

AUGUST 2022

FISCAL NOTES

CRYPTOCURRENCY IN TEXAS

7

STATE REVENUE WATCH

11

A Cryptocurrency Primer By Brynne Harder



UNDERSTANDING CRYPTO AND ITS RISE

In 2009, Satoshi Nakamoto wrote a software program that created the Bitcoin network (with an uppercase B) and the digital cryptocurrency, bitcoin (with a lowercase b). The identity of Nakamoto, a pseudonym for one or more people who created Bitcoin, remains a mystery, but the Bitcoin network's impact launched an industry, and its influence gave rise to the culture of cryptocurrency.

WHY CRYPTOCURRENCY?

"There is a lot of lingo in this world," says Anca Ion, chief investment officer for the Texas Treasury Safekeeping Trust Company. "The purpose of Bitcoin, initially at least, was to eliminate many of the problems that involve transacting with or through intermediaries — high costs and long processing times."

The push by creators of cryptocurrency to rely less on banks reflected current events at the time. During the

birth of Bitcoin in 2009, there were an estimated 119 million unbanked households in the U.S. alone, according to the Federal Deposit Insurance Corporation. The country also was experiencing the Great Recession and the failure of almost 500 banks.

CRYPTOCURRENCY'S GROWTH

It took more than a year after Bitcoin's launch before someone used the first bitcoin for a purchase — two pizzas on May 22, 2010. A programmer, Laszlo Hanyecz, offered any willing taker 10,000 bitcoins, or about \$41 in 2010 dollars, to purchase and deliver the pizzas on his behalf. While the transaction was noteworthy, the change in bitcoin value since that day has sealed its fame. On May 22, 2022, the amount paid for those two pizzas was valued at around \$300 million (**Exhibit 1**).

(CONTINUED ON PAGE 3)

A Message from the Comptroller



Cryptocurrency frequently appears in the news, but what it is and how it is used remains a mystery to many Texans. Maybe that's because crypto, as it's often called, has its own lingo or because it can seem like something out of a science fiction movie, with its complex software programs and digitized coins.

What's even more mind-boggling is that cryptocurrency needs to be "mined," but not in the traditional sense of the word. Crypto mining basically boils down to difficult mathematical equations solved by supercomputers and the rewards, or coins, those machines receive when they solve a problem.

You might be interested to know cities in Texas are embracing crypto, or at least the mining aspect of it. Several companies in our state also are looking at blockchain, a technology originating from the crypto world, which by all accounts securely stores cryptocurrency investments in digitized wallets. As you might imagine with any currency that is 100 percent digital and fairly new, crypto has downsides to consider, too.

In this issue of *Fiscal Notes*, we provide an overview of cryptocurrency and explain its rise since 2009 as well as its continued interest among some investors. This is despite a volatile crypto market and the thousands of cryptocurrencies available. And did I mention pizza? As surprising as it sounds, it's also a part of the story.

Next, we examine cryptocurrency mining and the enormous facilities and network of servers needed to produce one coin. Texas mining operations include one in Rockdale, and more are likely because of Texas' business-friendly environment and energy potential. The benefits? Cryptocurrency mining could bolster the state's traditional electricity supplies and spur greater renewable energy usage. But again, there are downsides the state must consider.

Though cryptocurrency remains a new technology and certainly has captured the imagination of many, it's still too soon to say where it will go. Rest assured, my office will be watching it closely.

As always, I hope you enjoy this issue.



Glenn Hegar

Texas Comptroller of Public Accounts

REGIONAL SNAPSHOT

CENTRAL TEXAS REGION



\$57 Billion

**CENTRAL TEXAS REGION
GROSS DOMESTIC PRODUCT, 2020**
ABOUT 3 PERCENT OF TEXAS' GDP OF \$1.8 TRILLION

The 20-county Central Texas region covers about 17,400 square miles in the heart of Texas and includes three metropolitan statistical areas (MSAs): the College Station-Bryan MSA, the Waco MSA and the Killeen-Temple MSA.

CENTRAL TEXAS REGION COUNTIES:

BELL	CORYELL	HAMILTON	LIMESTONE	MILLS
BOSQUE	FALLS	HILL	MADISON	ROBERTSON
BRAZOS	FREESTONE	LAMPASAS	MCLENNAN	SAN SABA
BURLESON	GRIMES	LEON	MILAM	WASHINGTON

POPULATION CHANGE

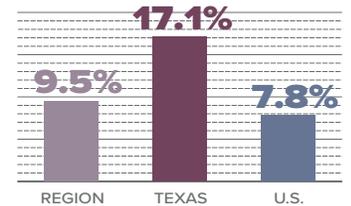
Brazos and Bell Counties led the region's growth, rising by 20 percent and 19.5 percent, respectively, between 2010 and 2020.



