and even sell and trade.

The first of these I came across was Libertycoin. And then Entropycoin, Vericoin, Cloakcoin, Mineralscoin, Stealthcoin, Darkcoin, Blackcoin and Ripple.

In fact, just over two years ago at the SIBOS banking and finance conference in Singapore, I spoke to the CEO of RippleLabs about how their cryptocurrency, Ripple, was going to change the world.

While all of these cryptocurrencies exist solely online, there's something else they typically share. Blockchain technology.

All cryptocurrencies rely on blockchains to function. Many of them work off their own blockchain, which is often based on Bitcoin's blockchain. But there are subtle variations between many of these cryptocurrencies.

One of the more important variations is the difference between what's called 'proof of work' (POW) and 'proof of stake' (POS).

Both of these are algorithms that cryptocurrencies can use to create consensus on a blockchain. That means how the blockchain performs its little 'audit' and validates transactions against the previous 'blocks' that make up the chain.

Achieving consensus allows many different users on the blockchain to agree on the current state and ensure that the next block…and so on…continue to be correct.

POW (which Bitcoin employs) uses 'mining' — energy intensive computations to prove the blocks are correct.

But POS uses validators that have a 'stake' in the network (a wallet that a person holds a number of coins in) to validate that a block is correct.

POW effectively rewards 'miners' who help power the cryptocurrencies system. POS can reward 'stakers', people who retain coins to help power the system.

Put simply, one system rewards finding coins, the other rewards holding coins.

There is of course far more complexity to it than this. For example, there are different tweaks developers can make to their POS coin to increase or decrease the stake reward for holding coins. We've seen a 5% per annum reward for simply holding and staking coins in a wallet. That beats most bank accounts.

Cryptocurrencies are exciting like Bitcoin because they're decentralised, there's no government control or influence (yet), many of them are anonymous (way more anonymous than Bitcoin) and protect user privacy, and you can transfer them all over the world without delay, interference or exorbitant fees.

But not all cryptocurrencies are 'currency'. Some of them you should think of as 'fuel'. They are more like a commodity than a currency. These 'fuel-like' cryptocurrencies have perhaps even a more important role to play in our future digital world. Perhaps they can be more important and *more valuable than Bitcoin.*

And next to Bitcoin, the most important cryptocurrency that exists right now is Ethereum — and it's token (coin) Ether.

While Bitcoin might be the future alternative finance and payments system, in our view Ethereum is the future of the new internet. And it's token Ether is as important as a 'fuel' for the future digital world that Ethereum is building the infrastructure for.

Another way to think of Ether (the token) is a bit like 'digital oil'. Oil was the lifeblood of the 20th century. It minted untold wealth as the 'fuel' that would power the world.

In our view Ethereum and their Ether coin has that same kind of wealth creation potential.

Ethereum has the potential to be the foundation of every major new digital — and even physical — application for the next 100 years.

You can think of Bitcoin as the future of money...and Ethereum as the future of the internet, applications and corporations.

Let us explain...

What is Ethereum?

Ethereum is commonly known as cryptocurrency for enterprise. The developers of Ethereum built a blockchain and system that allows people to build businesses on their blockchain.

Think about a city. Full of skyscrapers with companies and people working away. You can imagine Ethereum as the land and the skyscrapers. Ether (ETH) is the coin that powers the Ethereum blockchain — it's the same as the electricity that powers the city.

Ethereum originally started in 2013 on the back of a white paper by cryptocurrency researcher, Vitalik Buterin. His primary concept was to build decentralised applications using a new digital protocol.

> '*Ethereum does this by building what is essentially the ultimate abstract foundational layer: a blockchain with a built-in Turing-complete programming language, allowing anyone to write smart contracts and decentralized applications where they can create their own arbitrary rules for ownership, transaction formats and state transition functions*.'

Again, the simple way to view Ethereum is more as a platform for building applications, businesses, enterprise and even new cryptocurrencies. It can achieve this via the use of 'smart contracts'. These are 'autonomous agents' that operate on logic.

For example, if A does B then C does D. These smart contracts can be far more complex than that. They can be as complex as to verify the identity of someone that might be applying for a new trading account. Or they could be a smart contract to pay out a certain amount of money on the delivery of a particular product.

The key point is a smart contract can be used for *anything*. It can be fully automated and trusted. Thanks to the blockchain system and its decentralised nature, it's the perfect tool to build enterprise on.

While we view Ethereum as the world's most important system for future digital business, we also need to make sure we don't dismiss this as just some kind of software platform.

Ethereum is developing in a way where it's almost taking on its own life force. Already there is an entire ecosystem of new applications based on Ethereum.

The best way to get your head around this is to almost think of it like the Apple App Store on the very first day of existence — and then the explosive growth of apps and the billions in wealth it has helped generate.

Investing in Ethereum now is like being on the ground level of

day 0 of the app store. This is already creating new enterprise that we never dreamed of existing before.

Take, for instance, an Ethereum based enterprise called Golem. This is a company that's trying to decentralise computing power. Let's say you've got a nice computer that you regularly use to surf the web. And that's pretty much all you use it for.

It's likely you're using maybe 20% of your computer's processing power. That's 80% you're wasting. But what if you could rent out that 80% or rent to someone who needs more — like a high-end graphic designer. A designer who doesn't want to have to pay the prices for Amazon Web Services or Microsoft Azure. They might not need heaps of computing power all the time. Just some of the time.

So they rent computing power from you, and maybe 10 other Golem users. The renter pays you in Golem. Golem tokens become the method of payment, transfer, and fuel for the Golem system of decentralised computer power.

This is a real enterprise. And Golem tokens are real tradable cryptocurrencies. The thing is, Golem is built and based on Ethereum. Golem might be an up and coming digital business, but Ethereum is its core foundation.

