Bitcoin, Cryptocurrencies and Blockchain

A Technology and Financial Services Sector Report

- We continue to believe cryptocurrencies are highly speculative.
- Edward Jones does not offer a way to purchase or hold cryptocurrencies, or futures contracts on cryptocurrencies.
- Edward Jones does not offer a way to purchase cryptocurrency-related funds, ETFs or ETNs that own cryptocurrencies directly.

For more information:

If you have any questions, please contact your local Edward Jones advisor, or write to: Edward Jones, 90 Burnhamthorpe Road West, Sussex Center, Suite 902, Mississauga, ON L5B 3C3.

The price of bitcoin remains volatile, as investors have watched the world's largest cryptocurrency drop approximately 50% in less than one year[1] only to rally back over 60% in 2023. The volatility is generating headlines on a regular basis and interest with investors. We continue to view bitcoin and other cryptocurrencies like ethereum, XRP and dogecoin as high-risk, speculative investments that are not suitable for most investors. In addition, these digital assets lack key characteristics that typically provide a steadier and more predictable price pattern, such as stable long-term supply-and-demand dynamics and transparent regulatory oversight. **We continue to believe prices for cryptocurrencies will remain extremely volatile for the foreseeable future, and we view any investment in cryptocurrencies as highly speculative at this time.**

What's driving the near-term volatility in bitcoin?
Although it's not totally clear why the cryptocurrency volatility continues, price swings seem to follow the overall increase or decrease in risk appetite among investors. When bullish sentiment is high, riskier assets tend to outperform, and vice versa. Cryptocurrency is no exception.

We believe bitcoin's price will remain volatile
After rising over 1,200% in 2017 to just over $19,000 per bitcoin, the cryptocurrency cratered the following year, dropping 84% to $3,200 per bitcoin (see Figure 1). Bitcoin's rise in 2017 far surpassed previous bubble peaks, such as the dot-com bubble of the late 1990s and the U.S. housing-market bubble of the late 2000s. In late 2020, we once again saw another massive upswing in bitcoin, only to be followed by more unpredictable price volatility towards the end of 2022 and into 2023. We believe bitcoin's subsequent price volatility will continue for the foreseeable future given the significant risks associated with cryptocurrencies.

Risks to investing in bitcoin and other cryptocurrencies
Unlike an investment in a stock or mutual fund, there are no underlying fundamentals (cash flows, profits, etc.) to support the valuation of any given cryptocurrency. Other risks include price manipulation by unknown market participants, the potential for government interference, and competition from other cryptocurrencies.

Analyst: Logan Purk, CFA
Analyst: David Heger, CFA

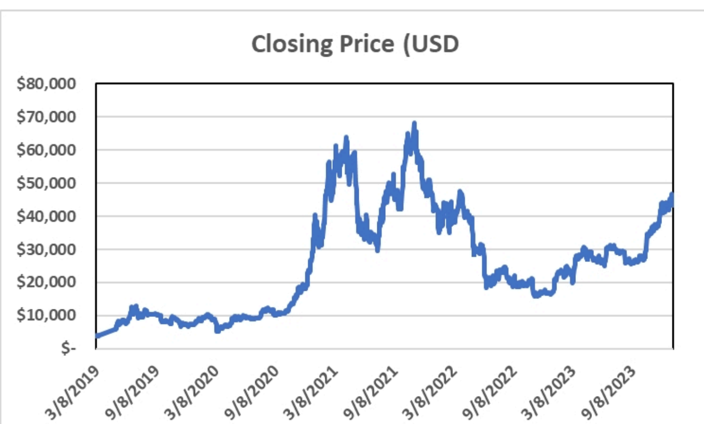
Can Bitcoin Become a New Currency?

It is a common argument that bitcoin can be a replacement for fiat currencies, such as the dollar, and upend typical currencies around the world. However, we do not view this as likely, and we maintain our view that cryptocurrencies, including bitcoin, are speculative investments that are not suitable for most Edward Jones clients. We think widespread use of bitcoin is limited by several factors.