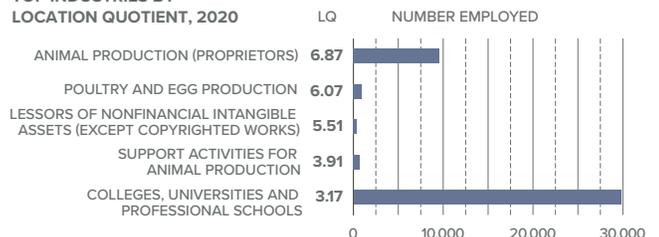
JOBS & WAGES

PERCENT CHANGE IN TOTAL JOBS, 2010 TO 2020

Around 480,900 people were employed in the region in 2020, an increase of 41,548 jobs from 2010. Higher education is a top industry by employment, growth and location quotient (LQ). An LQ of 1.25 or higher indicates the industry is highly concentrated and unique to the regional economy.



TOP INDUSTRIES BY LOCATION QUOTIENT, 2020

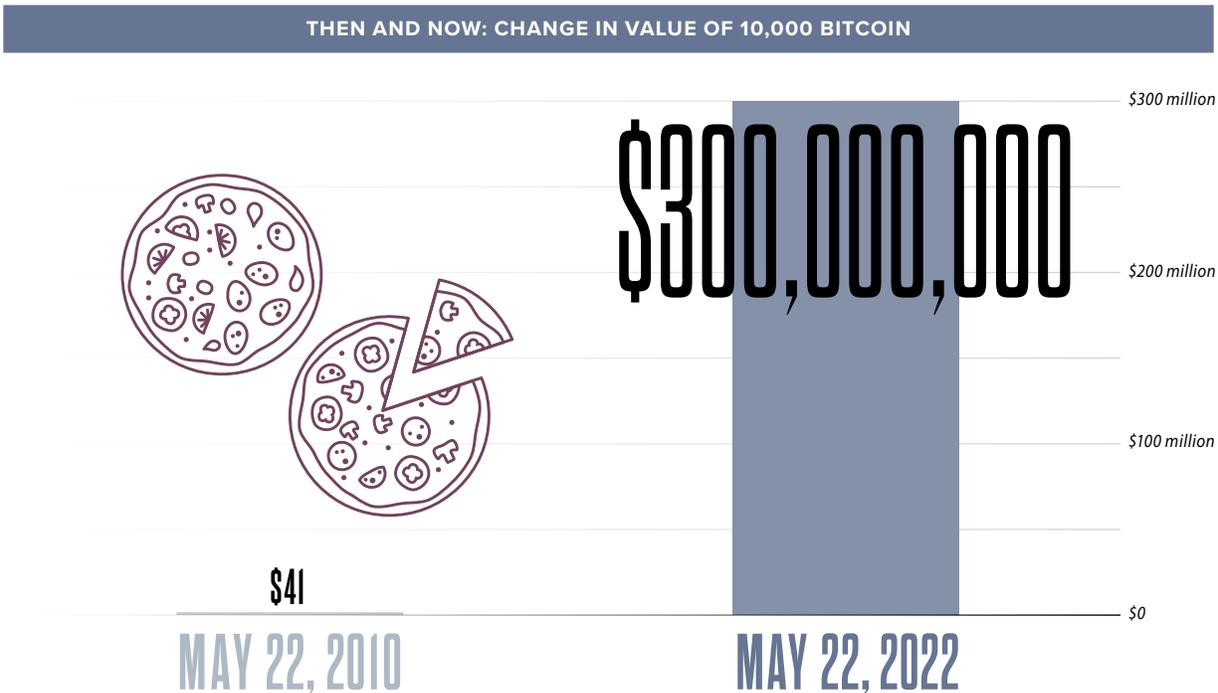


Sources: JobsEQ; U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages; U.S. Census Bureau; U.S. Bureau of Economic Analysis; Texas Comptroller of Public Accounts

THE CENTRAL TEXAS REGION IS ONE OF THE COMPTROLLER'S 12 ECONOMIC REGIONS. To see the complete 2022 Regional Reports, visit: comptroller.texas.gov/economy/economic-data/regions/2022/

If you would like to receive a paper copy of Fiscal Notes, contact us at fiscal.notes@cpa.texas.gov.

EXHIBIT 1



*Note: Values are approximate.
Sources: Investopedia; CoinDesk*

Cryptocurrency has gained a stronger foothold in retail since its early days, including in such major chains as Home Depot and Starbucks and in local businesses. Transactions typically occur through a third-party app.

