

**Platinum
International Fund
(Quoted Managed Hedge Fund)**

(ARSN 620 895 301 | ASX Code: PIXX)

**Quarterly Investment
Manager's Report**

31 December 2017

 **Platinum**
INTERNATIONAL FUND
(QUOTED MANAGED HEDGE FUND)

Investment Update

by Kerr Neilson, Portfolio Manager

Performance

(to 31 December 2017)

	QUARTER	SINCE INCEPTION
Platinum International Fund (Quoted Managed Hedge Fund)	6.6%	8.5%
MSCI AC World Net Index (A\$)	6.1%	9.1%

Net of accrued fees and costs. Inception date: 12 September 2017.

Refer to note 1, back cover.

Source: Platinum Investment Management Limited, RIMES Technologies.
Historical performance is not a reliable indicator of future performance.

The Platinum International Fund (Quoted Managed Hedge Fund) (ASX code: PIXX) is a feeder fund that primarily invests into Platinum's flagship international equity fund, the Platinum International Fund ("PIF"), which was established on 4 April 1995.

The following is the 31 December 2017 Quarterly Investment Manager's Report prepared for PIF by its Portfolio Manager. Please note that in this report, the "Fund" refers to PIF and portfolio details, such as portfolio disposition, top 10 holdings and currency exposure, pertain to PIF's portfolio. Please be aware that PIXX and PIF (C Class - standard fee option) have different fee structures and therefore different returns. PIXX's returns may also vary slightly from PIF's performance fee (P Class) returns due to different cash holdings as well as gains and losses arising as a result of PIXX's market making activities.

Markets

For all the political news chatter around the Trump administration, Brexit negotiations, the 19th National Congress of the Communist Party of China, the supremacy of the Liberal Democratic Party under Shinzo Abe in the recent Japanese elections and, of course, the hysteria around missile launches by North Korea, the year **2017 has been one of near perfection for most markets:** stocks, bonds and property. Underpinning the whole shebang has been the frantic purchasing of bonds, both government and corporate, by the US Federal Reserve, the European Central Bank (ECB), the Bank of Japan (BoJ) and the Bank of England (BoE) that has seen these four major central banks' balance sheets, in aggregate, blow out to a **new record of US\$20 trillion** of

assets and correspondingly to **oppress interest rates along the entire yield curve**. The effect should not be underestimated, because corporate issuers of subprime debt in Europe are raising term funding at a lower cost than the US Federal Government! One consequence of floating exchange rates is that the behaviour of an individual central bank impinges on the entire global system via currency swaps and the free movement of capital – it effectively cheapens money across the board.

This does matter, because quantitative easing (QE) has allowed the rebuilding of bank equity for those most affected following the Lehman crisis, it has allowed various industries to find cheap financing through the likes of private equity, to fund adventurous ideas, and indeed has encouraged the swapping of equity for debt, notably in the US, via share buy-backs. The overarching effect of forcing investors to reach for yield, be they life companies, pension funds or hapless retirees, is to **raise the risk threshold**, justified by **the view that it has obviated an otherwise likely contraction** of economic activity.

Evidently it is working and, as was suggested by the work of Kenneth Rogoff and Carmen Reinhart following the Lehman meltdown, cheap money would ultimately allow the system to **rebalance after about 10 years of sub-optimal growth**. Other factors have played their part, most notably the contribution of unremitting expansion of the Chinese economy, huge strides in alternative energy production and the power unleashed from the internet to serve a much broader purpose. No longer confined to e-mails and the like, there has been an explosion of on-line shopping and expedited fulfilment, fintech services, on-line games and entertainment, and now the industrial element with the internet of things (IoT). These developments were still in their infancy in 2007.

Some of **these changes have sidelined previously comfortable industries** with the subsequent costs of restructuring and mergers. These continued through the quarter with some mega deals revealing the changed circumstances of the players, notably the proposed acquisition of 21st Century Fox assets by Disney, the obstructed merger between AT&T with Time Warner, the combining of CVS and Aetna in health care, Unibail-Rodamco's takeover of Westfield in property, and in aerospace, Boeing's bid to acquire Embraer and Safran's bid for Zodiac.

The main show though was **synchronised global growth**, early signs of returning pricing power in some industries, and yet the bonds refusing to hint at the return of inflation even though such chronic deflators such as Japan are seeing general price rises of over one percent. Topping off the year was the passing of the tax bill in the US which reduces corporate taxes, including to the benefit of foreign companies, and encourages capex via accelerated depreciation deductions. Despite generous commentary, the tax break for the median earner (US\$59,000 p.a.) is pitiful, some US\$1,000 p.a. versus US\$3,000 for the so-called "middle class" with incomes of US\$100,000 p.a. Despite a rise of the government deficit by an estimated US\$1.5 trillion a year, the bond market barely took notice.