The more enterprises develop and build on Ethereum, the more powerful it gets. And we see it developing like the explosion of the internet 25 years ago.

And in order for this Ethereum organism to flourish, in order for the construction of enterprise on Ethereum, it needs energy. It needs fuel. As the Ethereum white paper explains,

> *'"Ether" is the main internal crypto-fuel of Ethereum, and is used to pay transaction fees.'*

Ether is to Ethereum what electricity is to the internet. And this is an important aspect to understand the future value potential of Ether. Think of it like a commodity. A limited resource that the whole system needs to use to work, but which is in limited supply.

Early investors in Ether will be like the Saudi and Russian oil barons we hear about today. Untold wealth built on holding all the major oil resources from decades earlier.

Imagine in a decade or two being wealthy enough to call yourself an Ether baron. That's the kind of insane potential this just might have.

As Ethereum grows in size and stature, and attracts major global corporations, the value of its fuel, Ether, should rise. And rise... and rise. The bigger it gets, the more it needs Ether. And those that hold it, and use it to help fuel the system could turn into Ether millionaires, maybe even Ether billionaires in the coming future.

The world's big wigs want in

What makes us even more confident about Ethereum is that major business is already getting involved.

Recently the *Enterprise Ethereum Alliance* was formed. This is an 'alliance' between giants of the corporate world such as Microsoft, Intel, JP Morgan, BNY Mellon, BP, ING, Thomson Reuters and others.

Their aim is to:

> '*Learn from and build upon the only smart contract supporting blockchain currently running in real-world production and to define enterprise-grade software capable of handling the most complex, highly demanding applications at the speed of business*.'

This kind of enterprise backing has seen Ethereum become a major alternative cryptocurrency to Bitcoin. ING has even recently undertaken live oil trading on an Ethereum based blockchain.

According to Coindesk ,

> '*The live transactions between ING, Société Générale and commodities trading house Mercuria, involved an oil cargo*

shipment of African crude oil that was sold three times on its way to China.'

And the fuel that powers it all…is Ether.

We view Bitcoin as a digital, decentralised currency for 'the people'. Ethereum could well be the supercharged 'business version' the world's biggest companies will all come rely on.

This is why we think now is the time to get involved in Ethereum and buy Ether. If the growth trajectory of this heads the way we think it will, this could explode in value over the next five to 10 years.

The run has begun…but it's still early days

The good news is that while all this is going on, it's early days yet. Most of these companies are still researching and testing applications on Ethereum. We think it will work, and that major corporations will find use, cost savings and return on investment when they develop Ethereum based applications.

That's going to push the value of Ether higher. This will also coincide with another major catalyst in the development of the Ethereum system.

Currently the system is based on proof-of-work, like Bitcoin. But the developers of Ethereum are working furiously towards changing that to proof-of-stake.

Doing so would allow Ethereum to increase in scale exponentially, as it would remove the increasingly energy inefficient reliance on computing power to process the blocks.

Instead as proof-of-stake miners become validators and keep the processing requirement under control.

Also, proof-of-stake would put supply constraints on Ether and again push its price.

Proof-of-stake would reward holders of Ether by holding their Ether in wallets to become 'nodes' on the network. In becoming a

node and holding (hoarding) Ether, the more Ether you hold, the most important you become in validating the blockchain.

So Proof-of-stake incentivises users to hold — not buy and sell — their Ether. This tightens volumes in trading and helps to push the price higher. And don't forget that, as more transactions take place on the system, more smart contracts are built and in operation. And Ether becomes more valuable to power the system.

Early 2016 the cofounder of Coinbase, one of the most well funded Bitcoin startups ever, suggested that Ethereum could even, '*blow past Bitcoin entirely*'.

He wrote,

> '*There is nothing that Bitcoin can do which Ethereum can't. While Ethereum is less battle tested, it is moving faster, has better leadership and has more developer mindshare. First mover advantage is challenging to overcome, but at current pace, it's conceivable*.'

Imagine if Ethereum could indeed blow past Bitcoin. If you invested in Ethereum now and it went to the price of Bitcoin today, you would turn US$360 into US$2,700. You'd make 7.5 times your money.

That would turn a $1,000 investment into Ether into $7,500.

But we have much bigger price aims for Ether.

We've been keeping an eye on Ethereum since 2016. And the price of one Ether has already started to accelerate. One Ether is now the equivalent of around 0.13000000 Bitcoins — that's around US$360.

This is already up from just 0.00847000 at the start of this year. That means Ether is up more than 1,400% year to date.

When Ethereum first launched and was raising money in an Initial Coin Offering (ICO), the value was US$1 per Ether. At US$360 per Ether today…well you can see the money some people

have *already made.*

But it's not too late. We believe Ether is only just getting warmed up. You can look back and think *'oh we wish we'd invested at $1'*. But you didn't know about it then. So rather than look back… look forward.

The potential of Ethereum and the value of Ether is huge. Maybe even bigger than Bitcoin.

And some major tech players think Bitcoin could go to $500,000. The first investor in Snap Inc. [NASDAQ:SNAP] (Snapchat), Jeremy Liew, said by 2030 Bitcoin could realistically go to US$500,000 per BTC.

He says,

> '*Bitcoin's 2030 price and user count total $500,000 and 400 million, respectively. The price is found by taking the $10 trillion market cap and dividing it by the fixed supply of 20 million Bitcoin*.'

That would be compelling if you own Bitcoin. But imagine if the same can be said for Ether. If the value of one Ether was still just 0.13Bitcoin, that would be US$65,000. Then you'd be looking at 180 times your money from today.

And if Bitcoin hits $1 million in the future. Or even if Ether becomes stronger comparative to Bitcoin's price — then the sky is the limit.

