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My #1 strategy for profiting from cryptocurrencies

Eoin Treacy, Investment Director



Let's talk crypto currencies. You've probably heard a lot about them, since bitcoin is up 296% and ethereum 2,300% in the

last 12 months. But today I want to introduce a crypto strategy that I consider the smartest way to profit from the boom. And it doesn't involve buying crypto currencies themselves at all...

Let me explain...

I'm a director of the Nevada Trust Company which takes care of \$600 million for its clients.

One client in particular is worthy of mention. He is one of the original bitcoin miners. He has a personal fortune in bitcoin of approximately \$147million and a personal staff devoted to managing his hoard.

When I spoke with him in May at our offices in Las Vegas he said he is committed to holding the position indefinitely, selling only enough to sustain his lifestyle, because he believes in the long-term value represented by bitcoin and blockchain. By being an early adopter he has transformed his life beyond even his wildest dreams; coming from a relatively humble background to quite profound riches and potential for even more.

But that's all in the past. From early this year he has been getting into another venture which I'd like to share with you.

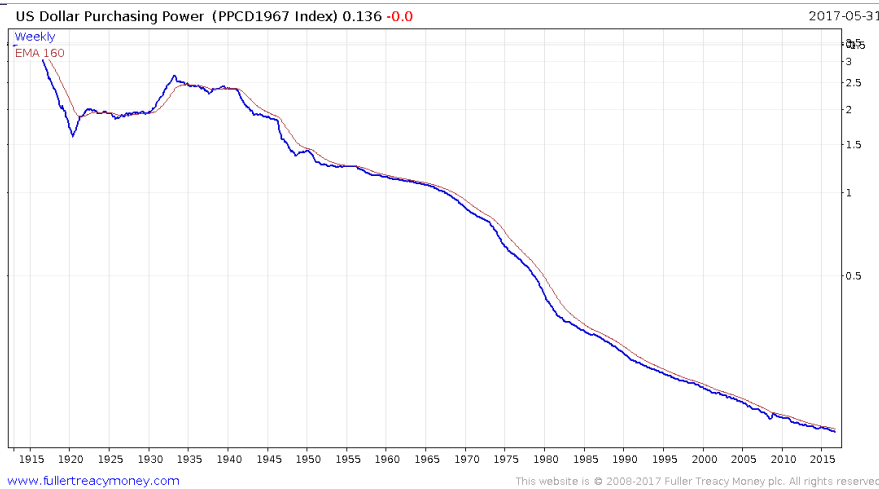
Cryptocurrencies have afforded my client the kind of freedom many people can only ever aspire to. He represents the kind of libertarian ideal that we can all look at with envy: a life free of debt and demands whether

explicit or implicit on his time, labour, attention and loyalty. The reason cryptocurrencies have been so fervently adopted by those seeking real freedom is because they are a true reflection of value being created in the online world that are beyond the reach of governments to pervert for their own uses.

In a world where bureaucrats appear more intent than ever on serving themselves than the public good, and come up with regulation for regulations sake, I find it refreshing that a rebellion is taking place against overbearing officialdom.

This is what the purchasing value of the Dollar looks like. It has lost 92.5% of its value since the end of World War II. If the UK allowed the same data to be published it would look exactly the same, maybe even worse.





The oldest rule in politics is “Give the people what they want” and politicians on both sides of the house have come up with ever more inventive ways of doing just that.

You want free healthcare, education and social security? You want public transport and public sector pensions to go with them? You want a nuclear arsenal and to project power internationally?

You can have it! But it all costs money and will be paid for in large part by devaluing the currency. Not all at once of course, but bit by bit and slowly so that you hardly notice it. It's just that as time goes by you feel like you need to strive a little longer for what used to be easy.

The trend however is undeniable.

The purchasing power of our currency is on a secular path of decline by design and there is no end in sight.

Cryptocurrencies = freedom

“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 acceptance of the majority.

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

Cryptocurrencies 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 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 the political and financial problems that assail us. **Step outside the circus.**

Why cryptos will be king of the currency world one day

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? It's quite a combination.

And it's particularly relevant to UK investors.

