



2018 CRYPTO ROADMAP

**Your chance to make a life changing
fortune from the crypto boom**



• SAM VOLKERING, HARRY HAMBURG & EOIN TREACY •

Five cryptos to buy and “HODL” through 2018 – and one to avoid

By Sam Volkering, Harry Hamburg and Eoin Treacy

If you had bought some of the top crypto in 2017 and held them through to the end of the year you could have minted yourself a small fortune.

Without doubt the best strategy in 2017 was to buy and (as they say in the crypto world) “HODL” on to your tokens.

Well we all wish with hindsight that we could go back to the start of 2017 again and buy and HODL a whole range of cryptos. But we can... or can we?

While 2017 was a giant year for crypto, we think that 2018 has the potential to dish up the exact same kind of opportunity.

The major difference this year is that you’ve got a whole heap more cryptos to choose from. There are now thousands of cryptos you could put your money into. Which beggars the question, how the heck do you choose which ones to buy and HODL for 2018?

Well we’ve made that easy for you. In this report we’ve identified five cryptos we think you should buy and HODL for the entirety of 2018. These five have been handpicked by three of the sharpest minds in the world of crypto investing and traditional stockmarket investing.

Sam Volkering, Eoin Treacy and Harry Hamburg got together to discuss and filter out five of the best cryptos they think people should buy for 2018. The list was long to start with. But after great debate and analysis they decided on their choice five.

As the crypto markets have taught us all, there is **no ceiling** to the growth potential in this market. And the same can be said for the five cryptos in this report. Sam – a world-renowned tech investor who has invested in this booming market since 2011 – believes each has the potential to make you at least 1,000% on your money over the coming months and years. But as you will see in the following pages, that could be just the beginning. Should they reach their maximum potential, the sky is the limit.

Interestingly, all three when asked to name the one to avoid were instantly in unanimous agreement. The list of ones to avoid was short, there was only one.

It’s worth noting there are lots of cryptos that aren’t worth investing in at all... ever. There are cryptos that have no real purpose, no development, no roadmap and no substance. There are many cryptos that are nothing short of a scam and that you can get into a lot of trouble blindly investing in .

You should be aware that investing in crypto is incredibly high risk. This isn’t the same as investing in stocks or “traditional” markets. There is no recourse if your crypto are

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stolen, or if you accidentally contribute to a scam. There is no real consumer protection or regulation in this market.

It's still very risky and can be a minefield if you aren't experienced enough to navigate it with relative safety. For that reason you should only ever invest money into crypto you are prepared to lose. That's how high risk this is – you could lose every penny you put into it.

And you should also know that while 2017 was a huge year, past performance is by no way any guarantee of future performance. If the crypto markets crash and values plummet, again you may lose 100% of your investment.

But if you understand and accept those high risks, then we think the crypto market is easily the most exciting, potential-fuelled market we've ever seen before. As Sam puts it,

“It's the single biggest wealth creation event in the history of everything.”

The cryptos of 2018 #1 – powering the future through the blockchain

Hurricane Irma ravaged the Caribbean in 2017. This was a hurricane with power not seen since Hurricane Katrina in 2005.

Irma ended in the loss of around 134 lives and a damage bill of more than US\$64 billion.

While the devastation was immediately obvious, one of the biggest problems was getting power back online.

As explained by Dr Jemma Green, contributing to Forbes, On Tortola, the main island in the British Virgin Islands, there was a central generation station and it sent electricity to the outlying islands via a submerged cable. When this went down it took the other islands with it.

Contrast this with a microgrid on Sir Richard's own Necker Island. Despite Necker being almost completely destroyed, his solar panels emerged unscathed from the destruction, and showed how resilient the renewables system was.

Sir Richard Branson is a huge advocate for the idea of using micro grids and renewables. But one of the difficulties with the use of micro grids is how do you connect them all? How do you get the power from the micro grid to those who need it?

While you may have energy creators that form part of the grid, not everyone will or can generate the same levels of energy. And some people consume far more than others.

There needs to be some way of trading energy between participants in a micro grid energy community. Some kind of automated system, where people can buy energy when they have exceeded demand, and sell it when they have excess supply.

That's where the wonders of blockchain technology, and distributed, decentralised platforms come into play. And it's why this is one of *the* cryptos to hold for 2018.

Power Ledger and its native token POWR is an Australian-based cryptocurrency project that's operating in the world of decentralised energy trading. That means it's developing a platform using blockchain technology to enable people and companies to trade excess energy to each other.

The easiest way to understand how this works is with an example.

Let's say you've got a house with a range of solar panels on it. You also have storage batteries where you store your excess energy so that when it's cloudy, or night-time, you are able to access your generated energy.