This is as early stage as it still gets for this kind of breakthrough technology. There's a long road ahead for mass adoption, awareness, usability, understanding and growth.

Both Bitcoin and Ethereum have their place. But we think the potential upside for Ethereum and their token, Ether, is extraordinary. Also, as Ether is mainly exchangeable to Bitcoin, the idea with Ether long term is that you do exit a position and convert back to Bitcoin as your primary way of then using your Ether profits in the real world.

Ether isn't designed to be spent. Bitcoin is. So you must make sure you keep that in mind at all times.

Before you do get involved, though, we strongly recommend reading up more information on Ethereum at their official Ethereum Project website, ethereum.org.

How to buy Ethereum?

Like Bitcoin, the next big question I get is obviously how do I buy Ether?

Over the last three years buying and investing in cryptocurrencies has become significantly easier.

With Ethereum it's very simple to get things started. In many cases now you simply go to a site just like you do with Bitcoin such as Coinbase or Bittyicious, or CEX.io or any other Bitcoin exchange, and simply buy Ether with your fiat money.

But of course by now you might already have Bitcoin. And if that's the case, then great. You're already in the cryptoeconomy. There's another way to get Ether, and that's to exchange your Bitcoin for it, keeping everything within the crypto world.

If you want to trade Bitcoin for Ether then again, you will need to set up an account with a cryptocurrency exchange site. The ones we recommend, because we use them for all our crypto exchanges, are Poloniex and Bittrex.

While you can trade Bitcoin for Ether, you'll also see you can trade for a whole range of cryptocurrencies.

But the focus here is Ether. Daily volumes of Etherare often around 5,000–10,000 Bitcoins per day . Sometimes on Poloniex they can push as high and higher than 100,000 Bitcoin worth of Ether. That means you'll easily be able to get some.

Now you do need to get your Bitcoin into these exchanges to trade Bitcoin for Ether. And that's as simple as sending Bitcoin from your wallet into your exchange wallet.

Don't forget you need the 'deposit' address from your exchange wallet 100% correct when sending in your Bitcoin. But once your exchange wallet is loaded, away you go. You're ready to buy Ether.

Go to the 'BTC/ETH' market, scroll down to 'BUY ETH' and put your order in. It's just like buying stocks — but buying crypto instead. When your order is processed you'll find you'll have Ether in your 'Deposits & Withdrawals' tab from earlier.

And much like Bitcoin, you need to withdraw your Ether to you Ethereum wallet. That obviously means you need to install an Ethereum wallet.

This is just like installing a Bitcoin wallet. Remember when I said if you can do it with Bitcoin you can do it with any crypto? Well, this is the proof.

And like Bitcoin, you can use one on your desktop or mobile.

However, as this is a long-term play we recommend using an offline storage device to store your Ether. We use a device exactly like we explained in how to store your Bitcoin — the 'Ledger Nano S Wallet'.

This will allow you to set up a Ledger Ethereum Wallet and then also store your Ether on the device offline — protecting against the risk of cyber theft of your Ether.

When you've set up your wallet you will need to copy the address of your wallet and process the withdrawal on Poloniex. After a short period of time your Ether should appear in your wallet.

You now own Ether, and have it safely secured and stored.

This might seem a little daunting, but it's not too hard if you've bought some Bitcoin already. Again, if you're still a little unsure, then I recommend starting with small amounts to get used to it before ramping up to buy larger amounts.

Of course, just like Bitcoin you want to make sure you understand this could all go wrong! Ethereum is still so early stage and full

of potential risks, much in the same way that Bitcoin is, that any money you do put into it could all disappear in an instant.

Do not confuse investing in cryptocurrencies with stock markets or fiat currency markets. While similar in operation to Bitcoin, both are incredibly high risk.

We can't stress highly enough that you are at a serious risk of losing your investment. That means you shouldn't pump your life savings into any of this. Small capital amounts can provide huge upside potential long term — that's what you're looking at.

If it all goes wrong and you do your dough, don't say I didn't warn you. This is high risk investing at the earliest of early stages for future technologies and their huge upside potential.

Like the early days of the internet, it's a bit like the Wild West. There is potential for huge success. There is also potential for complete failure. I've seen cryptocurrencies fail firsthand. It's not pretty.

Ethereum , while already establishing itself as a major blockchain provider and developer of cryptocurrency, is vulnerable to failure. Ether could crash in price. Ethereum may suffer a cyber attack or go through a hard fork, splitting the currency into two streams.

This has actually happened once prior in its early development. Which is why there are two forks of Ethereum. These are Ethereum and the other is Ethereum Classic.

It's important to understand we are talking here about Ethereum, not Ethereum Classic. While the two share the same history, they are now separate crypto assets.

And this kind of hard fork that split them could happen again. Although the developer team of Ethereum is far more advanced with the project now than they were prior. But a hard fork can happen again, and it's a risk you need to accept.

There's also the risk that other cryptocurrency networks like Ethereum — but better — could appear in the future. These could

provide even more compelling opportunities for development and investment.

After all, Bitcoin was the first back in 2009, and Ethereum didn't even exist. Thanks to Bitcoin we now have Ethereum. It's viable to think that, thanks to Ethereum, we will have another major cryptocurrency project, which may be better again.

We can't predict if and when that will happen, but it's also a risk that you should be aware of. This is high-tech development in the digital 'wild west'. Competition risk and technology risk are incredibly high. But the advantage Ethereum has is it's a first mover with smart contracts and it's already got a huge head start on any potential competitor.

You need to make sure you're ready for everything that Ethereum will throw at you. It's an unregulated market, prone to cyber theft and scam. If you send your Ether to the wrong account or don't properly secure your wallet, you could lose your investment and have little chance of recovering it…ever. That's why we're a big fan of the offline storage using the Ledger Wallet.