The Pound collapsed from near \$2 in June 2008 to January 2009 low near \$1.35. That sheltered the domestic economy during the Credit Crisis by making exports more competitive but the massive bailouts of banks, loans to other EU nations and the economic contraction the global calamity engendered meant the only way to ever pay back the debt would be to debase the currency.

The British Pound's purchasing power parity CPI inflation – essentially a comparison of inflation rates for a given bunch of variables compared to the USA – was in relative equilibrium between about 1990 and 2009 but broke out as the

Bank of England's extraordinary measures went into overdrive and it is still advancing at an alarming rate. This means inflation and currency debasement is far worse in Britain than across the Atlantic.

Like I said, central banks like inflation but not when it gets out of control and the above chart suggests that is what is happening in the UK.

In fact Kristin Forbes of the MPC said late last year that *"Inflation is already picking up. It will pick up even faster and we are likely to overshoot our 2% inflation target, perhaps sharply in the next two years."*

That is the primary reason the Bank of England is now talking about beginning to raise interest rates. Inflation is picking up at a quicker rate. In May Mark Carney described that as delivering a "more challenging time for households". In other words expect lower living standards, the money in your pocket is not going to pay for as many goods and services.

Is it any wonder more people are interested in cryptocurrencies?



Source: Bloomberg

Finding gold allowed California move directly to statehood. Transporting all that wealth east meant transcontinental railroads had to be built and mechanisms for transporting, feeding, housing and supplying miners have to be built from nothing. In short a whole mining infrastructure had to be industrialised.

It is impossible to scale up panning so enterprising

contributes to concentration of mining in a relatively small number of hands. That is exactly what has happened with Bitcoin, which has to be 'mined' by a computer solving an increasingly complex algorithmic puzzle.

How high could bitcoin go?

Bitcoin's public ledger was first started on January 3rd 2009 and the reward for solving the "genesis" block was 50 bitcoin which was the equivalent of about \$2. Today 50 bitcoins is worth \$125,000.

As each block is solved the difficulty increases. Each successive solve requires progressively more computing power. In that regard Bitcoin is a lot like the original days of a gold rush or diamond rush. The first pieces are easy to find and cost very little but as the easily available seams are extracted, the cost of mining increases.

The price of any commodity is a factor of the cost of extraction and the growth in demand. For example it is difficult for prices to fall very much below the cost of extraction for a sustained period because eventually new supply would stop coming to market. The upper limit for prices is theoretically unlimited

In a gold rush sell shovels

In 1848 James Marshall found gold at Sutter's Mill in the hills of California. Within four years 300,000 people had moved to the newly formed state which had previously been a thinly populated Ex Mexican territory. San Francisco emerged as a major city, growing from a population of 1000 in 1848 to 25000 in 1850. Billions of Dollars in today's money were extracted from California in subsequent decades. With many people arriving in 1949, they were referred to as the '49ers and they fuelled that growth.

miners introduced rockers and 'long-toms'. When they had exhausted the easily accessible river gold they introduced hydraulic mining techniques, and subsequently moved up the hills and into the mountains. All of this required greater capital, greater concentration and progressively more sophisticated knowhow.

The lesson is simple. To make money in a mining boom, sell picks and shovels. As the difficulty of extraction rises, so does the cost and this



but in practical terms, the price will increase for as long as it takes to bring new supply to the market. On the other side of the ledger high prices will eventually erode demand because consumers can no longer afford it.

Therefore there are two important components in how we value any cryptocurrency. These are the marginal cost of production to bring new coins into the market and the pace with which demand for those new coins is increasing.

Supply of bitcoin is limited to 3 bitcents below 21 million units. That's a hard limit there will never be more than 21 million bitcoin. As of early June 2017 16,366,275 bitcoins had been mined. So we're close to that limit – but not as close as it may sound.

That's because as the difficulty increases and reward continues to halve it could be another 100 years before the remaining 4.63 million are mined. That's a lesson in exponential expansion in difficulty if you ever needed one. It means that solving bitcoin puzzles is going to require an industrial mining operation.

That is exactly what is happening today in China. Originally bitcoin could be mined on your computer running your regular CPU through the calculations. It wasn't particularly fast, but the calculations weren't particularly difficult. As competition increased and as calculations became more difficult miners moved onto GPUs (graphics cards). These are multiples times faster because they are running dedicated functions rather than wasting time keeping the computer running. The practice of running mining on GPUs quickly gave way however to ASIC (Application-specific integrated circuit) machines.