An acknowledgement of broad dependable growth, combined with the capacity reductions in several basic industries in China (supply side reforms), saw markets **reprice value stocks and cyclicals relative to growth stocks**. This was in stark contrast to the bidding-up for "certainty" that gripped the markets from 2011 through to early 2016. All this coalesced to produce a new record. 2017 was the first calendar year on record in which the MSCI All Country World Index had had no down month (in local currency terms)!

Note the variances of performance by sector and country in the accompanying tables below.

Even though the Fund runs cash and has been burdened with ineffectual short selling in strongly rising markets through the year, the broadening of market action has significantly rewarded our index-agnostic stock picking. For the quarter and the year, PIF (C Class) achieved respectively 7.0% and

25.1% while its benchmark MSCI AC World Net Index rose by 6.1% and 14.8% (in AUD) (refer to note 1, back cover).

This strong performance, in both absolute and relative terms, is pleasing, but by no means surprising. Some of you may recall the detailed expositions in our March and June 2016 quarterly reports in which we took you through the characteristics of PIF's portfolio, including numerous individual positions within it. On measures of growth, profitability, leverage and value, **PIF's portfolio was as attractive as it had ever been in the prior 17 years; yet, at the time it looked forlorn** next to the index-hugging funds chasing expensive consumer staples companies and other bond-proxy stocks. As it transpired over the last 18 to 24 months, those characteristics served us well and the investments unfolded largely as envisaged to generate handsome returns, once again attesting to the underlying method at work.

Changes to the Portfolio

We have been gradually raising the cyclical component of the portfolio. This has been motivated by the significant impact that the production rationalisation in China has had on prices across a wide range of industries. Broader global growth has also played a part in tightening supply and lacklustre capex has found many companies chasing to add capacity. Other emerging themes like battery-driven automobiles, the pollution clean-up in China, and factory automation are also influencing our preferences. To fund these investments, we have been reducing or eliminating the highly successful Chinese internet plays like **Baidu, Tencent and 58.com**. We have also reduced some of the Fund's financials exposure in China and Europe, trimming companies like **China Pacific Insurance** and **Raiffeisen Bank**.

MSCI Regional Index Performance to 31.12.2017 (AUD)

REGION	QUARTER	1 YEAR
Developed Markets	6%	13%
Emerging Markets	8%	27%
United States	7%	12%
Europe	3%	16%
Germany	3%	18%
France	2%	19%
United Kingdom	6%	13%
Japan	9%	15%
Asia ex Japan	9%	31%
China	8%	43%
Hong Kong	7%	26%
India	12%	28%
Korea	12%	36%
Australia	7%	11%

Source: RIMES Technologies.

Historical performance is not a reliable indicator of future performance.

MSCI All Country World Sector Index Performance to 31.12.2017 (AUD)

SECTOR	QUARTER	1 YEAR
Information Technology	8%	31%
Materials	8%	20%
Consumer Discretionary	8%	16%
Energy	7%	-1%
Financials	6%	15%
Consumer Staples	6%	9%
Industrials	6%	16%
Telecommunication Services	2%	0%
Health Care	2%	11%
Utilities	0%	5%

Source: RIMES Technologies.

Historical performance is not a reliable indicator of future performance.

An important addition was **Siemens**. This remarkable 170 year old company, which started out with a telegraph invention, has pioneered many innovations involving the use of electricity to find itself today as a leader in power generation and distribution, industrial and building automation, rail transport and healthcare equipment. Apart from heavy spending on research and development (R&D), Siemens has arrived at this point through a myriad of forward-looking acquisitions and disposals.

At present, the market is a little unsure about its near-term earnings power because of the need to downsize its large combined cycle gas turbine business (note GE is afflicted by the same). There is also pressure on the profits of its wind power subsidiary Siemens Gamesa, and the local press are agitated about the CEO's decision to own partial stakes in former core businesses that have been recently merged with competitors to consolidate their industrial significance. Some of these mergers were not so well-timed. Early in 2018, the plan is to list a (minority) stake in its healthcare business. The press is flustered about this German national icon losing relevance as it sets on this new path.

Having followed the twists and turns that Siemens has taken over the decades, we feel these **uncertainties give an excellent buying opportunity** to own one of the great industrial enterprises of our times. The evolution of Industry 4.0, which is essentially a digital transformation of manufacturing and other activities to enable data to be manipulated, shared and used to control processes to ultimately have self-ordering systems, has come a long way since the vision was unveiled by the German government at the Hannover Fair in 2011. Siemens is indubitably the leader in the field. Of course, the majority of factories are burdened with massive legacy investments and the task ahead is to persuade, facilitate and profit from this inevitable shift in the way things are made or controlled.

PIF Portfolio Disposition

REGION	31 DEC 2017	30 SEP 2017
Asia	39%	38%
Europe	22%	22%
North America	16%	17%
Japan	14%	13%
Russia	1%	1%
South America	<1%	<1%
Australia	<1%	<1%
Cash	7%	9%
Shorts	-12%	-11%

Refer to note 2, back cover.