While we forecast that Ether has the potential to rise incredibly in price, as high as $100,000, there is no guarantee. The opposite could happen. With incredible upside potential comes incredible risk. It's also volatile, going from $1 just a couple years back to $360. It even went from around $35 to $400 in the space of a few weeks in 2017.

If you're prepared to accept all the traps and trimmings that come with Ethereum, then come on board. Buy some Ether along with your Bitcoin, and own the fuel of the digital future.

New Global Finance – the Crypto Revolution

For all the importance we associate with Bitcoin and Ethereum there's another crucial piece of the puzzle that you need to understand. These are simply the beginning.

Cryptocurrencies are the new kid on the global financial block. But even beyond global finance there are cryptocurrencies that are redefining everything from how companies raise capital to what the very concept of 'money' is to society.

In fact, its inaccurate to define them all into the one basket of cryptocurrency.

The reality is that many of them don't act like currencies in the traditional sense at all. We've demonstrated that with Ethereum. The 'Ether' is more like an energy source that powers the Ethereum smart contracts, which operate on the Ethereum blockchain. And at its core Ethereum has become one of the most influential networks of the modern era.

You must view Ethereum as a piece of infrastructure. In fact you should look at it much the same as you look at the internet.

Now if you think of the internet, think about all the wonderful companies that we now have thanks to it. As mentioned in the chapter previous, companies like Snap Inc., Facebook, Amazon… these are all only possible because of the mass adoption and widespread release of the internet.

Companies like Apple only experience growth, huge revenues and profits like they do because their phones, computers and tablets are much more than devices you simply call someone on, write a letter on or play *Fruit Ninja* on.

Without the power of connectivity, without the power of the internet, many of these companies would simply be worthless. Can you imagine online shopping with Amazon if the internet didn't exist?

Of course not. Amazon wouldn't exist. There would be no such thing as Amazon Web Services (AWS). Without the internet,

Amazon is a jungle in South America, as it was before the internet.

So think of Ethereum like the internet.

But think of other cryptocurrencies built on Ethereum like the Amazons, Apples and Facebooks of the new cryptoeconomy.

Crypto like Golem, Humaniq, Aragon, Monaco, Mysterium…these are all new start-up businesses that are running on versions of the Ethereum token.

However, there are a number of other new companies that are springing up every single day like Status, Civic and the Bancor Protocol that are using Ethereum's smart contract to perform 'Initial Coin Offerings' (ICOs).

And this is where the crypto world begins to get really exciting… and dangerous.

Anyone with a bit of programming knowledge can effectively start up their own crypto and launch an ICO. There is no oversight, no regulation, no controls, no way for the average punter to see through the spin and out the other side.

That means someone like you could effectively launch a new company called 'MyCoin' put together a well written 'white paper' which is basically just a business plan, tool up a nice, HTML5 rich website with all the bells and whistles, set up a twitter account with lots of hashtags, retweets and paid for bot followers, and then launch an ICO.

In that ICO you might value your 'MyCoin' token (MCT) at 2000 MCT per 1 Ether. So if someone wanted to invest 10 Ether (about $3,600) into your ICO they'd get 20,000 MCT. That would place a value of 18 cents for 1 MCT.

Here's where it gets oh so easy to sniff out a scam. You could decide to 'mint' 200,000,000 MCT. So if all MCT were minted and in circulation and the value stayed at 18 cents, your MyCoin project would have an effective enterprise value of $36 million.

That's the danger and exciting part of these ICOs.

There are already companies like Gnosis, TokenCard and Humaniq that have already done their ICO's and raised millions of dollars in ICOs in a matter of *minutes*.

The TokenCard ICO raised over $16.7 million in under 10 minutes. But shortly thereafter it came to light that a 'bug' in the ICO meant that some investors who bought Tokencard's 'Tokens' using the cryptocurrency 'Singles' were able to obtain far more than they should have.

In one instance a bulk buyer spent $432,000 purchasing 6.2 million Tokens of the 42.3 million total supply. In one swift action one investors controlled 15% of the total stake. So much for decentralised…

Then more recently the Status ICO actually clogged up the Ethereum blockchain so badly that you could barely transact in Ether. This is a big problem, and now a scaling problem that Ethereum faces too.

These ICOs have become a craze of hype, hysteria and FOMO all in their own right. Stupid money being blindly thrown at ICOs hoping to be the next Bitcoin.

I've personally watched a crypto come from obscurity to suddenly be trading in excess of 10,000 Bitcoins worth of volume in a day. It went up more than 500% in a day and then in the space of 20 minutes halved in price.

This is effectively what we call a 'pump n dump'. And it's much the same as how some penny stocks on markets used to trade. We say 'used to' because stock markets have far more regulatory oversight than they used to.

But the crypto market has no oversight.

It's the wild west of the new economy. And while we make pains to explain how volatile, how risky and dangerous this all is, the simple fact is it's early stage. And there's money to be made both in trading these cryptocurrencies, and investing in the right kinds of ICOs that might actually go on to be the next Amazon or Facebook of the crypto world.

But the other reality is the ICO market is a bubble that will pop. And it will clear out the rubbish and leave only the strong to continue. And it's the strong cryptos, the ones with real world application and network value, like Ethereum, Bitcoin and a select few others, that will live on stronger and more successful once the ICO mania explodes in people's faces.

You only need to look at the list of the most valuable cryptocurrency to see there's a real ecosystem building here. Just three years ago, back in mid 2014, the biggest cryptocurrency was Bitcoin. It had a market cap then of around $8 billion.