Bitcoin Price Volatility, Fees and Approval Times Limit Use

While cryptocurrency apps and wallets have gained in popularity more recently, using bitcoin as a currency faces several headwinds. First, the extreme price volatility **(Figure 1)** of bitcoin has made it difficult to use it for daily transactions. Bitcoin prices can change dramatically day-to-day, increasing the risk to both parties in a bitcoin transaction. This has limited the widespread acceptance of cryptocurrencies as a form of payment. Second, fees and taxes also need to be considered when purchasing and selling cryptocurrencies. For example, cryptocurrencies are treated as property, so holders are subject to capital gains taxes when they sell it. Additionally, the average fee per bitcoin transaction can fluctuate dramatically and has been as high as $63 in recent years. High taxes and fees make bitcoin unsuitable for most daily purchases. Finally, approval times for bitcoin are around 10 minutes (Source: Coindesk) and can stretch into hours when network congestion is high. This approval time is built into the bitcoin protocol, so it is not easy to change.

Figure 1. Bitcoin price volatility



Source: FactSet. Past performance is no guarantee of future results. Bitcoin's last price is as of January 10, 2024.

Cryptocurrencies Are Not Hard Assets

A unique characteristic is that digital coins are not backed by any physical assets. For example, gold and silver prices are tied to a physical asset that is used to make goods. While commodity prices do fluctuate, there is an inherent value, or utility, to the underlying commodity given its use in various end-markets or products. Cryptocurrencies do not have this characteristic. Their price is inherently driven by what the next investor is willing to pay for a particular digital coin, which further adds to their speculative nature.

Cryptocurrencies Lack Price Support

A defining characteristic of a fiat currency is that it is supported by a government body, such as the dollar and the Federal Reserve. This is important because it more or less guarantees the value of the underlying currency. Governments strive for stable currencies to support the overall health of the economy. Cryptocurrencies, with no ties to physical assets or support from a governing body, have a theoretical price of zero.

If Cryptocurrencies Aren't Currencies or Hard Assets, What Are They?

In our view, cryptocurrencies are speculative digital products built upon blockchain technology. Our main concern is that it is next to impossible to arrive at an intrinsic value of various cryptocurrencies, given they produce no cash flows and offer no physical utility. In our view, the price of most cryptocurrencies is determined solely by what the next investor is willing to pay for them. This only fuels the speculative nature of these digital assets. We believe bitcoin prices will continue to be volatile.

The Bull Case for Bitcoin

There are several points that many investors use as the backbone of why they believe bitcoin should increase in value. Below we will discuss the main points regarding the bull thesis for bitcoin.

1) Scarcity Equates to Value

Since the current bitcoin protocol limits the total outstanding bitcoins to 21 million[1], some investors argue this means its value will be maintained in perpetuity because there is built-in scarcity. However, we caution painting with broad strokes like this because we do not believe it is this simplistic. Bitcoin resembles other collectibles like art, baseball cards or comic books. Even though there are many pieces of art that are technically scarce, they do not all have value. Bitcoin is similar to art in this way: It has value because there is a perceived value, not solely due to scarcity. This ties back to our belief that the price of bitcoin is determined solely by what the next investor is willing to pay for it.

2) Bitcoin Is the New Store of Value and Will Equal the Market for Gold

Another popular argument is that since the market capitalization of gold is approximately $13 trillion[2], and bitcoin is approximately $520 billion[1], the difference between the two is the upside. We think the comparison to other commodities based purely on market value is difficult. Other precious metals (gold, silver and platinum) have served as stores of value, but also have some use in end-market applications. These metals have long track records of holding value, with the case of gold stretching back thousands of years. We also view a majority of bitcoin ownership being driven by speculation that prices will go meaningfully higher, not as a store of value of that investment.

