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**OnWatch**

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# BITCOIN AND THE BLOCKCHAIN

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Five years ago, virtually no one asked about bitcoin or blockchain technology. Today, it's a question my colleagues and I hear frequently. Previously a topic reserved to internet forums and technology circles, cryptocurrency is now a mainstream topic.

The "blockchain" technology underlying cryptocurrencies, including bitcoin, may ultimately be much more important to the financial services industry and investors than the fluctuating price of the electronic currency.

Before addressing the promise of that technology, the history of bitcoin may provide helpful context. Bitcoin was launched in 2009 as the first form of electronic cash. It was designed to play the same function that a traditional fiat currency does—as a store of value and a medium of exchange for purchasing goods and services. Fiat currencies like the dollar and yen are backed by users' faith in the issuing governments and central banks that control their supply. Bitcoin has no central authority governing its value and the supply is controlled by a digital infrastructure that limits the number of coins in circulation.

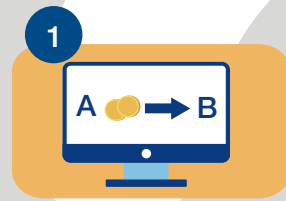
Because bitcoin only exists online and has no central authority regulating it, it can be used anonymously and across borders without regard to currency conversion or capital controls. The first real-world transaction using bitcoin was to buy two pizzas in Florida in 2010. Less innocuous uses of bitcoin soon flourished, with the cryptocurrency used to purchase illegal drugs and weapons in online black markets. The FBI shut down the largest such marketplace, Silk Road, in 2013, but large-scale criminal enterprises involving bitcoin continue to proliferate. For example, well-respected security researchers at FireEye Inc. recently concluded that North Korea is using bitcoin to evade

## About Sentinel Trust Company

Sentinel Trust Company, LBA is an independent wealth management firm and multi-family office that provides comprehensive wealth and succession planning, fiduciary, investment management, philanthropic, and family office services to a select group of affluent families and their closely held entities and foundations. Founded in 1997 as the successor to two 40-plus-year old single-family offices, Sentinel Trust currently serves more than 30 multi-generational families nationwide and is responsible for approximately \$4 billion in assets as of December 31, 2017.

Learn more at [www.sentineltrust.com](http://www.sentineltrust.com).

# How Blockchain Works:



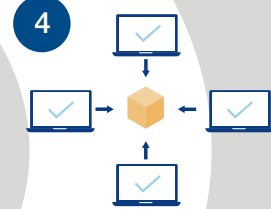
1  
Person A wants to send money to Person B.



2  
The transaction is represented online as a "block" in the shared ledger.



3  
The transaction is broadcasted to every party in the network.



4  
The parties in the network validate the transaction as valid.



6  
The money moves from Person A to Person B.



5  
Now the block can be added to the blockchain, which results in a permanent and uneditable transaction.

international sanctions.

A handful of popular US companies now accept bitcoin, including both Expedia.com and Overstock.com. Many mom-and-pop stores in developing countries like Mexico have also adopted it since large segments of the population live outside of traditional banking systems and the value of the fiat currency has historically been unstable.

## Blockchain

For all the headlines about bitcoin's dramatic price changes, the underlying blockchain technology is potentially more revolutionary for business and investors.

Blockchain was developed by the anonymous inventor of bitcoin to solve a problem that had plagued previous attempts at creating a digital currency: how to ensure one unit of currency is not spent twice. The internet makes it easy to copy and distribute the same file over and over, which would destroy the value of digital money.

A blockchain is a type of ledger for tracking ownership and transactions. It replaces the verification played by trusted third parties with a decentralized, public, cryptographically secure digital record called a "block."

Consider the process of buying a house. The buyer transfers cash to an escrow account, where a third party verifies that the amount is correct. The escrow agent holds the funds until the date when the buyer and seller execute paperwork to transfer title. Then, the funds are released from escrow to the seller's account. Another third party, the title agent, files the new deed with the authorities to show ownership.

With a blockchain system, the buyer transfers funds directly to the seller. The transaction is verified by creating a new block with cryptographic security so the details of the transaction (time-stamp, amount, etc.) cannot be altered. The block is public and everyone with the blockchain software installed can see the transaction, even though the parties' identities are anonymous.

Because everyone in the blockchain network has this new block, its validity is established by consensus. No one can change the block without every other user changing the block as well.

The advantage of a blockchain system is that it reduces the time and cost of transactions and removes the gate-keeping role played by financial institutions.

Because the first blockchain was established to facilitate a digital currency, the two are often linked. However, emerging applications of blockchain do not involve a cryptocurrency. For example, IBM and the shipping company Maersk have launched a blockchain solution for supply chain management. The World Food Programme is also using a blockchain program to establish the identification of refugees who qualify for aid. Many industries are pursuing blockchain applications.

## Other Cryptocurrencies

In the nine years since bitcoin emerged, over 1600 new cryptocurrencies have

been developed. The major ones were developed to solve technical problems unaddressed by bitcoin or to expand on the kind of transactions a blockchain can handle beyond straightforward purchases and sales of goods and services.