But let's also say you're creating more energy than you need. More energy than you can store. What Power Ledger plans to build is a way for you to trade that energy through its platform to someone else that requires it.

And vice versa. It's a decentralised network that enables peer-to-peer energy trading using renewable energy.

Now the beauty of Power Ledger is that it's developed a cryptocurrency. And it operates the organisation like a well-run public company. Clearly there's a difference though. Power Ledger isn't listed. It's a crypto project, and as such it has a crypto token.

But this isn't any old token. It's a token with genuine utility. It's crucial to the operation of the platform – and it serves a dual purpose. That means it could be invested in for future value potential, but also as a pure utility token. Buying Power Ledger's POWR token today could be locking in your own personal energy future.

What encourages us about Power Ledger's future is that it's already establishing major projects with development partners to run real-world testing and prototypes of its platform.

In late 2017, it was part of a group of companies working with the city of Fremantle in Western Australia to trial how blockchain could be used in city infrastructure. According to the Power Ledger press release,

... the Australian government announced they will provide \$2.57 million in funding for a cutting edge project in the City of Fremantle and \$5.68 million will be funded through project partners including Curtin University, Murdoch University, Curtin Institute of Computation, LandCorp, CSIRO/Data61, CISCO and Power Ledger.

... The trial will involve highly resilient, low-carbon and low-cost systems installed and connected using blockchain technology. A large solar photovoltaic (PV) plant, rooftop solar PV panels, a precinct sized battery, an electric vehicle charge station and precinct water treatment and capture systems will be orchestrated using blockchain technology and data analytics, and demonstrate the interconnected infrastructure of future smart cities.

... Power Ledger will provide the transactional layer for the renewable assets as well as the ownership model for the community owned battery.

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While this is a recent development, even before this, it had been developing a technical trial with multi-billion dollar Aussie energy giant Origin Energy [ASX:ORG] as far back as September 2017.

And it's been working on developing the platform in Queensland, with existing micro grid infrastructure there. Now it's been busy travelling the globe looking for research and development partners. And it's been getting them.

In early November 2017, it announced a partnership with the Liechtenstein Institute for Strategic Development (LISD).

Its announcement for this explains,

LISD will become the first European Application Host to offer Power Ledger's blockchain-based peer-to-peer energy trading platform to support the development of low-cost, low-carbon distributed energy markets in micro grid developments in Europe.

And in late September 2017 it announced a partnership with Indian tech conglomerate Tech Mahindra.

Tech Mahindra, a leading provider of digital transformation, consulting and business reengineering services, and Power Ledger, a blockchain-based peer-to-peer electricity trading platform provider have announced a series of technology trials that aim at bringing the benefits of energy micro grid developments to India's booming urban population, through Microgrid-as-a-Service.

This is a crypto project run by very smart people. The team behind it, including co-founders Dr Jemma Green and Dave Martin, are very savvy operators.

They are making all the right connections, meeting all the right people to get Power Ledger known and working with real energy micro grids around the world.

This is a crypto project being run like a multibillion-dollar public company. Except with greater excitement and opportunity.

And this is one of the most proactive crypto projects we've ever seen. Its ability to develop its project and also push it towards a fully functioning commercial rollout is nothing short of exceptional.

We think 2018 will see more development and bigger deals with other companies. Even as recently as January 2018 Power Ledger was named as one of three finalists of the Extreme Tech Challenge. Edging out thousands of other projects, Power Ledger will get to present to a panel of global CEOs on Richard Branson's Necker Island – potentially opening up crucial networking, mentoring and infrastructure support from global tech companies such as IBM and Amazon.

Power Ledger could be the best performing crypto of 2018. However, POWR does carry risk.

Power Ledger is early stage. There's a long way to go to move past tests, trials and initial partnership agreements for its technologies.

Remember, tests can fail. Projects may prove to be not as commercially viable as they might initially seem. The growth of the network might not be as widespread as we anticipate.

The demand for the POWR token may not be as high as expected. If it can't continue to test, trial and create partnerships with energy providers and users, then we may see a fall in the value of POWR.

The crucial part for the long-term success of Power Ledger is its network effect. It must connect its platform to micro grids and energy systems where it can access and tap into a huge number of users.

If it can't, the value of the POWR token diminishes.

Action to take: buy Power Ledger and its POWR tokens at market prices and hold through 2018.

The cryptos of 2018 #2 - the godfather of data is all in

In 2013 we attended a tech conference in London called Campus Party. The keynote speaker was Professor Alex "Sandy" Pentland.

