Bitcoins and Bubbles

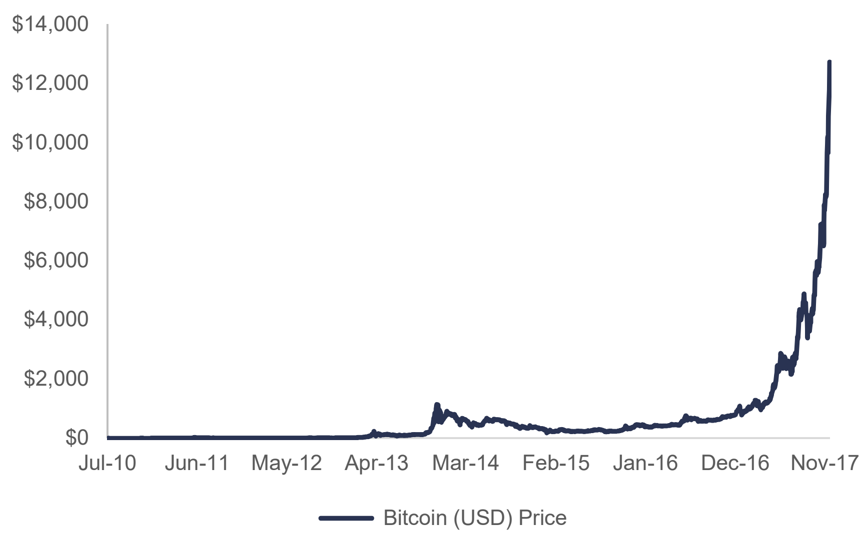
Leo J. Kelly III, CFP, CBEC
Chief Executive Officer, Partner
lkelly@verdence.com

Megan Horneman
Director of Portfolio Strategy
mhorneman@verdence.com

The Impressive Rise of Bitcoin

In recent weeks, we have witnessed the surge in Bitcoin prices and listened to the countless arguments about its true value and the future of the virtual currency market. Over the past year alone, Bitcoin prices have increased over 1,500% to a record high (of over $12K per U.S. dollar) (chart 1).[1] Its market cap is now ~$220 billion which may be a fraction of the global FX market (which trades in excess of $5 trillion per day) but its market cap now surpasses the economies of Portugal, New Zealand and many U.S. companies like UnitedHealth Group, Pfizer and Verizon. To put the increasing interest in perspective, research searches for Bitcoin on the internet have surged past the searches for Donald Trump (chart 2)!

Chart 1: Bitcoin Rises to Record High



Footnotes: Data as of December 6, 2017.
Source: Bloomberg Finance LP, Verdence Capital Advisors.

Proponents of Bitcoin argue this is the new world of financial exchange while others rule it is an "experimental concept" with extensive risk and high volatility.[2] Before sharing our opinion on Bitcoin, it is important to understand what Bitcoin is and what has driven it to a record high.

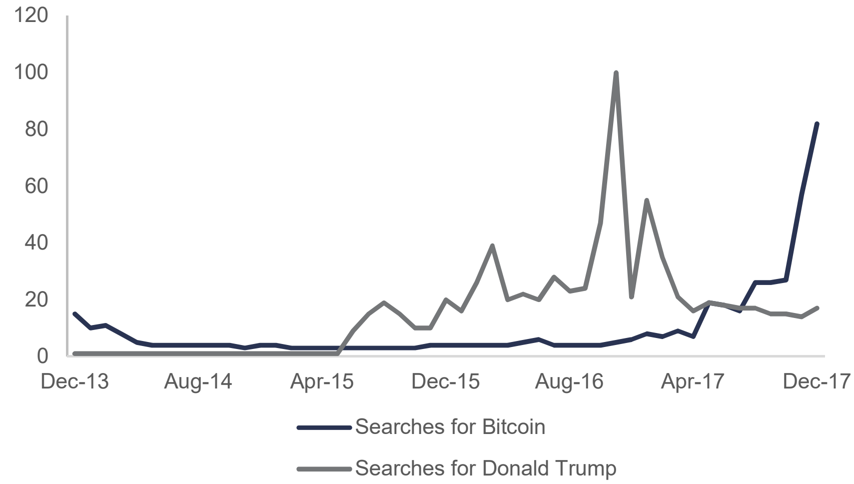
What is Bitcoin?