ASIC machines are dedicated

bitcoin miners. They are faster and use considerably less energy which has allowed mining costs to come down but this has only increased competition. In fact an arms race is on to develop the most efficient mining rig because once a miner has acquired a faster machine every other piece of hardware is immediately obsolete.

The mining hash rate increases about 16% with every retarget or about every two weeks. Einstein said compound interest is the eighth wonder of the world and at a 16% compounding rate the pace of doubling is every 9 weeks. Little wonder then that it is getting progressively harder for the little guy, the modern day '17er, to make money from bitcoin mining.

Right now China dominates production and sale of ASIC machines with 60% of mining taking place in areas where electricity is cheap, like Sichuan, where there is a great deal of hydroelectric power. With access to cheap parts and power China is likely to remain at the top of the bitcoin mining game and the companies producing the ASIC machines are privately held so there is no way to invest.

If bitcoin is digital gold, ethereum is silver

The reason we do not use gold as a readily exchangeable currency any longer is because coupling the money supply to the rate at which mines can produce gold is rather arbitrary. The fact gold is not found in equal proportion globally is an additional factor that lends some countries an unnatural advantage and in fact encourages global conquest to ensure ownership of mining assets.

For bitcoin the hard limit on the number of tokens which can ever be produced, and the exponential increases in difficulty of solving each additional block, acts as headwind to it gaining credence

as a globally significant currency. At today's value of around \$2500 bitcoins are already trade hands at more than 5 decimal places below 1 which is not particularly practical.

Central banks increase money supply to not only to create inflation but also to ensure money supply does not retard the potential for growth. It's an important characteristic of a currency that the supply can increase to allow for growth. Where fiat currencies run into trouble is when politicians take control of supply and start promising future obligations they have no way of paying for.

As I mentioned above tying supply to arbitrary resource exploitation is far from an ideal model so Ethereum, after a number of disagreements and attacks, has been designed so that it does not have a hard cap. For purists that's a big problem but for banks and those who want to explore how to create businesses that can scale on the blockchain that's a big deal.

Ethereum has been set up primarily as a "smart contract" service provider. That is why it has been chosen by mega-cap banks like JPMorgan, Goldman Sachs and the UK's Royal Bank of Scotland.

On June 14th Reuters reported that Circle Internet, a Goldman Sachs and Baidu backed start-up, has moved its system onto Ethereum's blockchain and is planning on offering free international money transfers.

Here is a section from the article:

"When's the last time you sent a 'cross-border email'?" Allaire said in an interview. "The idea of cross-border payments is going to completely go away. ... Our vision is for there to be no distinction between international and domestic payments."

Circle, which processed over \$1 billion in transactions in 2016 and whose customer base increased more than 10-fold in the year up to last month, does not make money from its payments service, nor does it plan to, as it reckons consumers expect these services to be free.

"We don't think there is any money to be made in payments anymore," said Allaire. "The entire business model of extracting a toll or having time delays around the movement of value is going away completely."

This is heady stuff but it is just one of the potential uses for Ethereum or indeed Bitcoin. The range of sectors likely to be overrun by cryptocurrencies and the blockchains on which they are based is overwhelming. Everything that now requires a contract and needs to be done on paper from sending money to one another or overseas, wills, deeds of title for property, stocks, bonds or any financial asset, car, boat or plane ownership.

In short the global economy's massive logistics operations can all be managed using blockchains.

I don't want to get too heavily into the mechanics of mining just yet but the rapid advances in cryptocurrency prices and the increasingly large portfolio of potential uses for the technology means that the sector is growing rapidly and in true egalitarian and libertarian fashion is available to everyone who can secure both the hardware necessary to solve the equations and cheap electricity to power the machines. Right now that means plugging into the grid or living in a country with cheap energy but it dovetails conveniently with the increasing efficiency of solar cells which

are being installed every day in people's homes. Your home could soon be making you money in more ways than one.

Is this a mania or the start of something bigger?

I got this email last week from a journalist at Vedomosti, Russia's most prestigious financial newspaper, asking my opinion of an important development in that market and I am printing it in full now to highlight just how feverous the momentum behind the mining trend is.