Pentland is one of the most cited computational scientists in the world. In 2012, Forbes declared him one of "the world's 7 most powerful data scientists".

Pentland helped to create the MIT Media Lab, where he leads the Human Dynamics research group. In 2014, The Verge labelled Pentland "the godfather of wearables". He helped develop Google Glass, while also pioneering wearable fitness trackers.

He is one of the most knowledgeable and significant people in the technology space who you've probably never heard of.

When we heard Pentland talk in 2013, we were in awe. His insight into data and its importance in the world was nothing short of incredible.

At the MIT Media Lab, Pentland is adviser to a number of students. But there's one in particular, Guy Zyskind, with whom Pentland has worked very closely.

On 30 June 2015, Wired published an article titled, "MIT's Bitcoin-Inspired 'Enigma' Lets Computers Mine Encrypted Data".

The article explained that:

... a pair of bitcoin entrepreneurs and the MIT Media Lab revealed a prototype for a system called Enigma, designed to achieve a decades-old goal in data security known as "homomorphic" encryption: A way to encrypt data such that it can be shared with a third party and used in computations without it ever being decrypted.

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One of the entrepreneurs the article was referring to was Zyskind. Along with Oz Nathan from Tel Aviv University, the two (under the tutelage of Pentland) had cracked the “holy grail” of data sharing.

They were able to allow computers to analyse data without ever having to actually reveal the details of the data.

Zyskind explains:

“You can see it as a black box... You send whatever data you want, and it runs in the black box and only returns the result. The actual data is never revealed, neither to the outside nor to the computers running the computations inside.”

Fast-forward two years later, and today, thanks to the research and development at MIT, Zyskind is now putting their breakthrough into practice.

Except now, with advanced blockchain and decentralised, distributed ledger technology, the idea of a private, safe, encrypted data marketplace is now a reality.

The Enigma Project and its ENG token is another crypto to hold through 2018.

What is Enigma, and why is this a crypto you should be buying in 2018?

Zyskind is one of the co-founders of the Enigma Project. He’s using his work at MIT and a select team of developers and advisers (including Pentland) to try and create the world’s first decentralised, private and secure data marketplace.

They have a goal of creating a decentralised marketplace for data that’s safe and private. In the long term, all kinds of data will be available through the Enigma platform, for both data creators and consumers.

Enigma is designed to decentralise data, which enables it to encrypt the data in such a way that it can be used and analysed without privacy risks.

That means analysing encrypted data and providing tangible results for the data user, without ever having to give out the details of the data itself.

This is the fundamental core of the Enigma Project. Personal data, with the power and control in the hands of the creator – people like you and me.

It also means that creators of data can receive a monetary reward in the form of the ENG token for their data. Companies or institutions wanting to use and analyse that data pay for it with the ENG token.

As the Enigma Project team explains:

At Enigma, we are passionate about the role of crypto-currencies in defining personal financial freedom. We want to play our part in driving their mainstream adoption.

The technological background to the way Enigma works is complex. It involves both on- and off-chain execution of code to ensure that the data is encrypted and correct. This is an inherent feature of the blockchain tech.

If you're so inclined (and I do recommend it), read the white paper explaining the [Enigma technology here](#).

The long-term goal of Enigma is to open this decentralised data marketplace to all and any kinds of data. Data that could be used by pharmaceutical companies, economists, advertisers, marketing companies, research organisations, governments... anyone.

But, to get to that stage, it needs to develop applications on its Enigma platform. And the very first application that will launch on Enigma could prove to be the most important. It calls it "Catalyst"; it's a decentralised application (dApp) for quantitative analysis traders (quants) to deploy their trading algorithms and create their own crypto funds.

Catalyst's platform allows anyone to create their own crypto hedge fund.

We think the Catalyst platform is incredibly exciting, and a huge reason for participating in the token sale. In fact, it could be a standalone cryptocurrency play.

Except this isn't.

Remember, Catalyst is just the *first* dApp that will run on Enigma. In the long term, we see all kinds of data-hungry applications using Enigma and providing genuine utility to the ENG token as a real way for people to utilise their own data creation and monetise it.

We think this is an outstanding opportunity to get in on another incredibly exciting crypto play. We think the assembled team and depth of research and development in this project is second to none.

The potential to create a widespread, distributed, decentralised, private and encrypted marketplace for data is ground-breaking.

Of course, ENG comes with risks.

We have provided analysis that indicates a favourable outcome, but the market might not agree. Like all cryptocurrencies, there must be a growing, thriving network for this to proliferate and grow.

Absence of an expanding network could see the equivalent value of the ENG token plummet. Like all cryptos, this is an all-or-nothing play. It could take off, and you could easily see the value of your ENG rapidly double, triple or more. Or it could plummet to a fraction of its initial purchase value.