3) Bitcoin and Blockchain Are Ideal for Remittance Payments

Remittance payments, also known as cross-border payments, are the ideal application for blockchain and bitcoin. Sending larger sums of money around the world is usually expensive, time consuming, and can involve multiple banks and systems. Conversely, an individual can perform the same transaction for under $100 and in 10 minutes using blockchain technology. Even though this is an appealing feature, we note this is a feature of blockchain and not dependent on bitcoin. A blockchain like this could be replicated that is based on coins linked to a hard currency, offering the same benefits as the bitcoin blockchain with the advantage of being tied to real currencies.

Cryptocurrencies and Illegal Activity

While it is true that cryptocurrencies, like bitcoin, have been used for illegal activities, the scope is widely overstated based on statistics. The largely discrete nature of bitcoin transactions makes them appealing for illegal activities since there is no requirement for a name, address or social security number to receive electronic payments. According to a report from Chainanalysis, illegal activities made up about 0.34% of all cryptocurrency transactions in 2020, down from 2% a year earlier. This equates to about $5 billion. For perspective, the UN estimates that $1.6 trillion-$4 trillion is tied to illegal activity globally. So while cryptocurrency is used for illegal activities, the amount is not as widespread as some may think.

The Potential of Blockchain Technology

Bitcoin is the product of a technology called blockchain. The original intent of blockchain was to enable peer-to-peer digital payments that do not require a trusted third party, such as a financial institution. The problem blockchain solves is assuring the recipient of a digital asset and that the asset is wholly and directly transferred (as opposed to copied and then transferred), thereby eliminating the possibility of digital double-spending and the need for a third party to verify peer-to-peer digital transactions. Blockchain technology has many potential applications, including 1) regulatory recordkeeping of any sort (health history, land title, etc.), 2) financial transactions or transfers of value (payments, loans, etc.), 3) personal control of online identity, 4) supply-chain optimization, and 5) consumer-royalty programs.

Will There Be a Central-Bank Digital Currency in the U.S.?

We think the excitement and wider use of cryptocurrencies likely results in two outcomes: further innovation and more regulation. In terms of innovation, we think many governments will look to develop digital coins based on their underlying currency, commonly referred to as a central-bank digital currency (CBDC). This increases the ease of payments and security due to the use of blockchain, as well as digitizes hard currencies. China has been a first mover in this regard, and we believe the U.S. government will not be far behind. In January 2022 the U.S. Federal Reserve published the report "Money and Payments: The U.S. Dollar in the Age of Digital Transformation" as a first step in a broad and transparent public dialogue about CBDCs. The Federal Reserve is also involved in several exploratory projects to investigate the feasibility of a CBDC used by an economy the size of the U.S. There are many outstanding questions around the benefits and risks of a CBDC; however, the Federal Reserve has stated that a CBDC would complement rather than replace current forms of money. Additionally, any CBDC would need to strike an appropriate balance between safeguarding the privacy rights of consumers and affording the transparency necessary to deter criminal activity. To date, no decisions have been made on the creation of a CBDC in the U.S., and it would take Congressional approval.

In terms of additional regulation, given the increased use among retail investors, we do believe cryptocurrencies will face heightened regulatory scrutiny. The ultimate outcome is unknown, but could take the form of higher taxes or fees and possibly trading limits.

The Mechanics of Blockchain
Blockchain is a digital ledger, or record, of transactions managed by a decentralized network of computers. Each computer on the network has a copy of the ledger. In order to make a ledger entry, a special type of computer ("miner") must solve a mathematical puzzle and, in doing so, expend energy in the form of electricity. For a set of ledger entries ("block") to be successfully added to the blockchain, all computers on the network must agree that the entries are accurate, which they are able to do because they each have a copy of the ledger. If they all agree, then the block will be added, and the miner is rewarded in the form of bitcoin. If not, the miner has expended useless energy. In this way, miners are incentivized to add valid transactions to the ledger, removing the need for a central trust authority.