Litecoin was another of the biggest. It had a market cap around $300 million. Even Dogecoin, started as a joke coin (seriously) had a market cap of $35 million. Ethereum, Golem, Aragon, and NEM didn't even exist. Even Dash was only first starting out.

Today Bitcoin's market cap is north of $44 billion. Ethereum, which only launched its ICO in 2015, is worth $31 billion. Golem, worth $508 million, Aragon $94 million. NEM now has a market cap over $1.7 billion. And Dash has gone from a market cap of around $750,000 in 2014 to $1.32 billion in 2017.

Many of the 'long termer' coins that were around in 2014 and have survived this long have seen their value increase 100-fold and more. Imagine being an early investor in Dash for example, back in 2014. $1,000 worth of Dash back then would be worth almost $1.76 million today. That's the kind of return that early Bitcoin investors were making.

And that's what makes the world of crypto so very exciting. There are opportunities like Bitcoin, Dash, and Ethereum to make money that you simply would never make in any other market in the world.

And most mainstream people still have absolutely no idea there's money to be made or how to go about making it. Most people I talk to are still afraid about buying Bitcoin. They see it as worthless because it isn't backed by anything physical. Yet somehow they believe the money that sits in their online bank account with their 'trusted' bank is more than 0s and 1s. They think that money has some kind of 'backing'.

The truth is that the global banking system is broken. And it's the new cryptoeconomy that's going to change it all.

For now the cryptoeconomy it is the Wild West, though. There are just as many sharks, con artists, and scammers in the crypto world as there are in the real financial world. Yet most people still feel comfortable with their money in the traditional banking system.

But the inherent beauty of cryptocurrencies is the blockchain technology they are all based on. Sure there are subtle differences, different unique offerings, different layers of anonymity, different kinds of applications, wallets, ways in which to use them. But they (mostly) all rely on a blockchain.

And you can't cheat the blockchain. It's decentralised nature makes the system more trustworthy than the global banking system we use today. That's the real gem in all of this. The very system that drove the creation of crypto now wants a piece of the action.

And because of the decentralised nature, scam artists get found out and get weeded from the system. The network, the blockchain, the community operates as one as a whole, and a trusted system and represents the ultimate free market.

The decentralised, free market that is the cryptoeconomy is inherently anti-establishment. It's purely libertarian.

That's really what we think Satoshi Nakamoto was aiming for when he published the Bitcoin white paper and started all this. He was looking for a way for people to operate independently of the controls of the government. Independently of those who oversee us and think they know what's best for us.

The truth is if you put the power in the hands of the people and a truly free market, then the collective will decide what is best. Blockchain technology, Bitcoin, Ethereum, cryptocurrencies all over the world are proof that the world can adapt, change and develop something truly great. A real once in a lifetime opportunity. With no input from authorities and nefarious influences within government departments.

The crypto world is freedom. And it's just starting. As the years roll by the market of crypto will develop. It will mature. The high level opportunities that you see with Bitcoin, Ethereum, Dash and others will not be as prevalent. You will see stupid money chasing returns in 'trashcoins' and ICOs.

You will see the smart money bunker down into a set few number of cryptos that hold real long term potential to revolutionise the world's global finance and banking system. Crypto that has the potential to revolutionise the corporate world. To develop a network like the second coming of the internet and see incredible businesses flourish and thrive on these new blockchain networks.

Now and only now is the time to make the kinds of returns and gains as investors that you perhaps would have had back in the 1980s. Imagine being the person who invested in Steve Jobs and Steve Wozniack when they were still putting together the first Mac in a garage. Then cashing out a few decades later, when the company they built topped $700 billion.

Now imagine doing that again, but in crypto. And instead of cashing out a few decades later doing it within one decade. That's the kind of explosive potential we see the crypto opportunity presenting. You don't often, as an investment professional, see once in a lifetime opportunities to make a play that could redefine your entire career.

But that's what we see here. That's why we think it's the best play into a new market opportunity that's perhaps ever existed. And that's why we're educating you in all things Bitcoin, Ethereum and cryptocurrency related.

You have to know this market opportunity inside and out. You need to understand Bitcoin, its nuances its origins, the origins of the cryptocurrency world. You need to know why Ethereum is so radically different and why in just two years has become as important as, if not more important to everything blockchain and crypto related than Bitcoin.

And you need to know that other opportunities like these exist now, and will come in the next few years. Opportunities as the cryptonet matures and presents chances to invest and make

money while the mainstream are still napping.

Of course there's always danger that government wants to get their grubby mitts on crypto. They want to regulate it, control it, and have a hand in it.

Remember, one of the core principles of cryptocurrency is its decentralised nature. That means it's free from central bank interference and government control.

This is what makes cryptocurrency so appealing. However, this does not please central banks or governments. Cryptocurrency is a threat to the control of these centralised powers.

And that's exactly why central banks and governments want a bigger say in how cryptocurrency works.

Jens Weidmann is the current head of the Central Bank in Germany, the Bundesbank. And Jens doesn't like Bitcoin or cryptocurrency. He thinks it will worsen future financial crises. And he blames its decentralised nature. Jens thinks central banks know what's best for everyone. And he doesn't like the thought of currencies outside their control.

For a start, Jens must clearly believe there will be another crisis. The fear of a fresh crisis is one reason why there's already been a flight away from central bank-controlled money and into cryptocurrency. But Jens must not have figured that out yet.

He thinks that central banks should issue their own cryptocurrency instead. He thinks it's safer for everyone. In other words Jens actually *likes* cryptocurrency — just not ones that he and his cronies in the Bundesbank can't manipulate.

We're pretty sure Jens missed the memo that people like cryptocurrency *because* the central bank can't touch it. They like it because government can't influence it. They like it *because it's decentralised*.

It's not just Jens who wants to get their grubby mitts on cryptocurrency.