Source: Platinum Investment Management Limited.

We run the risk of being too early in entering this investment because of downward pressure on 2018 earnings from the divisions that are restructuring and from a further rise in R&D in the Digital Factory division, but finding a company of this quality selling on 15 times earnings is rare in these markets.

Shorting

Our stock specific shorts, which relate mainly to consumer brand names that are fighting valiantly to hold sales and/or margins against a changing retail environment, recovered slightly this quarter. These consumer companies remain expensive and growth challenged. The index shorts were expensive in a record year on 12 solid months of unremitting advances.

Currency

The main change was a further reduction of the holding of US dollars in favour of the Japanese yen, the Korean won and the Norwegian krone. Regarding the Australian dollar, we were inclined to remove this long position early in 2017 as we built further positions in cyclical stocks and did not wish to double the 'bet'. See table below:

CURRENCY	31 DEC 2017	30 SEP 2017
US dollar (USD)	22%	28%
Euro (EUR)	14%	16%
Hong Kong dollar (HKD)	14%	12%
Japanese yen (JPY)	10%	9%
Korean won (KRW)	8%	8%
Chinese yuan (CNY)	7%	7%
Indian rupee (INR)	6%	6%
British pound (GBP)	5%	5%
Norwegian krone (NOK)	5%	4%
Australian dollar (AUD)	3%	2%

Refer to note 3, back cover.

Source: Platinum Investment Management Limited.

Top 10 Holdings of PIF

STOCK	COUNTRY	INDUSTRY	WEIGHT
Samsung Electronics	Korea	IT	3.1%
Ping An Insurance Group	China	Financials	3.1%
Inpex Corporation	Japan	Energy	2.8%
Alphabet Inc	USA	IT	2.7%
Glencore PLC	Switzerland	Materials	2.4%
TechnipFMC	UK	Energy	2.2%
Lixil Group Corporation	Japan	Industrials	2.2%
Royal Dutch Shell PLC	UK	Energy	2.1%
PICC Property & Casualty Co	China	Financials	1.9%
Tencent Holdings Ltd	China	IT	1.9%

As at 31 December 2017. Refer to note 4, back cover.

Source: Platinum Investment Management Limited.

Commentary

On account of the surplus capacity that came with the Global Financial Crisis, inflation has been absent, except, one could argue, in the price of tangible assets, nominal and real. More recently one can spot this effervescence boiling over into new 'asset' concepts like #Bitcoin and the host of emulators that have caught the popular imagination. The important point to grasp is that **the concept of a public register, called a 'blockchain'**, and the way entries are verified and recorded by users across the network, rather than depending on a central authority, **are sound and clever**. Building on this kernel, the idea that it is tamper-proof from government intervention has created a mystique. The distributed nature of a public blockchain and the **traceability of every entry** gives the technology particular appeal from a **security standpoint**. This is increasingly important in a world where everything from bank accounts to smart cars is at the mercy of hackers. Further, the trade in already-mined Bitcoin has exploded as exchanges have sprung up to meet and promote this burgeoning activity. Right now there is massive turnover in the existing stocks of the token, earning spreads that are creating huge wealth for the operators of these exchanges. As you will see from the accompanying article by Sava Mihic, *Bitcoin – A Primer*, **gross annual fees generated are likely greater now than those on the New York Stock Exchange!**

This massive cash flow provides motivation and funding for highly promotional *web-directed* activities to perpetuate this apparent gravity-defying money-making machine. **Why one might not fight the trend at present is that it's got many of the qualities of a good story** for new-age millennials and disparaged voters in a world that is readily embracing new digital payment systems and, in addition, money is very cheap. Long gone is any discussion about its inherent worth (a store of value) or as a medium of exchange, a value attributed to traditional money, which might even earn interest to those who are so old-fashioned as to care. The gamblers are having the time of their lives and it is all about buying-the-dips and getting involved. Of course, this desperate participation **forewarns of the likely bust**, but for now, punters (as a group!) are reckoning on their greater agility than the crowd. The leader, Bitcoin, may eventually falter and lose favour, and its recent exponential rise from US\$1,000 at the beginning of 2017 to a peak of US\$19,000 in mid-December suggests **its parabolic rise is close to climax, dwarfing even the Tulip fever** that gripped Amsterdam in the 17th century. However, if and when that happens, others like Ripple (XRP), which facilitates the exchange of cryptos into hard cash and offers cheap and speedy processing, might be expected to take up the running.

With the cost of money being so low, the danger lies in **the use of debt to play** and as of December both the Chicago Board Options Exchange (CBOE) and the Chicago Mercantile Exchange (CME) offered futures contracts on Bitcoin. **If debt**

is used to fuel the flames, the consequence of a bust could be felt across all asset classes as **the liquidity squeeze** forces the sale of other assets to meet the collapsing crypto phenomenon.

