



CRYPTO ASSETS EXPLAINED.

Understanding the Basics of a New Asset Class

presented by

APOLLO
CAPITAL

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For people who can afford to invest a little in bitcoins, it's worth looking into

— Sir Richard Branson

CRYPTO ASSETS EXPLAINED

Understanding the Basics of a New Asset Class



**“Virtual Currencies”, “Digital Currencies,” “Digital Assets,”
“Crypto Currencies.”**

Crypto Assets are known by a variety of names. However you refer to them, crypto assets are a groundbreaking technology that have the potential to re-shape everyday commerce. Unfortunately though, they are not well understood. Most people simply dismiss crypto assets as a new toy for computer geeks and criminals, rather than making the effort to learn about them.

We hope this short e-book helps demystify crypto assets and answers some of your questions about this fascinating technology.

WHAT ARE CRYPTO ASSETS?

A crypto asset is a **digital asset** which utilises **cryptography, peer-to-peer networking**, and a **public ledger** to regulate the creation of new units, verify transactions and secure transactions without the intervention of any middleman.

That's a big definition. Lets break it down.

Cryptography

Crypto assets are powered by cryptography, the science of secure communication. Cryptography has traditionally been used to keep secrets from adversaries, such as communicating military commands during war times. Nowadays cryptography is used to power everyday commerce, including keeping credit card details safe when making purchases over the internet. Cryptography is fundamental to the process in which crypto assets are transacted, stored and secured.

Peer-to-peer networking

Crypto assets use the internet and peer-to-peer networking to process transactions without the need for a trusted third party or middleman. This is one of the ways in which crypto assets are a breakthrough technology. If we compare transferring money through a bank transfer, we need the consent and input of both the sending user's bank and the receiver's. With the introduction of crypto assets, users can now transact peer-to-peer, without the approval of a middleman or the fees they charge.

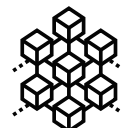
Digital Asset

Crypto assets empower participants to create, send, store and transact with unique digital assets that cannot be copied or stolen. This is another way in which crypto assets are a breakthrough technology. Let's compare a simple image stored on a computer. It is easy to copy this image many times over and send it to thousands of people. Crypto assets, through the combination of computer science and cryptography, allow us to create digital assets that cannot be duplicated. The implications of scarce digital assets are enormous.

Public ledger

Crypto assets use a public ledger or record of transactions to verify the ownership of assets. In the case of Bitcoin, all transactions ever recorded on the Bitcoin blockchain are publicly viewable. This, combined with the power of cryptography, allows network participants to verify ownership of assets.

So there we have it, easy!



Crypto assets are scarce digital assets, that are stored, secured and sent to other network participants through a peer-to-peer network across a public ledger, powered by the wonders of cryptography.

To put this definition into context, let's dive into an example: Bitcoin.

BITCOIN

Bitcoin was the first example of a scarce digital asset. Bitcoin is a unique digital asset with a finite supply that can be transacted peer-to-peer, with transactions being validated and executed through the Bitcoin blockchain.

Let's imagine that we are trying to create digital money, a pursuit which started in the early 1980s. The most important design element of digital money is preventing participants from duplicating or printing money. If this were allowed, everyone would print as much money as they like and the whole system would become worthless. With crypto assets, this problem is solved as we now have scarce digital assets.

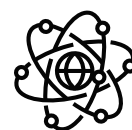


We can think of Bitcoin as digital money, or more specifically, Digital Gold. Investors from around the world have come to value Bitcoin for its unique properties, many of which are similar to gold. Gold and Bitcoin are both scarce, portable, storable and fungible. However, Bitcoin is better than gold. It is more scarce, easier to send and receive, easier and cheaper to store, easier to divide, programmable and importantly, unseizable. Bitcoin, and other Crypto Assets, are the first assets in history that cannot be seized by anyone else, including nation states or dictatorship governments.

INNOVATION

From the humble beginnings of Bitcoin in 2009, we have seen a wave of innovation that has built on the technical breakthroughs of digital scarcity and peer-to-peer networking. This innovation has led to other crypto assets with unique and valuable characteristics. We have Smart Contract platforms, where users can execute contracts automatically. We have privacy-focussed assets, allowing users to own their financial freedom and transact privately. We have collateral lending platforms, where users can borrow automatically against other crypto assets without involving a bank or financial institution.

We expect the pace of innovation will only accelerate.



What's the big deal?

The opportunity currently within crypto assets lies at the intersection of three important forces.

TECHNICAL TALENT

Many of the world's best software engineers are leaving Silicon Valley's biggest tech companies to work in the crypto industry

TECHNICAL BREAKTHROUGH

A new computing platform for trust

CAPITAL

An estimated USD 28.2bn* has been injected into crypto projects

INVESTMENT OPPORTUNITY

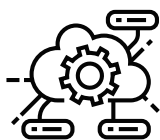
At the intersection of a groundbreaking technical breakthrough and investment of enormous amounts of human and financial capital lies one of the biggest investment opportunities of our life times.