The current Australian opposition leader Bill Shorten also has grand plans for it. You see, Bill thinks that Bitcoin is a safe haven for terrorists. He said in mid-2017,

> '*There are two things we simply do not know enough about to deal with properly—I refer to the use of the digital currency Bitcoin and the use of the dark web, a network of untraceable online activities and hidden websites, allowing those who wish to stay in the shadows to remain hidden*.'

This is a ploy for the Australian government to spy on and monitor every citizen and their activities. They love to use the threat of 'terror' to push the thumb down harder on their citizens.

Australia is fast becoming the ultimate nanny state. They're the modern form of Big Brother — and it's *another* reason why the world is switching to Bitcoin and cryptocurrency.

The government can try and stop it. The central banks can try manipulating it. But it's decentralised. It's out of their reach. It's bigger than government. And it's bigger than the 'traditional' financial system.

But for every day that cryptocurrency gains traction, builds a stronger user base, sees a new ICO, launches another decentralised blockchain, another government comes out in objection to it. Another central banks says it's a worry, perhaps a ponzi scheme, even the centre of the next major financial crisis.

But they don't get it. They don't see that this is a decentralisation of their power out to people. And therein lies the true revolution in crypto. It's building a new social architecture, a new internet, new funding methods. It's a whole new alternative financial system with the potential to include *everyone*.

The world of cryptocurrencies, the cryptoeconomy, is like nothing else we've seen before. It may not be like anything we'll see for another 30, 40, 50 years…maybe longer.

And once you see, really see, what's happening right under your feet, right at the end of your keyboard, you'll see just how easy this can be. How risky and dangerous it is. How exciting and how

wonderful an opportunity this world is to you, to your kids or your future kids, their kids, and generations to come.

The world is going crypto, and right now you've got a chance to be one of the earliest proponents of it. So grab this chance with both hands. Run with it. See the opportunity for what it is, and take a punt on the future.

And if it pays off the way I think it will, then you'll be a crypto convert for life. And maybe even one day people will talk about you as one of the barons of crypto.

This is such an extraordinary change to the very concept of global finance, connected networks, the decentralisation of power, that it's a genuine revolution.

There is a shift of money, and shift of power and shift of social views, behaviours and a shift of ideas and ideals of how the world should work.

What we know to be 'traditional' ways of banking and finance is under massive disruption. And only a few can see what's really happening.

I hope that with the sometimes-manic ramblings I've put to paper in this book, you have begun to gain an appreciation for what is really going on here.

I hope you understand the dramatic situation our governments, our central banks, our so-called democratically elected officials, deem is best for us, has ended up being worse for us.

I hope you understand that what you're told is the 'way of the world' doesn't have to be. That the system that's rigged to the elites, the establishment, the 'haves', the 1% might work for them in its current form — but their own hubris will get in the way of them seeing what's happening under their noses.

The crypto revolution is a change that, in a century the world will look back on and marvel at those smart enough to have got on board early. And put their full faith in a system that gives everyone a chance to do something great.

The decentralised nature of this revolution is shifting power financially and physically to the people. It's the ultimate libertarian, anti-establishment, anti-central authority change.

It's breaking the traditions we know and have relied on and, that have failed us so badly.

It's a better way, a fairer way, and a way that could change the lives of people like you if you have the nous to do something about it. Take this as a motivational speech. Take it as an informative piece of work. Take it as a warning.

Things are changing, and it's happening now.

The crypto revolution is underway. It's just beginning. The opportunities are extraordinary. And it's changing the world in a way that we'll never see again, at least not in our lifetime. And perhaps not for another 100 years or more.

So you have just one choice to make.

Are you going to be a part of the crypto revolution, or not?

You decide.

The regret of a lifetime

To perhaps nudge you that final step further into the crypto world, let me leave you with one final story. A personal story and one that holds great regrets. But as much as it hurts to recount this story over and over again, it serves as a lesson.

The lesson is to have faith and conviction in your views and beliefs. When your gut tells you one thing and your brain tells you another, perhaps you should listen to your gut.

I didn't in this story, and I should have. And I will never make the same mistakes again.

***

I sat outside the Nasi Padang Indonesian restaurant on Swanston Street, Melbourne, Australia. It was around May 2011.

I'd always had a deep enthusiasm for all things technology related. Computers, audio players, video games, robotics, cars, mechanics, electronics, everything that had a beating heart of a machine was fascinating to me.

Sometimes I even had to double check to make sure I wasn't some kind of advance artificial intelligence, a cyborg. For your information, I'm not. But could I be…

That day was surprisingly warm. Melbourne around May is usually cold. But at any time of the year it can be a four seasons in a day kind of place. It can be cold and windy early in the morning. But lunchtime the sun breaks through and you could be sitting outside in the sunshine on a nice 20 degree Celsius day — in Autumn! Then by the run home it's pelting down with rain, maybe some hail, and it seems like mother nature has just decided it's time to end everything.

Fortunately this lunchtime it was sunny enough to sit outside. Must have been around 20 degrees, because I remember I was sat down on the pavement, suit jacket off. While I'd probably do that even if it were 10 degrees, I wouldn't have done so outside.

I had ordered the Prawn Pad Thai. It's the only thing I ever ordered from here. It was good, the best in the area. It was also my local because I owned an apartment in the building it was in. I was several levels up, and a short lift ride and walk through the foyer had me on the doorstep.

This lunchtime however I hadn't decided to go home for lunch. Sandwiches would have to wait. Instead I was waiting for my work colleague Daryn. At the time I was toiling away as a Financial Adviser for a Melbourne based financial services company. A great company full of brilliant, people. A young company, so many of the staff were friends and hung out in social circles outside the office.