You must go into this almost expecting a poor outcome. You must be prepared to risk your investment in its entirety. If you're not comfortable with that level of risk, this is not for you.

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Action to take: buy Enigma and the ENG tokens at market prices and hold through 2018.

Crypto to own #3 - one crypto to rule them all

Remember using the internet in the mid-90s?

If you wanted to go to a specific website it was okay. Slow, but okay.

However, if you just wanted to browse, to find answers to specific questions or to explore a subject area, you were out of luck.

The internet was just a big, disorganised tangle of websites with no clear way to find what you were looking for.

I remember my IT teacher at school stating that the best way to find something was to follow a trail of links from website to website.

Remember that, when every website had a links section? It was awful.

Then along came the search engines. They made sense of the mass of information. They let you type what you wanted to find and they'd throw up a list of websites based on what you typed.

At first these search engines were practically useless. You used to have to check ten different ones just to make sure you weren't missing anything.

They even invented a search engine – Dogpile – which would do this for you. I thought Dogpile was great. It saved me so much time.

But then along came Google and blew everything out of the water. It actually worked, and worked well. Within a few years other search engines were consigned to the scrap heap.

Do you know what a £500 investment Google in the late 90s could have made you today? Rich. I don't even need to go into the numbers because you already know that. Everyone does.

Google took a new technology that was starting to get huge adoption and made it better for everyone. What's Google's secret to success? It made the internet good.

What Google did for the internet, Ark will do for blockchain

The world of crypto right now is very similar to how the internet was in the late 90s.

It has huge potential, but it is complicated. Not many people really understand the technology behind it, but they can see why it will go on to change the world.

There are many different cryptos out there specialising in many different things. A lot of them are trying to compete with each other and it's hard to know which ones will win out.

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This is where Ark's vision comes in. From the surface it may seem like any other next-generation crypto:

- It has super-fast eight-second block times
- It is infinitely scalable
- It can handle smart contracts
- Its wallet is incredibly easy to use, and compatible with Ledger hardware wallets
- The development team is very highly regarded and its code is open source
- The management team, again is top notch
- It's aiming to integrate with the Internet of Things
- It lets companies create their own blockchain and tokens in just a few clicks
- And it has a good market cap.

Just based on that it has huge appeal. But that's before we get into its two main features. These are what really set Ark apart.

Killer feature one: SmartBridge

Right. So remember that Google analogy? Well, SmartBridge is what makes Ark the Google of crypto.

This is how Ark describes it:

SmartBridge is the ability to connect and communicate between blockchains. By connecting blockchains, we can solve the great question of the last few years in the altcoin community. Which coin will replace bitcoin? The answer... none of them, and all of them. Let me explain.

With ARK's SmartBridge Technology every coin becomes even more powerful, every app produced on any blockchain has the potential to reach a greater audience and even bitcoin can gain the functionality of every altcoin through a simple blockchain token called ARK.

What that means is that, if SmartBridge works as intended, you'll be able to use the features of any compatible crypto by just using Ark.

Here's are a couple of examples Ark provides:

1: If you wanted to trigger an ETH smart contract but hold ark, you could just send the instructions through ark SmartBridge, right in the wallet to trigger the event. The code embedded in the ETH chain is always listening for an ark SmartBridge transaction and will collect this info and trigger the function to issue a contract.

2: You want to issue a record entry in Factom, but you only hold ARK. So you would go to your ARK wallet, enter the correct info and instructions for the FCT chain via the SmartBridge tab. Then send it. That's it, now the FCT chain receives the info and acts appropriately .

Ark would essentially become the gateway to every other crypto, just like Google is the

gateway to the world's websites.

Obviously this is a huge undertaking and hugely ambitious aim. It may not achieve it, but the team is certainly working hard, and hitting its targets.

It successfully completed its SmartBridge with bitcoin in December 2017 .

Killer feature two: crypto dividends, yielding 10%

As I type this, Ethereum is hard at work trying to change how its blockchain functions.

It's trying to make the switch from proof of work (POW) to proof of stake (POS).

Basically, in a POW blockchain, the network is secured and run by miners. They get rewarded for maintaining the network with payouts.

As the network matures, this mining work gets harder and harder, until eventually only people with hundreds of thousands of pounds of computer equipment can mine successfully.

The idea of mining was meant to keep the network decentralised. But in the case of Ether, and even more in the case of bitcoin, it's ended up fairly centralised.

Remember the stories about all those Chinese bitcoin mining farms using up the world's energy?

That's because bitcoin is based on POW.