"But what is likely to change the cost of money?" you ask. It was mentioned earlier that some industries are regaining their pricing power, some of which is due to the muted capex cycle and unexpected strength in demand. Traditional measures of productivity show weakness, yet still labour in markets as far apart as the US and Japan seems bereft of pricing power in aggregate. However, pressure from rising unit labour costs – and note the confidence of middle income workers has fallen since the US tax bill was announced – could turn the tide. It is not as if prices on average haven't been rising. The change in the CPI in the US did after all get down to zero in 2015 and is now rising by between 1.5% and 2.0% p.a. while in Japan it may be running at 1.5% p.a.

Based on our experience from field trips and company visits, and with the prospect of India and China growing yet again by above 6% in 2018 (remember, such growth in China is tantamount to adding an economy the size of the Philippines on a purchasing power parity basis with its population of 105 million), **we are inclined to back growth forcing changes in the cost of money**. This is against a backdrop of tightening by the US Federal Reserve and other central banks likely being shamed into desisting from their market manipulation. In the meantime the **cryptos** may serve as the proverbial **canaries of financial market health**. As an interesting gauge, we see that Google search trends for Bitcoin have dropped below those for gold!

Outlook

High valuations and long bull runs do not by themselves cause the onset of a bear market. The key is earnings growth and on that score the markets still look satisfactory. We like the companies we are finding in Asia in particular, as they typically offer above average growth prospects and yet are valued on lower multiples of earnings than those in the western hemisphere. While acknowledging that historically these markets have been prone to the influence of foreign flows, the weakening pattern of the US dollar suggests that this factor may be less significant in future. As we have highlighted over the last 18 months, Asia is creating its own ecosystem with ever diminishing dependence on the large Western economies. The likely repricing of borrowing caused by US Fed tightening is an evident obstruction, but, like earlier tightening cycles, the relative pace of earnings growth could be the deciding factor for individual investment opportunities. Some of the growth themes with which we tag individual stock ideas are almost immune from broader economic influences and this gives one confidence that they can deliver strong earnings almost independent of their host economies.

Bitcoin – A Primer

by Sava Mihic, Quant Analyst

Bitcoin has recently captured popular attention by exceeding the US\$10,000 per coin mental barrier. Discussion has been extremely polarised, with some claiming it is the biggest bubble since the Tulip while others claim we are seeing the start of a new paradigm.

This article will discuss what it is, some perspectives, and what the future may look like.

What is Bitcoin?

Bitcoin is the first of a new breed of digital tokens labelled “cryptocurrencies” (or simply “cryptos”). The core idea is that it has a public record of all transactions, called a “blockchain”. New transactions are recorded by adding transaction record blocks to the existing chain, with specific rules around who can add blocks, how new blocks are recognised, the types of blocks and the rate at which they are *meant*¹ to be added.

Bitcoin follows a “proof-of-work” requirement in order to add a block to the blockchain. This means that the right to record the next block is attained by doing work – also known as “mining”. The work required, in the case of Bitcoin, is testing a large number of random numbers until you happen upon one that produces a specific outcome. By making the numbers random, the playing field is levelled, with anybody able to jump in and mine. The more miners there are testing random numbers, and the more computing power they use, the faster somebody finds the correct random number. Miners that control more computing power are more likely to be the first to find the solution, with their rate of success being proportional to their share of computing power. Making mining simple means it isn’t dominated by any one party, preventing a malicious party from consistently adding fraudulent transaction blocks.

Once a new block is mined, the miner will broadcast it to the network. The network will confirm that the random number the miner chose does indeed generate the required outcome, and will append it to all the other blocks in the Bitcoin blockchain. One Bitcoin block is meant to be added every 10 minutes – the idea being that prescribing 10 minute intervals makes it less likely for two miners to independently find and broadcast competing solutions to the network at the same time. If mining activity increases and blocks start to be added

faster, the difficulty of mining will increase in order to keep the rate at one block per 10 minutes.² Conversely, the difficulty will decrease if there is less mining. Each block can at present accommodate around 2,000 transactions.

Of course, people need to be incentivised to do the work required to record transactions, so Bitcoin has an incentive system to encourage mining. There are two parts to the incentive system, and both go to the miner that solves the block first:

1. The first part is the block reward. Currently set at 12.5 Bitcoin and halving every four years, it will increase Bitcoin supply up to a maximum of 21 million Bitcoin and will therefore end in 2140 if all goes to plan. This amount isn’t paid by anybody in particular, but rather is inflationary. Essentially, it is partially funded by everybody that owns Bitcoin.
2. The second part is the transaction fee, which is a variable amount and depends on how much Bitcoin users are willing to pay in order to have their transaction included in the next block. Users bid a transaction fee, and miners then decide which transactions to include in the block they are mining. As Bitcoin has risen in popularity, transaction fees have moved from being around 0.1 Bitcoin to 2 Bitcoin per block, with this cost borne by the parties initiating transactions.