Daryn was the kind of guy where we both seemed to share similar views on life, the world, the economy, finance. He also had the same inclination to technology. We got chatting about the usual things, finance, some clients, the global financial system. Remember, we were just a year off the back of the Global Financial Crisis, so it was still topical. We both still had clients reeling from massive losses thanks to the devastation across global markets and at home on the Australian Stock Exchange.

We were always looking for opportunity. We both knew that great opportunity came in times after catastrophic failure. And there had been no greater catastrophic failure than that of the global debt markets and the global financial system.

Through my own personal research and mulling around online I had come across this strange digital currency called 'Bitcoin'. My first experiences with it had been a while ago. Actually back in 2010.

It had popped up a couple of times on various forums, and people kept directing others into the 'deep web' to find out more about it and how to get it.

The key concepts were that it was anonymous and that you could get it by 'mining it'. And most importantly you could use it to buy things. I had read about a guy in a Bitcoin forum from Jacksonville, Florida who had offered up 10,000 Bitcoin to buy a couple of pizzas. The guy who went by the forum handle 'Laszlo'

offered up the bounty to anyone who would get him a couple of pizzas and deliver them to him.

At the time another forum user pointed out they were expensive pizzas because the Bitcoin USD exchange rate meant 10,000 BTC was around US$41. A few days after his offer, Laszlo was happy to report he was successful in his trade of 10,000BTC for his pizza.

But through most of 2010 it was just an interesting idea. More or less worthless, and seemingly the instrument of those that knew far more about computer programming and coding than I did.

So for the rest of 2010 it just remained there, in the back of my mind floating around, occasionally popping up again in some research. Then things started to progress and it started to be available for trade, exchange, more readily available for use, and more people were starting to get involved in the mining of it.

It really was a way to print your own money. And with the US government going through their initial stages of 'quantitative easing' I was starting to ask the question, if they could print money why can't I? With Bitcoin, in those early days, we actually could print our own money.

So I invited Daryn to lunch to chat about Bitcoin and perhaps look at a way we could both get involved and start mining some, and maybe have it be worth something that we could exchange back to Aussie money.

I told Daryn that I wanted to chat about an opportunity that was risky, complicated and new, but ultimately it was a licence to print money. And we talked.

(The following is a paraphrase of the conversation we actually had. But this was our first instance of talking about how Bitcoin works and ways in which we could get involved…)

> *'Daryn, I want to chat to you about this currency thing, Bitcoin. I think there could be an opportunity here. From what I understand you can print your own money. Seriously. Using a computer you can 'mine' these coins that are actually worth real money. Currently you can exchange them for USD. Now*

> *here's the thing, each one is worth about US$1 right now and every time you 'mine' a block of coins, you get 50 coins. That's US$50 for doing nothing except running a computer program. Around a year ago you could mine them and they were worth about 7 cents per Bitcoin — so around $3.50 for each block'*

Daryn asked again about the mining side of things. He wasn't quite sure about how you could just mine these blocks from thin air using a computer, and just create money from what was effectively nothing.

I repeated the process and again explained by mining a block using a computer you would get 50 coins as a reward. And at current prices it would be worth $150.

There was a strange silence between us. As we both took the time to absorb the opportunity. We could clearly see that this was a real thing. But we also both has extensive education in finance and economics. We were both employed in the financial advice industry and were both extremely familiar with traditional and non-traditional markets and financial instruments.

Importantly, we'd both just witnessed firsthand what happens when complex financial instruments go wrong — people lose money. A lot of money.

Now here in front of us (well at the forefront of our discussion) was something completely new, very foreign to Daryn, very interesting to us both and seemingly too good to be true. We both knew there was no such thing as a 'money tree'. Everyone knows this to be true. And in terms of printing your own money, well unless you were a central bank, that wasn't going to happen.

But this was exactly the potential of Bitcoin. Every ounce of our financial experience and knowledge said that this wasn't real, it couldn't be. But it was. To us Bitcoin was hen's teeth, the golden egg, a unicorn, the pot at the end of the rainbow. This new thing, Bitcoin, was in fact a 'money tree'.

We finished up lunch as we both had clients to get back to. We made note that we'd chat about it more. Sit on it for a bit, research a bit more and find out in far more detail how this would work

from an economic point of view.

About a week later we chatted more about it. We threw around how we would go about things. We to'd and fro'd about it. And we kept this ongoing discussion going for a couple more weeks. All the while keeping an eye on the price of Bitcoin.

Before we knew it Bitcoin was worth more than US$20. Then in early June the price punched through US$30. We had seen the price go nuts in the space of just a month it was up another 1,000%.

The longer we waited the more expensive one Bitcoin became. When we first started talking just a few months earlier just one block would have seen us earn US$150. By now that same block would be worth US$1,500. If we were faster, earlier, it's likely we would already have covered our initial costs.

We had another chat about things, very serious about what to do now. By this stage Daryn had done some more research, and I had gone to some length understanding how to set up a computer to mine Bitcoin. I tried to get my head around how to get a 'client' and to set it up on a computer using an array of graphics processing units (GPUs) to mine Bitcoin effectively enough so as to be competitive enough to actually get some blocks.

At this point we had figured out that to mine Bitcoin was going to require to key things:

1. A powerful computer

2. Energy

You see, by this point we clearly weren't the only people looking at and mining Bitcoin. Experienced campaigners were already mining it with computer rigs they had already set up with multiple GPUs.

The use of GPUs was critical. They were able to mine faster and harder than any normal computer CPU. That meant building a custom PC. And to be competitive with other miners we needed some serious hardware. That meant also buying the equipment

that was going to set us back around $1,500–2,000 at the time.

We figured that way we would have enough GPU power to be competitive enough to mine and be successful in achieving Bitcoin blocks. But then we analysed the situation further.