Bitcoin was released in 2009 as a user-to-user worldwide payment system and is one of many "cryptocurrencies" in existence today. A cryptocurrency is a way of digitally exchanging currency. Bitcoin is decentralized, meaning that there is no issuing authority or intermediary. It is not regulated by any government agency, not insured, nor backed by any governmental body.

How does Bitcoin Work?

Bitcoin is an electronic way to send money to individuals and businesses using a "digital wallet" on a computer or mobile device. In essence, Bitcoin is a technology that is being marketed as a currency. Each "digital wallet" is anonymous. It does not include an individual's name, instead a wallet ID. While the list of retailers that accept Bitcoin seems to be growing, it is important to note that the majority of retailers are small companies, internet related social websites (e.g. OKCupid) or domain registrars (e.g. Namecheap) and most likely convert Bitcoins to another currency.

Chart 2: More Interest in Bitcoin Than Trump!



Footnotes: Data is monthly and December data is estimated as of December 5, 2017. According to Google Trends, the value represents search interest relative to the highest point on the chart for the given region and time. A value of 100 is the peak popularity for the term. A value of 50 means that the term is half as popular. Likewise a score of 0 means the term was less than 1% as popular as the peak.
Source: BCA, Google, Verdence Capital Advisors.

Is Bitcoin a Currency?

Hypothetically, let's consider a business that has decided to accept and do business completely in Bitcoin as opposed to dollars. For illustrative purposes the company is called Al's New and Used Cars Inc. Al has a certain model of car that he sells for $50,000 USD. Approximately a year ago, Al would have accepted 50 Bitcoins for one car. He would take those Bitcoins and pay off his floorplan debt, pay salaries, purchase inventory and make capital improvements. All along depending on the fact that others would accept Bitcoin as currency. One year later, Al only receives four Bitcoins for the same car. Al is relying on these four bitcoins to pay his bills. If the price of Bitcoin drops back to where it was 12 months ago, Al is out of business. If one of his debt payments is due the day Bitcoin drops 20%, Al's profits are wiped out and his business in jeopardy. Al is now selling cars for his competitor who stayed in dollars. There is a difference between a speculative asset and a currency. Bitcoin has a long way to go before it is a currency.

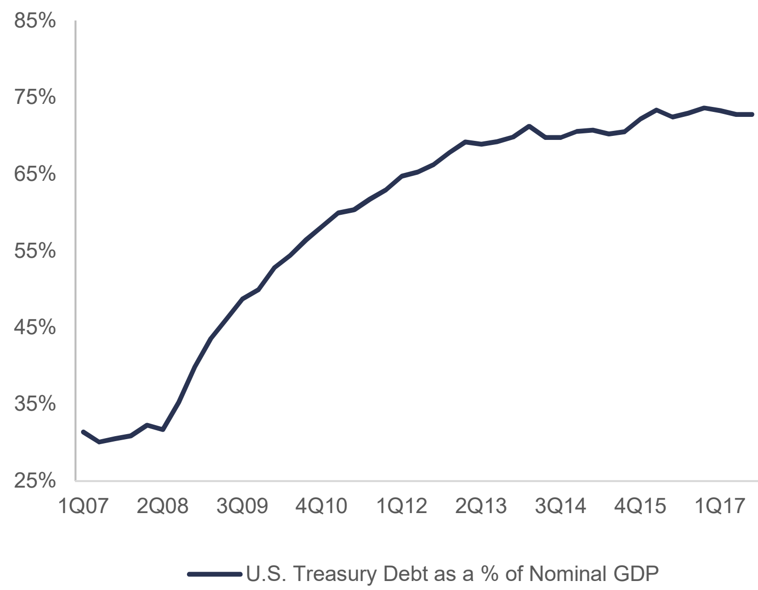
How are Bitcoins Created?