In a POS system, the network is secured by validators. (People who hold a stake in the network – ie, have a certain amount of the crypto.) And it only uses a fraction of the energy a POW system does.

In a POS system validators get rewarded for securing the blockchain. Essentially they get paid just for holding.

You can think of it like a crypto dividend.

There are different ways of implementing POS. And in the case of Ethereum, you'd need to lock up your Ether and "stake" it for a certain amount of time. Most likely a few months.

You'll also have to have a minimum amount in order to stake. It was first proposed that you'd need a minimum of 1,000 Ether. But since then prices have skyrocketed and lower numbers have been mooted.

Ark uses a delegated proof of stake (DPoS) method.

Here's Ark's explanation of how it works:

Think of DPoS as a representative democracy wherein individual users utilize their stakes in order to nominate delegates to serve on their behalf. These delegates are then responsible for validating transactions and securing the ARK network.

Ark has a choice of 51 delegates you can vote for. You vote for your delegate by sending 1 Ark to them in the wallet (there's a box in the wallet for voting. It's super easy).

Then when they get rewarded they share a proportional amount of their rewarded Ark with the wallets that voted for them .

The more Ark you hold, the more Ark you receive. But you can still vote and receive these Ark dividends with a very small amount of Ark. And you're not locking anything away. You're free to move your Ark about as you wish.

So what kind of yield can you expect to receive?

Around 6-10 % annually.

That's right, choose a good delegate, and you can expect to get as much as a 10% yield on your Ark .

We think when you combine all those upsides to this crypto, it too could become one of the best performing cryptos to buy and hold in 2018.

But bear in mind that ARK is nowhere near a risk-free investment. Should SmartBridge not work out as planned, the value of this crypto will suffer. Should another cryptocurrency create a more efficient version of DPoS, the currency may become obsolete. And if you attempt to earn that "dividend" for voting in DPoS, a not-so-great delegate could mean you see lower yields than I've laid out here.

Action to take: buy Ark and its token ARK at market prices and hold through 2018.

Crypto to own #4 - big in Japan, big everywhere

Nissin Instant Noodles, not exactly a household brand name in the UK. But in Japan during the 80s and 90s they were hugely popular. Of course part of this is thanks to the huge celebrity endorsement they got from Arnold Schwarzenegger.

Maki jewellery, Georgia Coffee drinks, Eneos Gas stations, Subaru, and Post drinking water in a can... again not exactly Western world household names (apart from Subaru). But if it wasn't thanks to the celebrity endorsement from Bruce Willis these wouldn't be as popular in Japan either.

In the 80s and 90s, Japan was a feeding frenzy for Hollywood celebrities to pick up some extra cash. Famous people such as Arnie, Bruce, Sly Stallone, Madonna, Sharon Stone, Harrison Ford and Richard Gere all hit it "big" in Japan in the 80s and 90s.

Being "big" in Japan was a status symbol in the 90s. If you could tap this market then you had near-unfettered access to the Asian population and their money to burn.

Interestingly this period in Japan also saw the build-up of an incredible asset price bubble in its economy. This growth was fuelled by an extraordinary series of interest rate cuts by the Bank of Japan (BoJ).

Then as the bubble popped (as they all eventually do) prices plummeted, economic growth faltered, systemic problems entered the banking system and Japanese growth was virtually non-existent.

But Japan pushed on. And the country struggled along during the 90s and into the 00s until the global debt crisis of 2008-09. The country also went through periods of recession in the 80s and 90s as a result of a strong yen.

Between 1985 and 1988 the yen had appreciated around 73% against the US dollar. This was also helped by the US easing of monetary policy after its issues during the 1987 market crash.

However, in all reality since the late 80s and early 90s the Japanese economy has been in status of “nothingness”. That means there has been no significant growth, no major development in monetary policy and an economy that has simply done nothing for well over a decade now.

But should you discount Japan completely? While it has a struggling economy, there’s still an appetite for innovation and a thirst for financial opportunity.

One of the world’s largest and most progressive tech companies is SoftBank Group [TYO:9984]. It is involved in everything from robotics and telecommunications to finance, media and even distributed ledger technology... the blockchain.

In 2017 it partnered with Sprint Corp [NYSE:S] and TCBASoft to bring blockchain to the telecommunications industry. The announcement highlights the companies will,

... promote research and development with the aim of building a cross-carrier blockchain platform for various services, such as secured clearing and settlement, personal authentication, IoT applications, and other services provided by telecommunication carriers.

In June 2017, the three companies commenced a technical trial that connects TCBASoft’s blockchain platform to telecommunication carriers’ systems. The three companies will collaborate closely on issues related to technology, business and the regulations of various jurisdictions.