We would have to run the computer 24/7 to be really efficient. And a tricked up custom computer wasn't cheap to run. Someone, we, would have to wear the energy bills too. But with the price of Bitcoin it was looking like that wouldn't matter. At this rate, after a few weeks we should be able to get a block or two and meet our costs for the whole year.

That was it. We would source the parts needed and build a custom computer. I had a spare room in my apartment. We'd set it up in there and have the beast running 24/7. By the end of the year we'd probably have build up a few thousand in returns. Worst case scenario, we'd have blown $2,000 and own a pretty great gaming computer.

We went away to price up and get the parts needed to build our Bitcoin mining 'rig'. And then the price of Bitcoin started to fall. And then it fell a little further, and then further still. We put the plans on hold to see how this was going to pan out.

By mid October Bitcoin had plummeted from over US$30 to around US$2.20. It floated around this US$2 to US$3 range for the rest of the year. It was at this point we decided to flick the idea of building a custom rig to run 24/7.

Doing the sums on the current price, and the outlay, it didn't make sense. We both figured we'd be better off investing that money into stocks instead and generating a return from the good old traditional ASX.

However, we weren't completely dead on the idea just yet. We also toyed with the idea of just buying some Bitcoin outright.

Sure, we wouldn't become miners. That didn't make economical sense. But nothing would stop us from just going to a Bitcoin exchange and buying $1,500 worth and sitting them somewhere to see what happens.

Once more our education and experience got the better of us. I had seen Bitcoin go from 7 US cents to US$1 to US$30 and all the way back to US$2 in the space of a bit over a year. That kind of volatility suits *no one*. Let alone two finance professionals with common sense and a background in investing.

Again we thought about the opportunity cost of $1,500 worth of Bitcoin today versus $1,500 of stock investment instead. With Bitcoin worth a couple of bucks and the potential to continue to crash back down to nothing but cents, we took the 'smarter' approach and stuck with what we knew.

Add to the fact that, while in theory at this time buying Bitcoin and storing it outright seemed easy, it wasn't. This was early doors for the breakthrough technology. There exchanges were dodgy at best, the people you were buying from you never knew, there were no faces, no risk free transactions. We could very well exchange $1,500 and get nothing. The risk was simply far too high at the time, based on the potential return that we believed was possible.

We were quite comfortable with our decision through almost all of 2012. Bitcoin fell off the radar from the mainstream. The price 'stabilised' and was worth around US$5, $6 for most of the year. Sure it still doubled from US$3, but so did plenty of ASX listed companies too.

Bitcoin, while a great idea, a great technology and possibly something that would stick around for a long time, was just a thing. It didn't really have financial merit for investment. It didn't really make sense on the numbers to mine it. And the number of people mining had exponentially increased by then, anyway. There were now mining 'pools' where users pooled resources to mine Bitcoins. Some people were putting YouTube videos online showing entire *rooms of GPUs* strung together into one super-mining-rig.

There was no way we would be able to compete with that. And the more miners there were, the more power they had, the less chance we had of even mining a single block.

By late 2012 the number of Bitcoins you would get as reward for

mining a block halved, as explained earlier in this book, in the chapter 'Events that changed Bitcoin forever'.

This all pointed to a situation that simply didn't make sense in the 'traditional financial rules and principles sense' for Daryn or I to really start mining or buy up Bitcoins.

We had the opportunity. We were there at the right time. But we didn't see it for what it truly was. We focused too much on the now and not enough on the future. We got caught up in its wild price swings and didn't understand the real potential.

Had we started mining in 2011 or even just spent $2,000 on some Bitcoins at US$2.20 today, we'd be sitting on a Bitcoin fortune of around US$1.01 million.

I need a moment…

Every time I tell this story it's hard. And I always need a moment. And I'll likely kick myself until the day I die about the opportunity to change our lives that went begging. I will never have such short nose vision on a life changing opportunity ever again.

The truth is I might never see an opportunity like that again.

So be it.

But in 2011 we didn't anticipate was the world almost coming to another global financial crisis. And we certainly didn't think that just two years later, one block of 50 Bitcoin that we could have mined would be worth US$57,362.50. We didn't foresee that action could have resulted in us sitting on millions worth of digital gold.

Simply, we were wrong. I was wrong. And in 2013 when Bitcoin breached through US$1,100 I vowed to never underestimate an opportunity of that magnitude ever again.

And therein lies the purpose to this story. Learn from the mistakes of others. I don't tell you about my great 'could have' moment for fun. It pains me every day I recount it.

I tell you this story to show you that great opportunity exists with the right knowledge and the right information. But perhaps more important is the right action to take when you have the conviction to back yourself and take a little risk for potentially life-changing reward.

Don't do what we did and convince yourself out of an opportunity because 'traditional' thinking says so. Be outside the box; think outside the box and act outside the box.

Those that do, those that did, went on to make millions from Bitcoin. Many have become Bitcoin entrepreneurs. Some, like me, missed it. Didn't properly see it.

It helped define my view on opportunity, and my ability to back my conviction when I see opportunity. And that's why I wrote this book. To educate you to the opportunity that *exists* with Bitcoin and cryptocurrency.

And in every part of my research into Bitcoin, every part of the time spent investigating, experimenting and uncovering the traps and trimmings of the cryptocurrency world, it all points to a hugely exciting future. Every part of me says that this *is the future*. And that if you take anything from my final story it's to not make the same mistakes.

If you believe in this revolution as much as I do, then by all means do what you can to get involved.

And instead of having regrets, you'll be thanking me one day for pointing you in the right direction. The direction to change your life, by getting involved, investing, using, buying, selling, and immersing yourself in the world of Bitcoin, cryptocurrency and the cryptoeconomy.