Bitcoins are created using a blockchain algorithm with the help of "miners." A blockchain in its simplest form is a public ledger which records all Bitcoin transactions in chronological order, using cryptography to encrypt them and then distributes them to all Bitcoin users to ensure the validity of the transactions which avoids double spending. The "ledger" is considered an "open source." It is not maintained by one individual or entity, instead it is controlled by thousands of users called "miners." These individuals are solving complex math problems that verify and collect the Bitcoin transactions in a process called "mining." In exchange for maintaining the ledger, "miners" receive Bitcoins, ultimately creating more Bitcoins. The number of Bitcoins that are issued as a reward to "miners" decreases over time (which reduces the incentive to become a "miner") and the maximum number of Bitcoins that can be issued is 21 million (currently ~17 million are in existence)[3]. A simple way to explain blockchain is rather than building a wall around one location and storing the data, put it in 20,000 locations that constantly verify the information ("the miners"). By doing this, a hacker must compromise 20,000 locations simultaneously to break the security, an unlikely event.

What is driving Bitcoin to Record Highs?

One of the reasons behind Bitcoins creation and most recent surge has been that investors are growing concerned about the debt levels of the major economies. For example, U.S. Treasury debt has increased from ~30% of nominal GDP at the start of the Great Recession to ~80% currently (chart 3). In addition, as central banks begin to unwind the nontraditional monetary policy (i.e. quantitative easing) that was crucial to stabilize their economies in the aftermath of the Great Recession, investors are concerned about the stability of many major global currencies. Lastly, given the increased demand for Bitcoin there are some major exchanges (e.g. CME Group) that are offering Bitcoin futures. This has only fueled the speculative demand for the "cryptocurrency" as investors believe institutional investors and hedge funds will serve as ongoing support for the virtual currency market.

Chart 3: U.S. is an Indebted Nation



Footnotes: Data as of 3Q17.
Source: Bloomberg Finance LP, Verdence Capital Advisors.

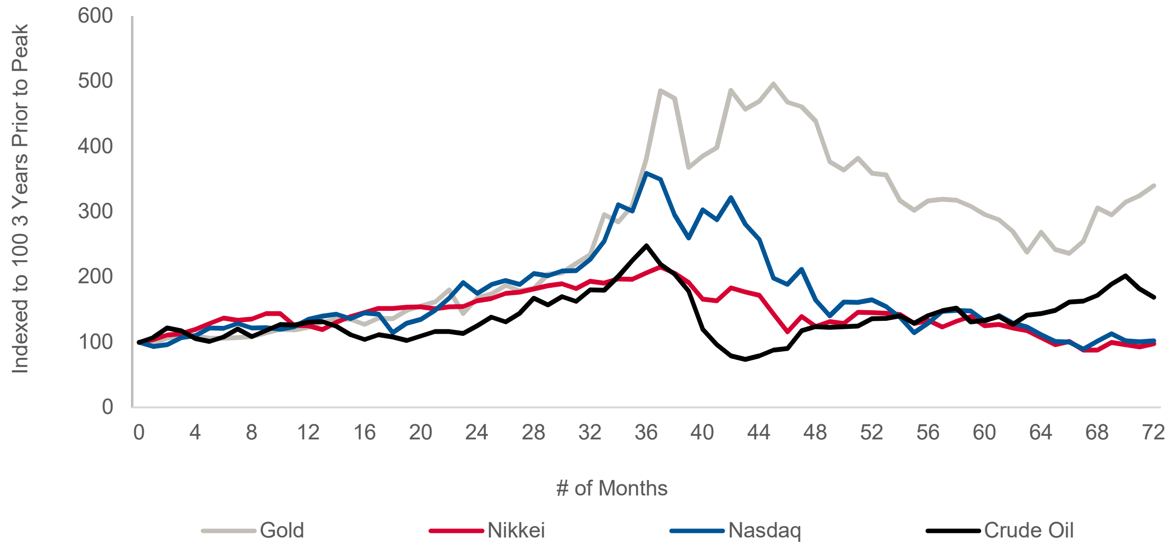
Is Bitcoin a Bubble?