We don’t think Japan and its economy is dead and buried just yet. If anything, it’s pulled itself up off the canvas and is about to fight back hard. But not in the traditional, typical sense that you would see governments and central banks try and do.

This time it’s the power of the network, of distributed, decentralised technology – blockchain technology that might solve it all.

It might just be that your latest crypto recommendation, which has deep-seated roots

in Japan, might just be the best thing that ever happened to a country that hasn't seen prosperity for almost 30 years.

Your next crypto to buy and hold in 2018 is the “New Economy Movement” commonly known as NEM and its token XEM.

NEM was founded in 2014 under the development of a team of Japanese developers. The crypto is deeply rooted in Japan and is now seeing incredible growth. The reason is that the Japanese crypto market continues to see money flow out of the “traditional” banking and finance system, into crypto as an alternative store of wealth away from the weakness of the Japanese economy.

And if the developers of NEM can release an ambitious and exciting project they call Catapult to market the value of the coin, it could again explode in price – rivalling that of Ripple and even Ethereum.

Lon Wong, CEO of Dragonfly Fintech and core member of the NEM project, says,

“Catapult is redefining the blockchain architecture landscape. It not only improves on the utility of the blockchain technology, but it also brings enterprise class design into the otherwise rigid and cumbersome blockchain solutions that we are used to.”

NEM is an all-new blockchain-based cryptocurrency. Many cryptocurrencies “borrow” code from the likes of bitcoin or Ethereum. They call this process “forking”. That's when there are changes to a core code, which is not accepted by the core network – hence it forks off on to its own separate blockchain leading its own separate (but inherently copied) life.

NEM is different. NEM's code is 100% new.

The expansion of NEM as a public cryptocurrency is based around its proof-of-importance algorithm and the namespace ability. As it's a unique, proprietary code, has multisignature transactions, and the ability to send encrypted, secure messages, we think there's huge upside potential. Add to this the namespace capability, mosaics, and fast, consistent transaction speed – NEM has a bright future and has already become a hugely popular cryptocurrency.

In our view should the developers succeed in Catapult, NEM could become the best designed, and most effective, fastest blockchain there is. It could rival the likes of Ethereum for blockchain platform dominance.

That would be some feat, and we think we will see the price sharply appreciate even further. However, as with all cryptos, NEM carries risks too.

We see the development so far and the development to come as the attractive investment proposition here. And the commercialisation avenue also gives it validation.

But if these developments don't succeed, if Catapult doesn't get a proper release, or it's faulty, or buggy, or simply doesn't work, we would expect the price of NEM (XEM) to crash.

Action to take: buy NEM and its XEM token at market prices and hold through 2018.

Crypto to own #5 - the world's virtual machine

Ethereum is a dual-use altcoin. It is both a cryptocurrency and a virtual machine.

You're familiar with what a cryptocurrency is so let's spend some time to think about how significant a virtual machine is.

Here is a handy definition from VMware:

A virtual machine is a software computer that, like a physical computer, runs an operating system and applications. The virtual machine is comprised of a set of specification and configuration files and is backed by the physical resources of a host. Every virtual machine has virtual devices that provide the same functionality as physical hardware and have additional benefits in terms of portability, manageability, and security.

A virtual machine consists of several types of files that you store on a supported storage device. The key files that make up a virtual machine are the configuration file, virtual disk file, NVRAM setting file, and the log file. You configure virtual machine settings through the vSphere Web Client or the vSphere Client. You do not need to touch the key files.

A virtual machine can have more files if one or more snapshots exist or if you add Raw Device Mappings (RDMs).

The virtual machine you might be most familiar with is the programming language Java. It can be used to program applications on Macs, Windows, Linux and Unix because it is based on a Java virtual machine, which supports its permeability across platforms.

Ethereum works in a similar way by having both a virtual machine, which allows code to be written in Solidity (similar to Java), Serpent (similar to Python), LLL (similar to Lisp) and Mutant (similar to Google's Go). That means programmers can write in any of these codes and send the end product to the Ethereum network for processing. That is the basis for why Ethereum is so enmeshed with the idea of smart contracts.

There are two aspects to smart contracts. The first is they form the basis for the evolution of the initial coin offering (ICO) market. With so many new tokens being sold over the last year it is impossible for people to come up with their own unique code. Instead they piggyback on incumbent smart contract platforms like Ethereum, Wave or NeoSmart.

What that means is Ethereum is both a beneficiary of interest in the cryptocurrency sector and also an enabler for other issuers to get their tokens to market. It stands to reason that smart contracts would first be used within the sector that birthed them, but there are much larger ambitions.