"Moscow is experiencing an acute shortage of videocards. Actually, there are none in computer shops now (you have to order and wait for 7-10 days). Also, due to feverish demand, prices grew twofold in the last six weeks.

Sellers in shops tell us that this is because buyers have been often buying 200-300 videocards at a time. The demand comes from a growing number of PC users "mining" bitcoin and other cryptocurrencies on their computers, i.e. using complex mathematical methods to create and get a bitcoin.

Videocard processors, it appears, are the best for such mathematical calculations.

This activity jumped recently, with bitcoin rising from about \$1,000 in late March to \$3,000 on June 12. While another popular cryptocurrency, Ethereum, increased more than 20-fold since early March to June 13. I noticed, that in late May you mentioned Russia among several countries whose activity in creating bitcoins increased significantly. Here, we've

got hard evidence of that.

Dear Eoin, could you please provide a comment on this from the market point of view? Can this herd behavior be a sign of a bubble and market reaching its high?"

Since the majority of bitcoin mining is done via large banks of machines in China the most likely scenario is that the masses of videocards disappearing off the shelves in Moscow are for Ethereum mining.

There is a simple reason. It was intentionally designed to be more egalitarian. Due to the Ghost protocol it employs there is no advantage to being in a pool in terms of capturing the reward for mining a new block. It also uses a memory hard hashing algorithm called Ethash that makes it unfriendly to ASIC machines because of the amount of memory required for the mining operation.

The truth is cryptocurrencies represent one of the biggest bull markets in history. The only boom that comes close is the California gold rush. Back in the 1840s the '49ers traipsed across America 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.

Therefore Ethereum mining has been designed to ensure the equivalent of today's '49ers will always have a place at the



table even as the complexity of the mining operation increases. It's the equivalent of the gold rush where the small guys will not be pushed off their claims by advances in technology and mass production.

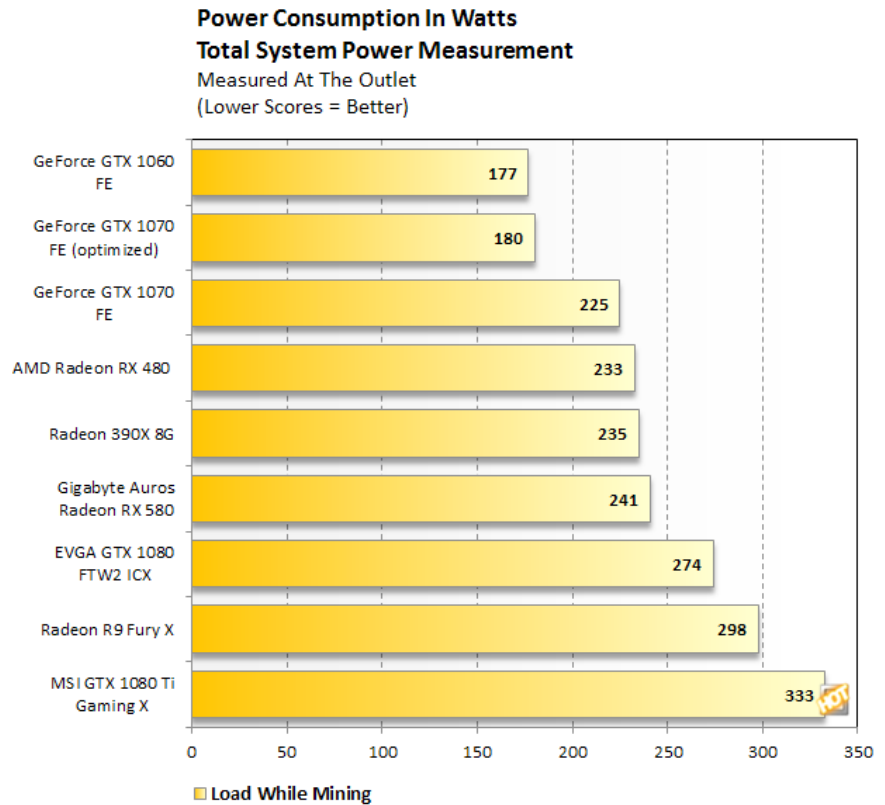
Cryptocurrencies wrest control from the grasp of the financial elite because they cannot control supply. That's the equivalent of setting up a new standard for value which we might argue is appropriate for a modern age. The gold standard functioned for millennia, or for as long as we were dependent on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

The smart way to play the boom

To answer Mikhail Overchenko's question in the above email, the answer is yes a bubble is forming in cryptocurrencies but the biggest question is whether it is about to imminently pop. The number of initial coin offering is multiplying. The result is that at the time of writing there are 944 different cryptocurrencies.