It is also important to understand the true dynamics of a "bubble." A "bubble" is defined as a "rapid escalation" of an asset price which has little, if any, fundamental justification. There tends to be three stages of a bubble:

1) **The Quiet Grind Higher:** "Bubbles" tend to start with an investment that carries significant investor skepticism. The beginning movement in the investment may be impressive but tends to go unnoticed.
2) **The Crowd Joins In:** The next stage is acceptance of the investment and more investors are pulled to the asset. Here is where perfect timing and the environment are critical.
3) **Greed Rears its Ugly Head:** The third and final leg is the most important and most dangerous in a "bubble." Once the asset soars, investors abandon a disciplined approach to pricing assets and are now buying the return, not the asset. This tends to be subtle at first, but becomes clear as the bubble matures.

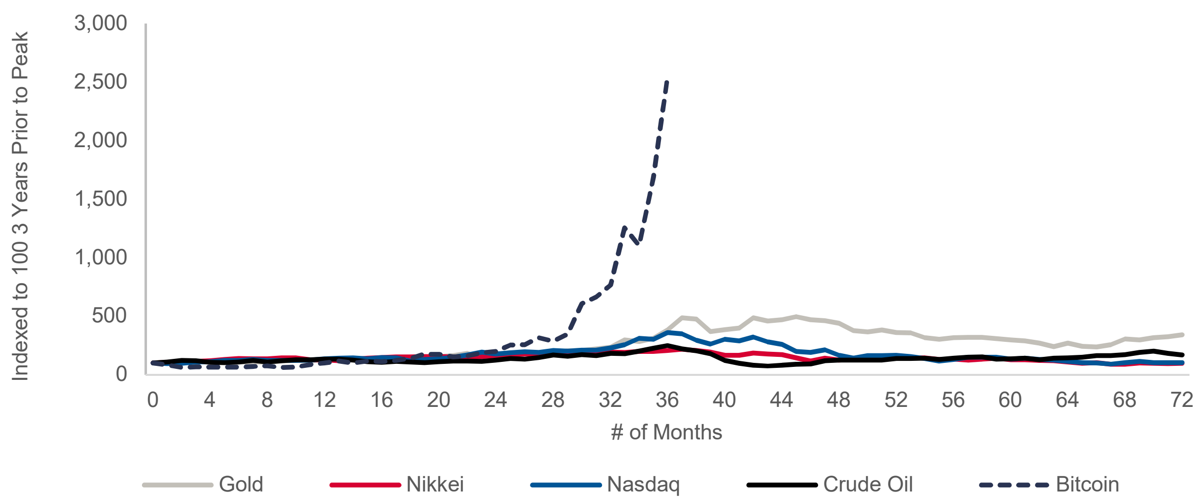
If one were to look at the pricing action of Bitcoin in recent months and compare it to past "bubbles," it is difficult to argue that Bitcoin does not reflect the traditional characteristics of a bubble. If you look at Bitcoin over the past three years and compare it to the run up in the three years prior to the peak of past bubbles (chart 4 and 5) such as gold (1980s), Japanese stocks (late 1980s), internet stocks (2000) and crude oil (2008), Bitcoin's rally is extraordinary.

Chart 4: A Look at Historic Bubbles



Footnotes: Data is monthly and taken from three years prior to peak in investment and three years after the peak.
Source: Bloomberg Finance LP, Verdence Capital Advisors.

Chart 5: Past Bubbles Compared to Bitcoin



Footnotes: Data is monthly and taken from three years prior to peak in investment and three years after the peak. Bitcoin is as of November 30, 2017.
Source: Bloomberg Finance LP, Verdence Capital Advisors.

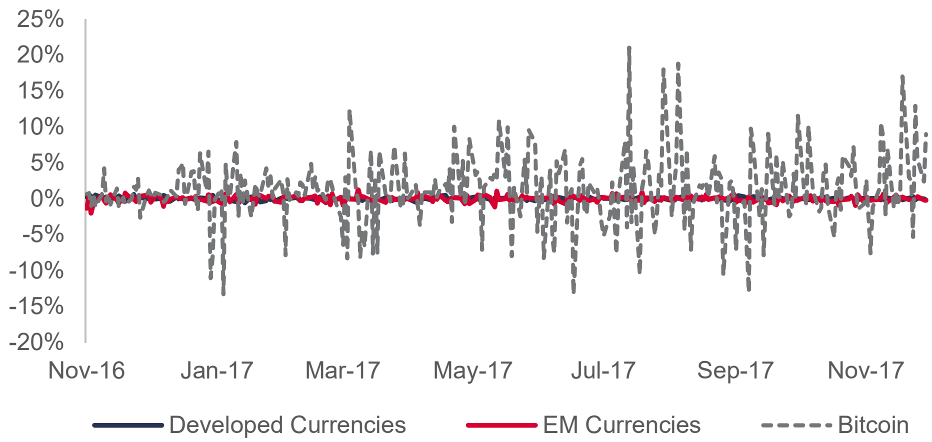
The Technology Behind Bitcoin May be the Ultimate Home Run