However, before we get carried away let's consider that smart contracts are still an evolving sector and they have competition from incumbents. For example, the London

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Stock Exchange's clearing house acts as an intermediary between the opposing parties in every trade by acting as the buyer to the seller and seller to the buyer. Another example is escrow companies, which also fulfil this function for the transfer of property where the company becomes the custodian both of the money and property until such time as both parties have lived up to their side of the contract.

Both of these examples represent well established intermediaries that fulfill their functions in a swift, relatively cost-efficient manner. Ethereum is going to need several upgrades, not least in terms of speed, to compete. The good news is that Ethereum is working on a system called Casper, which has the potential to massively increase its throughput speeds.

For example, NEO uses a PoS model and it has transaction rates of upwards of 1,000 transactions per second versus the Ethereum's speed of 15 transactions per second. The happy news is that because Ethereum is clearly aiming for ownership of the smart contract world, it is developing its own PoS protocol with Casper.

Once the decision to move from PoW mining to a PoS-based system takes place, it will probably require a fork but it will usher in the true viability of Ethereum as a large, secure, smart contract intermediary.

The second aspect to smart contracts is to introduce more efficiency and transparency into traditional forms of deal making and contract enforcement. They are particularly useful when we begin to talk about international transfers such as in the shipping industry.

Mrs Treacy imports containers of goods from China and it's not until you need to deal with shipping companies, bills of lading and customs brokers that you realise just how difficult it is to get goods from point A to B. It's a segment of the global economy that is inefficient, layered with often arbitrary charges and opaque to the uninitiated. The introduction of Ethereum's blockchain as an intermediary system will represent a game-changer for the sector because it has been so protected from competition for so long. International logistics is the simple answer to the use case question.

You want to have an interest in Ethereum because it is benefiting both from the growth of the blockchain industry and is a major constituent of it. Importantly, you know exactly what you are getting for your investment. Additionally, Ethereum is a significant part of the industry, it has confidence behind it and there is no evidence of mission creep. The progenitors of Ethereum started out targeting the smart contract market and that remains their end goal.

There is an additional point, which is worth considering simply from an environmental perspective. The move from a PoW to a PoS protocol removes the need to mine, which will reduce the quantity of electricity required to control the network. Additionally, it will directly link the value of the coin to the transaction value of the network, which will introduce a hard fundamental to the sector and therefore lend more security, which for a long-term investor is a highly desirable characteristic.

But the project, while already establishing itself as a major blockchain provider and

developer of cryptocurrency, is vulnerable to failure.

Ethereum may suffer a cyber-attack or go through a hard fork, splitting the currency into two streams, causing disruptions in transactions, or even devaluing the currency (temporarily or longer term). This has actually happened once prior in its early development. Which is why there are two forks of Ethereum. These are simply, Ethereum and Ethereum Classic.

It's important to understand we are recommending Ethereum – NOT Ethereum Classic. This kind of hard fork could happen again. Although the developer team of Ethereum is far more advanced with the project now than it was prior. But a hard fork can happen again and it's a risk you need to accept.

Action to take: buy Ethereum and its ETH tokens at market prices and hold through 2018.

The number one crypto to avoid in 2018

“Happiness in the currency markets is finding the strongest and pairing it with the weakest.”

- David Fuller

The reason that maxim works in the currency market is because every currency trade is a ratio. You are necessarily selling one when you buy another. Just how you choose which is the best to fit your needs will depend on a number of factors such as interest rate differentials between the two countries, faith in the governance of the differing regimes and the extent to which the currency is globally fungible or how liquid it is.

The other important factor about currency trading is that there are no hard and fast fundamentals one can lock on to. Some investors will focus on economic factors, others on supply, others on interest rates, but none trumps the other for influence. It's still a big question whether cryptocurrencies are in fact currencies in the normal sense of the word, but that's largely irrelevant to the growth of the blockchain as a vital piece of transactional infrastructure.

That's where we need to focus. Which of all the cryptocurrencies has the best potential to become the world beating long-term success story that cements its place in the financial lexicon of history?

When we got together to choose which are the five best and single worst of the cryptocurrencies, it would have been easy to focus exclusively on the “smallies” you've never heard of. Some will soar and Sam's spent the last year identifying those, but a lot are going to go bust too.

What we want to do is focus on the big token that we think is a bad investment today.

Ripple and the XRP token

It's the coin with the weakest argument for why it is a secure store of value. However, by contrasting it with Ethereum we can really see how the maxim of comparing the strongest with the weakest pays off.