Not all of these are going to survive but they all require mining architecture. Some are being used for the purposes of raising money so companies can avoid listing on stock markets, others are simply criminal efforts at fraud. With the number likely to increase further as the ease with which new tokens can be created



Source: HotHardware.com

likely to improve further as the technology matures demand for more and more mining operations are going to be required. Right now Ethereum mining requires the equivalent of Cyprus's daily electricity consumption to run it and keep the various mining operations running. That's for a cryptocurrency that only really came to notice among miners and investors in January.

It really is worth considering we are still in early days for most cryptocurrencies. Ethereum has been surging this year. It was up 5000% by June 12th to a price over \$400. It experienced a 45-millisecond flash crash on June 21st that took it down to 10¢ before jumping back up and volatility has been quite high since. That's despite the fact many of the investors affected on the exchange responsible for the crash are being made whole.

So how do you invest in this bull market?

The answer is obvious. In a

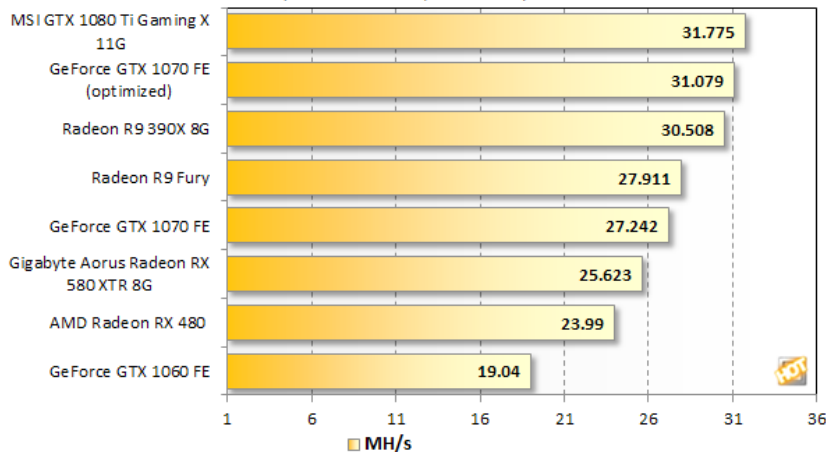
mining boom, sell shovels. Bitcoin mining has already been taken over by ASIC machines but Ethereum and other mining operations focus on Graphics Processing Units (GPU) technologies. The two big manufacturers of GPUs are NVidia and Advanced Micro Devices.

The biggest thing about using GPUs for mining is that you are generating graphics but using their internal memory to iterate through calculations so it does not necessarily follow the most up to date chip is the best for mining. In fact there is evidence that some midrange chips might not be as fast their more recent cousins but their drastically lower power consumption means they are more efficient.

If we run all of these numbers through a mining profitability calculator such as on we can quickly come up with profitability numbers based purely on performance and electricity draw. However there is the added complication both

GPU Performance Mining Ethereum w/ NiceHashMiner

MH/s (million hashes per second)



Source: HotHardware.com

supplies company like NVidia or Advanced Micro Devices is the best way to play this particular trend. These two shares are now on our 'watchlist' with a view to buying soon. **Neither share is currently a buy at today's prices.**

Let's hark back to the commodity bull market and contrast the performance of Rio Tinto with Caterpillar. The former is the world's largest miner while the latter is one of the world's largest producers of mining equipment.

The miner is at about half its peak value while the equipment maker is trading within reach of its all-time peak and even hit that peak well after the mining boom ended.

Miners tend to invest most when the market is close to a peak

of the cost of the units and their availability. Generally speaking the AMD RX 580 and 480 retail for \$400 but are now unavailable at those rates while Wal Mart is selling the 580 for \$600 right now. The NVidia chips are similarly hard to come by. As the companies struggle to keep pace with demand they are both planning on releasing new cards.