While Bitcoin itself may exhibit “bubble” characteristics, it does not necessarily mean the technology behind the way Bitcoin virtually transfers money (i.e. blockchain) does not have value. The blockchain technology anonymously secures the holders of their “currency” and trades it amongst users. This could have immense value and many technology companies are moving to develop this technology for uses in business and finance. As a result, Bitcoin may not even exist in its current form in the future as more and more companies use the underlying concept (i.e. blockchain) to enhance their own businesses. Take Google, for example, it is considered the most visited website in the world. However, Google was barely known until the aftermath of the dotcom bubble because it enhanced its search engine capability by learning from the technology that other search engines used during the tech bubble.

Verdence View on Bitcoin

In our view, Bitcoin is a concept that uses the complexities of algorithmic math, some technological quantitative mathematicians and the growing use of the internet as a way of transacting daily life (e.g. paypal, web banking etc). However, Bitcoin has no fundamental store of value which is necessary to be considered a currency or commodity and is extremely volatile. In order to supplant the U.S. dollar, the Euro or the Yen, a currency must hold value in all types of stress and turmoil. It is hard to say that the daily swings Bitcoin has experienced since inception satisfies this standard. Since September 1 (2017), the average intraday drawdown (the high to the low) in Bitcoin is ~7%, this is significantly higher than the Dollar Index which has seen an average intraday drawdown of less than 1% during the same time period. In addition, the average daily price change in Bitcoin is significantly more volatile than the developed currencies and the emerging market currencies (chart 6). With no earnings, no tangible product and no valuation, Bitcoin is simply an experiment that is testing the appetite of individuals for an advanced technological payment system, it is not a currency and is currently not widely used to transact business.

Chart 6:Bitcoin Volatility Compared to Other Currencies



Footnotes: Data is the daily price change as of December 5, 2017. Developed currencies are an equal weighed average of the Dollar Index, the Euro and Yen. The emerging market currencies is the JPMorgan Emerging Market Currency Index.
Source: Bloomberg Finance LP, Verdence Capital Advisors.

The Risks in Bitcoin

With global equities at record highs, yields stubbornly low and returns becoming more difficult to obtain, it is not surprising that investors would be looking for the next major technological advancement. At these early stages, Bitcoin may be a dangerous way to search for returns. It is important to reiterate that Bitcoin is not insured, not centralized, not regulated and has been known to be a commonplace for illegal activities (e.g. gambling, drug trafficking, terrorism). In addition, Bitcoin has little correlation to major asset classes and is also at risk of government scrutiny, especially as exchanges adopt trading the virtual currency. In fact, Randy Quarles, the new Vice Chairman for Bank supervision expressed his concern over Bitcoin recently, calling it "dangerous for the financial system." On the day of his comments the price of Bitcoin fell over 15% intraday. Even China restricts their financial institutions from handling Bitcoin transactions.

Bottom Line

As with any speculative asset moving at the speed that Bitcoin has experienced, it is impossible to determine how high the asset can go as more and more speculators enter the market. In historical "bubble" scenarios, the asset ascends far beyond any possible expectation and ultimately crashes further than any possible explanation. As a result, we would not recommend the product. At this stage of the economic cycle and with equities moving towards their 10th year in the current bull market, we remain committed to active management as a safer way to seek alpha in the current environment. We will continue to assess the development of the entire cryptocurrency market, more specifically the blockchain technology, but at this time would be hesitant to recommend entering this space.

[1] *Data as of December 6, 2017.*
[2] *Consumer Affairs and Business Regulation*
[3] *As of December 1, 2017.*