Risks to Investing in Cryptocurrencies
While blockchain solves an important technology problem, the value of any given cryptocurrency remains highly uncertain. Cryptocurrencies such as bitcoin, ethereum, XRP and dogecoin have all exhibited significant price fluctuations due to these high levels of uncertainty. In addition to price risk, there are other risks to investing in cryptocurrencies, such as loss of the device storing the digital asset, potential for government interference, competition from other cryptocurrencies, and lack of historical track record. Also, cryptocurrencies are not common stocks of companies and do not trade on stock exchanges. Edward Jones does not offer a way to purchase or hold cryptocurrencies, or future contracts on cryptocurrencies. It's also important to note that money launderers and other criminal organizations often use cryptocurrency to launder illicit funds. Finally, each cryptocurrency is unique and claims to offer some sort of service or utility to the market. However, not all, if any, will be useful or valuable in the future. Unlike an investment in a stock or mutual fund, there are no underlying fundamentals (cash flows, profits, tangible assets, etc.) to support the valuation.

Be Aware of Companies Taking Advantage
Several small publicly traded companies have recently rebranded their businesses to take advantage of the growing interest in cryptocurrency, even though their actual underlying business strategies have little or nothing to do with blockchain technology or cryptocurrencies.

New Investment Products Beginning to Emerge
Several investment companies have begun introducing cryptocurrency-related products that are either tied to one specific cryptocurrency or a basket of cryptocurrencies. These products are usually tied to futures contracts for a particular cryptocurrency. This means the investment vehicle will track the price of the underlying cryptocurrency relatively closely, but does not own any coins.

In January of 2024 the SEC approved 11 different exchange-traded funds (ETFs) that track the spot price of bitcoin. Investors will not own individual bitcoins when purchasing ETFs, but will simply own an asset that tracks the value of bitcoin. These ETFs will be listed on major exchanges and allow investors to trade them just like stocks. These reduce potential friction with buying bitcoin because ETFs can be bought through various financial institutions versus the traditional method of funding a wallet on a cryptocurrency exchange, and investing through that exchange.

Even though costs are likely higher with ETFs, we believe there is less risk given large financial institutions face a lower risk of being hacked or having liquidity issues. The approval of the ETFs gives some credence that the SEC will remain somewhat hands-off when it comes to cryptocurrency regulation. While this is likely to drive some near-term price appreciation for bitcoin and other cryptocurrencies, we do not believe these products will mark a drastic inflection point for ownership or the performance of bitcoin.

What Is Edward Jones' Guidance?
While we believe blockchain technology has significant promise, we view any investments in cryptocurrencies as highly speculative. We recommend following time-tested investment principles and avoid letting the "fear of missing out" impact your long-term investment strategy.

[1]Source: Coindesk
[2]Source: Bloomberg

Analyst Certification

I certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers; and no part of my compensation was, is, or will be directly or indirectly related to the specific recommendations or views contained in the research report.
Logan Purk, CFA; David Heger, CFA

Required Research Disclosures

Analysts receive compensation that is derived from revenues of the firm as a whole which include, but are not limited to, investment banking revenue.

Other Disclosures

This report does not take into account your particular investment profile and is not intended as an express recommendation to purchase, hold or sell particular securities, financial instruments or strategies. You should contact your Edward Jones Financial Advisor before acting upon any Edward Jones Research Rating referenced.

All investment decisions need to take into consideration individuals' unique circumstances such as risk tolerance, taxes, asset allocation and diversification.

It is the policy of Edward Jones that analysts or their associates are not permitted to have an ownership position in the companies they follow directly or through derivatives.

This opinion is based on information believed reliable but not guaranteed. The foregoing is for INFORMATION ONLY. Additional information is available on request. Past performance is no guarantee of future results.

In general, Edward Jones analysts do not view the material operations of the issuer.

Diversification does not guarantee a profit or protect against loss in declining markets.

Special risks are inherent to international investing including those related to currency fluctuations, foreign political and economic events.

Dividends can be increased, decreased or eliminated at any time without notice.

An index is not managed and is unavailable for direct investment.

Member - Canadian Investor Protection Fund