I want Frontier Tech Investors subscribers to own a piece of the cryptocurrency mining boom. However it has already surged this year and is now pulling back. This is a pivotal week because it has a US holiday, July 4th, when the rest of the world is open. That leaves a window open for algorithmic traders to influence the market and there is a substantial risk of a pullback. Therefore rather than rush the recommendation to fit the publishing schedule I would prefer to wait and issue a buy recommendation when the share is trading with less risk of a pullback.

To put it another way, I know *what* we should be buying... but I'm not confident *now* is the time. We may get a better entry point in the coming weeks. I wanted to introduce the concept to you in full now, so that when

it's time to 'pull the trigger' we're all on the same page.

However I would like to explain why I think a mining



and go on producing as prices fall because they have to pay off the investment in additional supply purchased during the boom. That means mining is a highly cyclical business. Mining services companies are certainly not immune to volatility and will not come out unscathed from a decline – but they do tend to survive in better shape and offer no less upside scope during the boom.

Quite apart from its prowess as a GPU mega-cap company **NVIDIA** falls into that mining equipment category.

The share has a market cap of \$86 billion, has a 0.39% dividend yield that is growing at a rate of almost 17.5% over the last three years. It is trading on a growth multiple with an Estimated P/E of 41.20 with shipments of GPUs accelerating this year to almost \$6 billion in revenue.

Advanced Micro Devices is in the lead right now with its mining friendly chips and the share has risen impressively over the last 18 months in line with the price of cryptocurrencies. It also tends to have lower priced chips than **NVIDIA** which is a consideration for budding entrepreneurs. However with increased volatility on bitcoin



Source: Bloomberg

and Ethereum the share has been subject to a sharp pullback and overall loss of momentum. It is also at risk from **NVIDIA** choosing to develop its own dedicated mining chip so this is undeniably a hotly contested market.

The risk right now with both shares is that a lot of good news has been priced in over what has been a very short time so we could get a better entry opportunity by waiting. Taking a strategic pause will hopefully put us in a better risk-adjusted

position to benefit from what is a truly inspiring evolving major bull market.

Cryptocurrencies aren't going anywhere. We want to own a piece of this market. But I take my responsibility to your wealth seriously – we'll enter the market when we can get a good price, and not a second before. Keep an eye out for an alert from me on this subject in the coming months.

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Energy



Company	Ticker	Rec Date	Price Then	Price Now	Gain/loss %
Orocobre Ltd	ORE.AX	07/04/16	A\$ 2.92	A\$ 3.46	18.49%
Ormat Technologies	ORA on NYSE	06/06/17	\$58.79	\$58.71	-0.14%

Technology



Company	Ticker	Rec Date	Price Then	Price Now	Gain/loss %
Cyberdyne	7779	30/05/16	JPY 2,353	JPY 1501	-36.21%
IBM	IBM LN	07/06/16	\$153.33	\$155.58	1.47%
SAIC	SAIC US	05/07/16	\$58.20	\$70.17	20.57%
Garmin	GRMN US	02/08/16	\$55.75	\$51.82	-7.05%
2U INC	TWOU: US	06/02/17	\$33.25	\$46.76	40.63%
Cisco Systems Inc.	CSCO: US	03/04/17	\$33.80	\$31.33	-7.31%

Medical



Company	Ticker	Rec Date	Price Then	Price Now	Gain/loss %
Terra Tech Corp	TRTC	11/11/16	\$0.41	\$0.24	-41.87%
Abcam	ABC	07/03/17	907.5p	969.5p	6.83%
Zynerba Pharmaceuticals Inc	ZYNE: US	03/04/17	\$20.10	\$16.90	-15.92%

Moonshot



Company	Ticker	Rec Date	Price Then	Price Now	Gain/loss %
SolarWindow	WNDW	07/04/16	\$3.96	\$2.80	-29.29%
Alkane Resources Ltd	ALK: AU	05/09/16	AU\$ 0.31	AU\$ 0.24	-21.31%
Editas	EDIT: US	07/03/17	\$21.28	\$17.43	-18.09%
Haydale Graphene Industries	HAYD	02/5/17	178.5p	177.0p	-0.84%