Ether is the second largest cryptocurrency and has its own blockchain program called ethereum. Unlike bitcoin, where the coin itself is used as a form of payment, ether is used to “pay” the computers executing an operation as a form of authentication. The ethereum blockchain is best known for the development of smart contracts.

Think of a call option for stocks. A call option is a contract between two parties who agree that one party has the right to buy a certain stock from the other for a predetermined price (the strike price) by a predetermined date (the expiration). If the market price of the stock exceeds the strike price, then the buyer of the call option executes the contract to buy stock more cheaply from the counterparty. The buyer then sells at the market price, keeping the difference as profit. Call option contracts currently require several third parties to monitor and facilitate settlement of transactions.

A smart contract would have the variables for the stock ticker, price and date pre-programmed. It would automatically track the value of the strike price relative to the value of the market price and execute the transactions without human involvement.

The parties involved with the smart contract pay ether coins to the blockchain program to verify their agreement to the contract and prevent the blockchain from being littered with junk contracts. In this case, the value of the ether coin is derived from the adoption of the ethereum blockchain. Many of the newer cryptocurrencies function in this way and are better thought of as authentication tokens instead of replacements for cash.

## Trading

Cryptocurrencies are not traded on major exchanges like the New York Stock Exchange or NASDAQ. There are cryptocurrency-specific online exchanges with varying levels of trading activity. Some only foster trading for the major coins and others specialize in the more esoteric coins. Setting up an account

on these exchanges requires more tech savvy than a standard online brokerage account.

The Securities and Exchange Commission does not regulate cryptocurrency exchanges and has previously rejected applications for publicly-traded cryptocurrency exchange traded funds.

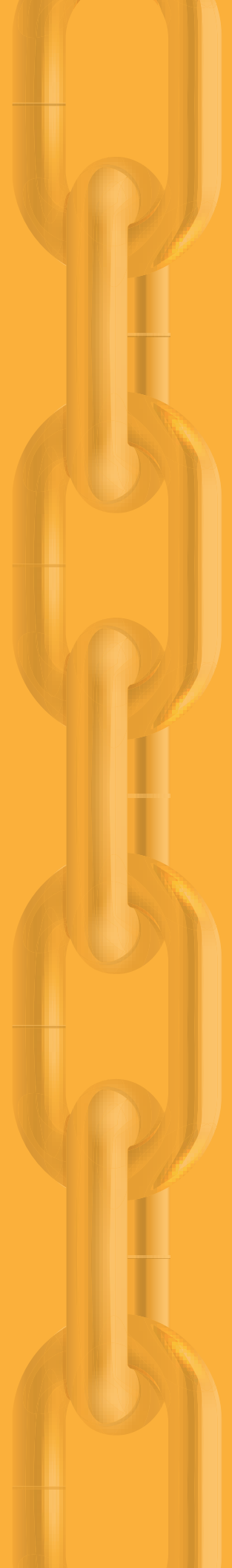
## Risks

The tax and regulatory frameworks for cryptocurrency are evolving more slowly than the underlying technologies. As of this writing, the IRS’ standing guidance is from 2014. It classifies cryptocurrencies as property subject to capital gains tax. However, the guidance is not clear on how to handle gains from cryptocurrencies used in a transaction or whether the like-kind exchange rules can be applied to these assets. “Miners,” who earn cryptocurrencies by validating blockchain transactions, are required to report the value of earned coins as income.

In addition to compliance risks, holding cryptocurrencies is also subject to risk of theft or loss because none of the major asset custodians currently accept the coins on their platforms. An owner of cryptocurrencies has to consider how and where to custody the coins. Holding cryptocurrencies in a virtual wallet associated with a cryptocurrency exchange subjects the owner to hacking risk. In 2014, the largest bitcoin exchange, Mt. Gox, was hacked and \$473 million of bitcoins were stolen from users’ virtual wallets. Alternative forms of storage (“cold storage”) that are not connected to an exchange have emerged to mitigate this risk but do not exist without other perils.

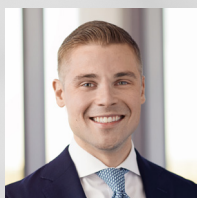
Some financial advisors liken cryptocurrencies to early stage venture capital investments. Indeed, many private equity managers we work with are taking an interest in companies that are leveraging the underlying blockchain technology to create new products and services, an investment topic we find much more compelling than following the daily price movements of the cryptocurrencies.

We will eagerly continue to watch the development of blockchain technology and consider its impact on the investment community.



# HOW TO BE A GOOD FOUNDATION TRUSTEE

**It is not a coincidence that the root of the word “trustee” is trust.**



**DAVID ZAHN, CPA, CFP®**  
*Vice President and Shareholder  
Senior Relationship Officer*

There are many reasons why someone would become a trustee (or director) of a foundation. Often there is a desire to participate in charitable works for an organization where there is an alignment of common values or stated mission. But no matter what the motivation may be, the best trustees are ever mindful that they have been entrusted to steward the resources of the foundations they serve. A duty of loyalty is owed not only to carrying out the foundation’s purpose, but also to the greater good of the public that relies on these resources.