Chart 1 on the following page shows the price of Bitcoin on a log scale, and puts into perspective just how extreme the initial boom in 2013 was. While it got a lot of attention then, it didn’t get the same level of attention as the latest boom, primarily because the total value of all outstanding Bitcoin peaked at US\$10 billion at the time, whereas we are now looking at US\$250 billion. See our commentary in *The Journal* on the 13th of January 2014 for further thoughts at the time.³

A lot has changed since the early days of Bitcoin. Nobody thought Bitcoin prices would reach the stratosphere when it first started, and there were so few miners at the time that mining could be done by a home PC. Today, mining has become so intense that it requires specially designed hardware, huge amounts of electricity and heavy cooling. Bitcoin has been able to rise through a combination of

1 Bitcoin blocks require testing random numbers to process, so a block can take more or less than the 10 minute target depending on miner luck. That is why processing time is *meant* to be 10 minutes, rather than *is* 10 minutes.

2 Difficulty is increased by requiring more random numbers to be tested by miners before a solution can be found.

3 <https://www.platinum.com.au/Insights-Tools/The-Journal/The-Fantastic-Rise-of-Bitcoin>

Chart 1 – Bitcoin Price History

BitStamp (USD) – Closing Price – Daily (Log Scale)



Source: <https://coincharts.com>

fulfilment of needs, strong promotion, and a healthy dose of speculative exuberance. Some of these are discussed in the following sections. The price of US\$15,000, which is current at the time of writing, will be used in numbers quoted below.

Bitcoin as a Medium of Exchange?

One of the early hopes was the idea that Bitcoin could be used as a cheap means of transaction that circumvents the banking system. As things stand today, however, this is not a realistic proposition unless some significant changes are made to the Bitcoin protocol. The reason is that transaction costs on the Bitcoin network are simply too high – today the block reward, i.e. the socialised cost of a transaction, is about US\$100 at the 2,000 transactions per block rate (see Chart 2). Additionally, the specific transaction cost borne by the transacting parties is about US\$15. Add to this the fact that each block takes 10 minutes to process,⁴ and you will be waiting quite a while to confirm your \$25 coffee order. The Bitcoin blockchain simply cannot be used to process small transactions as it is currently configured.

Bitcoin as a Store of Value?

With the reality that it cannot be used as a medium of exchange recognised, the narrative has shifted to Bitcoin being a store of value, with gold being used as an analogue. Proponents argue that the limited total supply of Bitcoin creates scarcity value, and that the mining of Bitcoin, similar

to the mining of gold, takes work. In the case of gold, the price is often underpinned to some extent by the cost of mining it, and mining costs generally increase over time as the geology becomes more difficult. In contrast, no such analogue can be drawn in Bitcoin, because the difficulty of mining is proportional to the amount of processing power being expended. High Bitcoin prices incentivise more processing power and therefore higher costs, but the reverse is also true, which implies that there is little pricing support when Bitcoin prices fall.

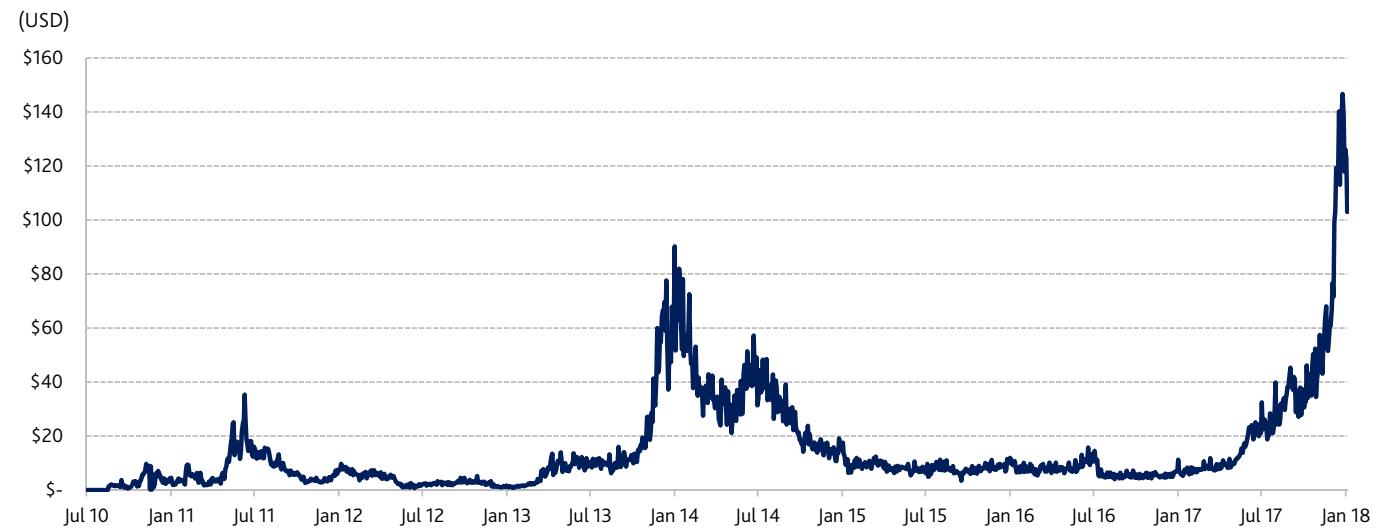
ICOs and "Forks"