First, let's think about use cases. Finance has long attracted ambitious people because it is layered with fees that scale without having to do much additional work. The FSA's (now FCA) Retail Distribution Review was implemented in 2012 and banned commissions for investment advice in the UK .

The reason it was necessary is because for years IFAs had been selling investment products and insurance to clients and collected fat fees annually regardless of performance. All unscrupulous individuals had to do was sell the funds with the highest commissions, then sit back and collect rebates for years to come. This is just one example of the many inefficiencies in the market that the blockchain is capable of streamlining.

The original blockchain was developed in response to the appalling way in which banks were bailed out during the credit crisis; where private sector debts were absorbed by sovereign states, which passed on the responsibility for paying them to hard working individuals like you and I. Nevertheless, to become fully competitive cryptocurrencies need to deliver one thing to the financial industry. A streamlining of costs.

Ripple has been all over the headlines because it is being used by an increasingly large number of financial institutions to settle cross-border transactions. It helps that confidence in the established SWIFT network is low since hackers made off with \$81 million of Bangladesh's funds in back in 2016 .

As a result of that event and a number of others, the global financial system has been amenable to the idea of a transaction system that is verifiable ahead of the actual transfer of funds. That is what Ripple's XCurrent product delivers. So it handily fulfills the first use case, it is convenient, secure and cheaper.

The problem, however, is that *you don't get xCurrent when you buy Ripple tokens*. The vast majority of banks that use xCurrent do not transact using Ripple and therefore speculating in the token is fraught with danger.

As reported by CoinDesk:

While XRP investors might be charmed by the thought of holding a cryptocurrency that one day a large swath of the banking system may use, the vast majority of Ripple's banking clients are using the company's xCurrent product – a glorified messaging platform...

xCurrent is the platform American Express is using. In mid-November, Amex announced that it had partnered with Ripple to connect Amex customers in the U.S. using U.S. dollars to Santander bank accounts in the U.K. using British pounds.

During the launch, Ripple's global head of strategic accounts, Marcus Treacher, told CoinDesk that Amex and Santander were connected directly with no need for an intermediary cryptocurrency.

...continued on next page...

Yet, the price of XRP rallied on that news, hitting a high, for the time, around \$0.30 per coin.

In many respects Ripple is suffering from the Alibaba conundrum.

When Alibaba IPOed in the US back in 2014 it was the biggest listing in history . Investors were falling over themselves to get a piece of the action and the share rallied impressively. However, what many people still do not realise is that Alipay, the real crown jewel of Jack Ma's business empire, is not part of the IPOed company. Alibaba the listed share does not own Alipay, Jack Ma does.

What you get when you buy Alibaba is its ecommerce site which is a major asset, with Taobao being something akin to Amazon for many Chinese. You also get its wholesale site which has serious problems with policing fake goods.

What you do not get is the extremely valuable payments and banking business of Alipay. This is very similar to Ripple except that the use case for the token is nowhere close to as valuable as Alibaba's retail arm.

Buying Ripple because you want a piece of xCurrent is like buying the Swiss franc because you want get a piece of Nestle. The two are only very loosely related.

If you're thinking about buying Ripple's XRP token, our advice is to look for better options in the crypto marketplace.

Important risk warnings:

Before investing you should consider carefully the risks involved, including those described below. If you have any doubt as to suitability or taxation implications, seek independent financial advice.

General - Your capital is at risk when you invest in shares, never risk more than you can afford to lose. Past performance and forecasts are not reliable indicators of future results. There is no guarantee dividends will be paid. Bid/offer spreads, commissions, fees and other charges can reduce returns from investments.

Small cap shares - Shares recommended may be small company shares. These can be relatively illiquid meaning they are hard to trade and can have a large bid/offer spread. If you need to sell soon after you bought, you might get back less than you paid. This makes them riskier than other investments. Small companies may not pay a dividend.

Overseas shares - Some recommendations may be denominated in a currency other than sterling. The return from these may increase or decrease as a result of currency fluctuations. Any dividends will be taxed at source in the country of issue.

Taxation - Profits from share dealing are a form of capital gain and subject to taxation. Tax treatment depends on individual circumstances and may be subject to change in the future.

Cryptocurrencies - Cryptocurrency investing and investing in Initial Coin Offerings (ICOs) is a highly speculative investment. The cryptocurrency market can be extremely volatile. Digital currency coins are encrypted to keep them secure. The encryption identifies the currency itself, but not its owner. This means that if a coin is stolen, you have very little recourse in getting it back. The Financial Conduct Authority (FCA) does not regulate the Cryptocurrency market. This means that you will not have the protection of the Financial Ombudsman Service or the Financial Services Compensation Scheme.

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