We humbly admit that we don't know how exactly crypto assets will develop and mature. Just as we weren't sure how the revolution of the internet would play out, it is impossible to forecast the future. However, one thing is known: there is enormous potential for innovation driven by the combination of a **technical breakthrough**, vast amounts of **financial capital** and the attention of the world's **best computer scientists**.

* Source: Coindesk

Why the bad reputation?

The reason why crypto has a bad reputation is because people don't understand it - it's that simple. Crypto is a complex topic that is difficult to understand. We don't trust what we don't understand, particularly when it comes to technology. Society has seen this repeatedly throughout history, with examples including the telephone, the motor vehicle and even the internet. It is easy to forget that as recently as 20 years ago, many people were skeptical of the internet, calling it a force for evil. Eventually society develops an indifference to the technology, followed by an understanding of it, followed by an appreciation for it. Crypto's reputation has improved considerably in recent times, but there is still a long way to go. We expect this will continue as time passes and people learn about crypto assets.



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Just as I, in my portfolio, am holding about 3.5% in emerging markets, I believe that one day soon asset managers around the world will diversify with crypto

*— legendary investor Mark Mobius,
Mobius Capital Partners*

CRYPTO AND THE PORTFOLIO

Crypto Assets are fast becoming an asset class that investors cannot ignore. Crypto Assets offer tremendous return potential and low correlation to traditional assets. However, crypto assets are volatile and investors need to consider position sizing.

Correlation

Crypto Assets show low correlation to traditional assets. Apollo Capital has calculated correlation numbers since the start of 2017, covering both up and down crypto markets. The numbers are calculated from an Australian Investor's perspective. The holy grail of a new asset class in a portfolio is immense return potential with low correlation to other assets in a portfolio. Crypto assets offer both.

Position Sizing

Crypto Assets are not without risk. The technology is young and the future is uncertain. This uncertainty leads to high volatility in crypto markets. As an example, the Apollo Capital Fund has delivered monthly returns ranging from +45% to -34%.

Investors in crypto assets need to consider position sizing, that is, how much of their portfolio they allocate to crypto assets. The higher the allocation, the higher the overall volatility of the portfolio, which might be difficult for some investors. Cambridge Associates, a respected Boston-based asset consultant with nearly \$400bn of Funds Under Advice, has studied institutional allocations to crypto assets. The study suggests that of the institutions that have invested in crypto assets, they have invested 0.20% to 0.30% of the total portfolio.

**“We believe that it is worthwhile for investors to begin exploring this area today with an eye toward the long term”
–Cambridge Associates**

Australian Equities	0.04
Australian Bonds	-0.01
International Equities	0.05
US Equities	0.02
International Bonds	-0.02
Gold	0.14

Correlations of traditional assets to a crypto portfolio; Weekly data from Jan 2017 to Jun 2019

INVESTMENT OPPORTUNITY

Asymmetric Payoff

We are at the ground floor of a technological breakthrough with massive upside potential

Lack of Knowledge

Few people deeply understand this sector - including governments, business and large institutional investors

Idiosyncratic Risk

Apollo Capital has studied crypto return correlations and has found that crypto assets have shown little correlation to traditional assets

Venture Capital Investing with Public Market Liquidity

A multi-strategy fund can take advantage of long and short timeframes

Inefficiency of Immature Markets

Lack of smart money means inefficiencies are prevalent, including questionable assets with large market capitalisations.

Best Performing Asset in a Decade

Crypto assets are the best performing asset over the past 1, 3, 5 and 10 years

Hedge Against Macro Uncertainty

The global economy has amassed record levels of debt. The next financial crisis may drive significant crypto adoption given its lack of correlation with existing assets and its seizure and inflation resistant properties. Bitcoin in particular may be attractive as a 'digital gold'

INSTITUTIONS ARE COMING

Crypto markets have historically been driven by retail investors. In recent times, this has changed as institutional investors have entered the market.



Fidelity - created Fidelity Digital Assets: Institutional solutions for a new asset class, including custody and execution services.



Goldman Sachs - invested in Circle, owner and operator of crypto exchange Poloniex and other activities in crypto



ICE (Intercontinental Exchange, holding company of the New York Stock Exchange) - investor in Bakkt, Bitcoin Futures and Custody solution

J.P.Morgan

JP Morgan - rolling out first bank-backed crypto asset



Facebook - leading the Libra Association to develop a crypto asset



Harvard, Yale, Stanford, MIT, Princeton - endowments have all invested in crypto assets

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I think the fact that within the Bitcoin universe an algorithm replaces the functions of the government is actually pretty cool. I am a big fan of Bitcoin.

— Al Gore

More information

Apollo Capital is an actively managed crypto fund offering sophisticated investors the ability to easily and securely invest in this promising asset class. Based in Melbourne, Australia, the Fund is run by a team of professionals experienced in both crypto markets and traditional financial markets.

For more information about crypto assets or the Apollo Capital Fund, please feel free to contact Tim Johnston, Managing Director.

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