But what about scarcity value? While Bitcoin supply is limited (unless the code is changed), there has been an enormous proliferation of copycats⁵ – the count of recognised cryptocurrencies stands at 1324 as of today. Coinschedule.com indicates that in 2016 a total of US\$96 million was raised in 46 “Initial Coin Offerings” (ICOs), and in 2017 the number has jumped to 235 ICOs, raising a total of US\$3.7 billion – a 39 fold increase in money raised.

⁴ There is a backlog, which varies in size, but currently has over 100,000 unconfirmed transactions, which would take over 8 hours to process assuming no further transactions are recorded. Even with no backlog, one would generally require several blocks to be added after the block processing one's transaction, to ensure that the transaction is embedded in the blockchain.

⁵ An example of a copycat is Ether, which is similar to Bitcoin, but has the added use of being able to pay for “smart contracts” on the Ethereum network, which are payment contracts that are executed automatically. For example, a smart contract may have an address, and when something is paid into that address, it may be split among two different addresses automatically in a certain share, like a royalty. The Ethereum network can also be used to issue ICOs. Another example is Ripple, which, instead of using proof of work like Bitcoin and Ether, relies on consensus among trusted parties to approve transactions, thereby removing the costs of proof of work, but also to some extent the decentralisation. If Ripple, which has some institutional backing, were to advance from concept to a fully functioning network, it may represent an efficient payment system. Among the many less popular tokens is UET, the “Useless Ethereum Token”. The “ICO disclosure” of UET, “the world’s first 100% honest Ethereum ICO”, says that it has “no value, no security and no product. Just me, spending your money.”

Chart 2 – Cost per Transaction



Source: <https://blockchain.info>

In an ICO, the promoter profits by selling tokens to the public. Generally the promoter will start by publishing a "whitepaper" to explain the token and getting backing from a few high net worth investors that are willing to fund the advertising of the token. Then the promoter will selectively groom some initial investors, for example, by setting up a Slack channel in which he chats with them directly, convincing this group that they are "in the know". This "special" group will take a pre-ICO placement of tokens to distribute ownership and some will then proceed to spread the word on the ICO and how great it is. Finally, after a strong burst of advertising, and once interest is judged to be at peak, the promoter will issue as many tokens as there is demand for while cashing out, usually significantly.

The other angle is "forking", which involves creating a new cryptocurrency and issuing the tokens to the owners of an existing cryptocurrency. Fork promoters tend to be involved in cryptocurrency mining and/or the running of cryptocurrency exchanges. They bet that the more widely distributed a token is the more valuable it is likely to be. So, instead of staging an ICO, which is likely to attract only a limited number of investors, they freely give the new tokens to everyone who is listed as an owner of Bitcoin (or some other well-known token) at a certain point in time, hoping to profit by being the trading hub where their token is traded, earning transaction fees. There have been two significant forks using the Bitcoin blockchain – Bitcoin Cash and Bitcoin Gold. While the names may give the impression that these tokens are somehow the offshoots of Bitcoin, in reality they are not – these are entirely unrelated cryptocurrencies created by those seeking to take advantage of Bitcoin's popularity and wide ownership base.

Some argue that these ICOs and forks will fade over time, and that people will refocus on Bitcoin, thereby retaining its scarcity value. For now, the proliferation is massive.

Black Market Demand

One of the initial use cases of Bitcoin was black market activity, because Bitcoin addresses⁶ have no identifying information, allowing criminals to stay anonymous. While there is no doubt that underground activity remains a significant part of the actual transactions using Bitcoin, which is considered the currency of the dark web, it is probably not playing as large a part in Bitcoin's recent run as it may have done previously.

The Miners

Around 300,000 Bitcoin transact each day using the blockchain, representing US\$3.5 billion at the moment. Of that, miners are earning around 2,200 Bitcoin per day, for revenues of about US\$33 million per day or US\$12 billion per year. There are estimates that mining electricity costs are around 16% of mining revenues today, with total power consumption up 25% in December alone and approaching one-seventh of Australia's national energy consumption.⁷ Currently miners are very profitable, but in the past they have suffered large losses when the price fell, as they were unable to recoup the significant capital outlay for the custom mining chips they operate. The chips used for mining are called ASICs (application-specific integrated circuits), and they have no use

⁶ Bitcoin addresses are digital keys that represent the location at which Bitcoin are held by an individual, similar to a bank account number, and are usually in the format of a string of random letters and numbers.