The role of a trustee in today’s litigious landscape continues to become increasingly demanding due to the ever-changing legal environment and tax code. A trustee should make certain that the foundation is in compliance with current law and tax filings requirements. Studying the organization’s bylaws, trust instrument, and recent tax returns can be a good starting point. Although it might seem like you need a law degree or a tax background to navigate these documents, you can also seek help from internal and outside experts (like a qualified attorney, CPA or a knowledgeable corporate trustee) to help understand them, as well as to stay abreast of changes that might affect how the foundation operates.

No two foundations are exactly alike and many come with a great deal of history. Understanding a foundation’s past will help a trustee be more effective in carrying out the mission and purpose. Speaking with the foundation’s founders (if living) and reviewing a foundation’s formation documents, prior meeting minutes, and grantmaking history can provide

some context for how decisions and grants should be determined. Trustees should always give a nod to the past but cannot be blind to the fact that foundations serve a dynamic society with evolving needs. It is important that trustees maintain the organization’s original purpose and yet continue to keep the foundation relevant and effective. The foundation should continue to improve its processes and update its technology to keep with the times.

Of course, grantmaking and other charitable activities are the key reasons for the foundation’s existence. Trustees should review grantmaking processes and ensure that they are being followed. Depending upon the depth of the foundation’s management team, it may be appropriate for trustees to meet key grantees, visit foundation facilities, and assess outcomes of the foundation’s philanthropic endeavors.

Lastly, a foundation trustee shows up to bat and has fun in the process. The demands are great and the work is, at times, daunting, with little recognition given. Yet despite this, the best trustees know that it is a true privilege to be a part of something far beyond themselves. After all, who doesn’t enjoy using or giving away money to support charitable causes?

*We recommend that you reach out to your Senior Relationship Officer to learn more about being an effective foundation trustee.*



# Give & Take

## What You Need To Know About IRS Notice 2018-61



**LESLIE KIEFER AMANN, JD**

*Senior Vice President and Shareholder  
Chief Fiduciary Officer*

Some things are nearly impossible to get excited about.

Example: Any document that arrives with the title “IRS Notice.” But in July we received just such a notice and it contained news we want to share with you — good news.

Everyone expects that when the Tax Code gives it will also take. So, when the 2017 tax legislation was handed down, the standard deduction was substantially increased and some individual income tax rates were reduced. The Tax Code gives.

As a quid pro quo, certain “miscellaneous itemized deductions” are disallowed until the new law expires in 2026. Prior law (and post-2025 law) allows these deductions to the extent that the sum of them exceeds 2% of an individual’s adjusted gross income. The most commonly affected deductions included investment management fees and tax advice and return preparation fees. Sigh ... the Tax Code takes.

The disallowance provision clearly applies to individuals. Unfortunately, the statutory language was unclear as to whether trusts and estates are also affected. Most frustratingly, we have only recently gained clarity after enduring years of uncertainty about whether and how to apply the 2%-of-adjusted-gross-income limitation on some of these same expenses (e.g., investment advisory fees and trustee fees) to trusts and estates. So, the IRS issued a Notice to provide clarification. This is the IRS Notice that turned out to be good news.

Basically, the Notice states that, like under prior law, a trust or estate may continue to deduct expenses that would not have been incurred if it was not a trust or estate. The prime examples are (i) the portion of fiduciary fees that are not allocable to investment management and (ii) fiduciary tax return preparation fees.

The Notice also clarifies that expenses which are not considered miscellaneous itemized deductions for individuals also will not be disallowed to trusts and estates. For example, a trust that receives income in respect of a decedent (e.g., distributions from IRAs and qualified plans that were subject to estate tax) may deduct the estate tax incurred on that income when it is received. So, for a change, we are excited about an IRS Notice (in this case, Notice 2018-61, which provides clarification concerning the effect of Section 67(g) on trusts and estates)!

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At Sentinel Trust, we take a holistic view of tax, estate, investment, family business, governance, and philanthropic goals, coupled with watchful eye over key regulatory developments, to devise and cultivate highly customized wealth plans for every client. Contact your Senior Relationship Officer to let us know how we can help you navigate the changing landscape of tax reform.

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Sentinel Trust Company is a family-owned, multi-family office focusing on the unique needs of affluent families and their closely held companies and foundations. Sentinel Trust provides advice on investment, tax, and estate strategies, serves as corporate trustee, and provides lifestyle services with a personal touch.

*Together, families prosper<sup>SM</sup>*

Founded in 1997 as the successor to two established, investment-focused single family offices, Sentinel Trust offers the stability of an institutional firm, the entrepreneurial spirit of a young firm, the personal feel of a family office and the in-house technical skills of independent planning and investment management firms.

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