⁷ <https://powercompare.co.uk/Bitcoin/> has great data.

outside of mining Bitcoin, resulting in Bitcoin miners being unable to sell them during the last crash. The most popular Bitcoin mining ASICs, Antminers, are developed by the biggest Chinese crypto mining company, a privately held firm called Bitmain.

The Exchanges

A cryptocurrency exchange is an entity through which a customer can exchange Dollars for Bitcoin or another cryptocurrency, or exchange one cryptocurrency for another.⁸ This is how most Bitcoin are bought. When a customer buys Bitcoin on an exchange, it does not go to their private wallet immediately; rather, it is held in custody by the exchange, where the customer can sell it. Moving Bitcoin between an exchange and one's private wallet, in either direction, will incur the blockchain fee. This means that customers holding Bitcoin in a private wallet run the risk of not being able to return their Bitcoin to the exchange in a timely manner if they wish to sell it, as there tends to be a large backlog to process transactions through the blockchain during times of heavy trading. Regulation on Bitcoin exchanges is currently minimal – the market has grown too fast for legislation to catch up.⁹

Impressively, the exchanges bear no mining costs but are, in aggregate, trading around US\$10 billion¹⁰ in Bitcoin per day, more than double the daily transaction volume on the blockchain itself. Taking a 1% clip (0.5% on each side) of that US\$10 billion means that the Bitcoin exchanges are pulling in US\$100 million per day at the current pace – annualising fees of US\$36.5 billion,¹¹ with relatively low overheads. If one adds the exchange trading of other cryptocurrencies to the mix, total annualised fees exceed US\$60 billion. To put this in perspective against conventional exchanges, Intercontinental Exchange, a group that operates the New York Stock Exchange among other regulated exchanges and clearing houses and has a market capitalisation of US\$46 billion, is expected to produce revenue of US\$4.6 billion in 2017.

If you ever wondered who funded all of the Bitcoin and cryptocurrency ads that you saw, now you know – the crypto

⁸ The main exchange for Australians is BTC Markets. There one can purchase Bitcoin using Australian Dollars. If one then wants to buy one of the more exotic cryptocurrencies, one could convert their Bitcoin to Ether and send the Ether to an offshore exchange that offers trading in other cryptocurrencies. Using Ether to fund the alternate exchange account is sensible as the transaction cost is lower and transaction confirmation is faster.

⁹ The government of South Korea has indicated concern around unsophisticated investors being too involved in cryptocurrency trading and is therefore considering regulating their exchanges. China has banned the exchange of Renminbi for cryptocurrency on exchanges.

¹⁰ <https://coinmarketcap.com/> has aggregation data regarding trading on all of the popular crypto exchanges.

¹¹ This annualises current turnover with the current elevated Bitcoin price. If the price falls, their annual take would fall proportionally.

exchanges are the true winners in the Bitcoin phenomenon, bearing none of the risk and earning outsize profits. It is somewhat ironic that these exchanges, which have none of the proof of work or decentralisation features that give Bitcoin its appeal, actually transact twice as much Bitcoin as the blockchain!

Bitcoin as Gambling Arbitrage

So how did the exchanges get so big? Part of the answer is gambling arbitrage. In Japan and South Korea gambling is heavily regulated. Japan has no casinos and pachinko parlours, the traditional gambling outlets, have been curtailed by regulation over time. The extreme volatility that has occurred in Bitcoin, coupled with its unregulated nature and high turnover, makes it an ideal avenue for gambling. A large Japanese cryptocurrency exchange plays the sound of pachinko machines as the prices of cryptocurrencies move up and down, as well as when trades are done, triggering all the necessary endorphins.

Bitcoin as a Tool to Circumvent Capital Controls

China has strict capital controls. It also dominates the crypto mining industry, having the largest share of mining as well as of the market for designing custom mining chips. The initial driver of the recent boom in Bitcoin occurred in China – Bitcoin, with its anonymity, allowed some capital to circumvent the traditional currency controls and flee the country. Seeing this, the Chinese government banned ICOs from being sold to Chinese nationals and shut down domestic crypto exchanges by preventing the exchange of Renminbi for cryptocurrencies.¹² Volumes observably related to China are now a tiny fraction of what they used to be.

Bitcoin and Decentralisation

Another of the initial hopes for Bitcoin was its potential to be a decentralised system, with a frequent argument being that it can disintermediate transactions by removing the need for “trusted” centralised institutions such as banks. To date, Bitcoin has not realised this decentralisation, and is becoming more rather than less centralised. For example, a small group of programmers, known as Bitcoin Core, still write the software that the network runs. Bitcoin mining, which was supposed to be democratised by the brute force “proof-of-work” that anybody can do, is instead being dominated by a few Chinese mining pools as institutionalised ASIC-based mining makes individual PC-based mining unprofitable. Mining ASIC design itself is also dominated by Chinese mining pool operator Bitmain, and Bitcoin trading is dominated by cryptocurrency exchanges, which are centralised institutions. Even Bitcoin ownership is highly

¹² Not all regulation has been negative – Japan has taken the most positive stance, approving Bitcoin as a means of payment.

centralised, with 1500 addresses (of a 28 million total) owning 38% of all Bitcoin. The number of parties that must be trusted therefore makes the argument that Bitcoin can be used for "trustless" disintermediation difficult.

Bitcoin as a Ponzi Scheme

Some argue that the structure of Bitcoin is an exact replica of a Ponzi Scheme. Nobody can see Bitcoin or make anything out of it and there is no utility value to holding Bitcoin (unlike, say, gold, which is used to make jewellery and has some limited industrial uses). Bitcoin generates no income, and an owner of Bitcoin can only make money by selling the Bitcoin at a higher price to another investor. Bitcoin buyers are attracted by the very high appreciation apparently on offer, and the continuation of the scheme is dependent upon current holders¹³ continuing to hold! Encouraging holding, there are some barriers to moving Bitcoin held off an exchange onto an exchange, such as slow transaction time and high transaction costs, making selling more difficult. To cap things off, the whole process is facilitated by the exchanges, which act as the cashed-up manager of the scheme, pumping out unregulated advertising promoting the wonderful returns on offer.

The Future of Bitcoin

The future of Bitcoin is unclear, but it is unlikely to become a medium of exchange in its current form, and further regulation is likely on the horizon. Whether that regulation removes demand for some of the uses of Bitcoin, and whether it stifles unregulated advertising, is yet to be seen, and its ultimate future will depend on that.

Telling also is the fact that long discussions among enthusiasts on the future uses of Bitcoin have given way to hopes and dreams around how soon one can become rich – one is told to resist the "fud" (fear, uncertainty, doubt), be one with the "fomo" (fear of missing out) and just "hodl" (hold). Amongst many buyers understanding of how Bitcoin works and whether it can be used for anything is minimal. People questioning the long-term value of Bitcoin are promptly banned from online crypto forums, although predictions around short-term declines are allowed. With Bitcoin having made the front cover of Barron's, there is no doubt that things are very frothy today, and while the madness of crowds has taught us that bubbles can persist for some time, ultimately, like every euphoria before it, Bitcoin will come crashing down.

¹³ Or, as they like to refer to themselves, "HODLers" – a famous misspelling of "hold" by a drunk Bitcoin user trying to calm people down during a crash.

New Website

We were excited to unveil our new website during the quarter. It features a fresh look, easy navigation, and new investment insights and tools.

Visit www.platinum.com.au/Our-Products/All-Products/PIXX-Quoted-Managed to access comprehensive information about PIXX, from investment performance to its ASX announcements and monthly updates.

You can also find a range of thought-provoking topics under **Investment Fundamentals**, from value investing to behavioural finance. And, of course, we will continue to share with you our views and insights on the latest market trends and themes in **The Journal**.

Visit www.platinum.com.au/Insights-Tools to explore.



Recent highlights include:

- **Macro Overview - December 2017¹** – Andrew Clifford, CIO, provides a quarterly update on the global macroeconomic conditions and market outlook.
- **Why We Need to Think Internationally When Investing (Video)²** – For millennial Australians, owning one's home may not be the safest path to wealth growth as it once was. Andrew Clifford gives a quick introduction to some key lessons of investing: the importance of the implied rates of return, mastering the psychological pitfalls, and the benefits of scouting globally.
- **Misconceptions about the Japanese Economy (Video)³** – Kerr Neilson and Scott Gilchrist discuss some of the common misconceptions about investing in Japan.

¹ <https://www.platinum.com.au/Insights-Tools/The-Journal/Macro-Overview-December-2017>

² <https://www.platinum.com.au/Insights-Tools/Investment-Fundamentals/Investing-What-Matters/Article-Item/Why-We-Need-to-Think-Internationally-When-Investin>

³ [https://www.platinum.com.au/Insights-Tools/The-Journal/Misconceptions-of-the-Japanese-Economy-\(Video\)](https://www.platinum.com.au/Insights-Tools/The-Journal/Misconceptions-of-the-Japanese-Economy-(Video))



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Notes

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2. The geographic disposition of assets represents PIF's exposure to physical holdings and long derivatives (of stocks and indices) as a percentage of PIF's net asset value.
3. The table shows PIF's major currency exposure as a percentage of PIF's net asset value, taking into account currency hedging.
4. The table shows PIF's top 10 long stock positions (through physical holdings and long derivatives) as a percentage of PIF's net asset value.

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