In 2021, H-E-B started a pilot program with Coin Cloud, a digital currency provider, to provide kiosks, or cryptocurrency ATMs, in 29 Houston-area stores.

According to a 2021 Pew Research Center survey, 86 percent of Americans have heard at least a little about cryptocurrencies, and 16 percent have invested in, traded or used a cryptocurrency. By comparison, when asked about bitcoin specifically in 2015, 48 percent of respondents reported hearing about it, and 1 percent had experience using it or investing in it.

Though more Americans are familiar with cryptocurrency, skepticism also is growing. Critics have called cryptocurrency a scam, a pyramid scheme and much more. A June 2022

survey by The Ascent, a Motley Fool service, found that 24 percent of respondents did not own cryptocurrency because they considered it a bad investment, up from 9 percent in 2021.

CRYPTOCURRENCY LINGO

There currently are around 10,000 types of cryptocurrencies, and some estimates place that number closer to 19,000. Though all are based on the original code for Bitcoin — cryptocurrency is open source software, allowing any developer to access the code — the various cryptocurrencies are not exactly the same. Dogecoin (DOGE) originated as a joke based on a popular meme; Tether (USDT) is a stablecoin whose tokens are supposedly backed 1-to-1 by U.S. dollars held in reserve; Flycoin, a financial technology startup, rewards frequent flyers with crypto tokens; and Ethereum is a blockchain platform, one of the most popular, that settles transactions by allowing users to send and receive the cryptocurrency called *ether*.

“If you look at bitcoin in the early days, the price did not fluctuate as crazily as it does now because it was just a form of payment. Bitcoin was never created as something people buy and sell. That’s when the price of crypto kind of went crazy.”

– Simon Mak, Caruth Institute for Entrepreneurship at Southern Methodist University

A Cryptocurrency Primer

Cryptocurrency Vocabulary

BITCOIN

Frequently considered the first peer-to-peer electronic payment system. The Bitcoin network uses a cryptocurrency called bitcoin.

CENTRAL BANK DIGITAL CURRENCIES (CBDC)

A virtual money backed by a government. Many countries, including the U.S., have initiatives that are researching or developing their own CBDC.

CRYPTOGRAPHY

The practice of writing and deciphering coded data. Cryptocurrency gets its name from the term.

DECENTRALIZATION

A system without a central point of control and one in which users maintain custody of their own assets. Bitcoin is based on this system.

DIGITAL CURRENCY

Money that exists in digital form and is sent electronically over the internet. This term may refer to money that exists only in digital form such as cryptocurrency but also is frequently applied to traditional monies exchanged digitally (e.g., an online payment or government-backed virtual currency).

PRIVATE KEY

A unique code that proves ownership of a wallet.

WALLET OR DIGITAL WALLET

Contains a private key allowing a user to access cryptocurrency located on a blockchain.

Sources: CoinDesk; Investopedia

Some of Bitcoin's features, however, are common attributes of all cryptocurrencies:

- **Transparency** – All cryptocurrency transactions are publicly recorded and viewable. At the same time, users maintain anonymity through user handles or pseudonyms.
- **Immutability** – Once contracts (i.e., transactions) are set, they are considered permanent and cannot be easily changed.
- **Blockchain** – All cryptocurrencies are tied to a secure, shared database called a blockchain network. A blockchain also is decentralized and immutable; it can be either public or private. Blockchains are discussed later in this article.

For all the technical details, Dr. Simon Mak, the Linda A. and Kenneth R. Morris endowed director of the Caruth Institute for Entrepreneurship at Southern Methodist University, says that there's nothing fancy about cryptocurrency. It's primarily a new way of looking at currency. He offers an analogy to help understand the concept:

The New York subway sells tokens, and these tokens are used to pay for rides on the New York subway. That's exactly what bitcoin and the Bitcoin blockchain are all about. Think about the Bitcoin blockchain as the New York subway system, the Ethereum blockchain as the Boston subway system, and so there's all these different subways — these blockchains — that have been created to try to make it a utility that people can use, but only for their particular network.

CRYPTO AS AN INVESTMENT

Bitcoin's source code designates a limited supply of 21 million digital coins. As of publication, more than 19 million coins have been mined, but experts predict the last bitcoin won't be mined until around 2140. The source code tells the mining process to slow down over time. In theory, these features increase the coin's value — depending on demand.

However, Bitcoin, and the wider cryptocurrency market (**Exhibit 2**), is viewed as highly volatile. The reason for this, says Mak, goes back to the original intent behind Bitcoin.

"If you look at bitcoin in the early days, the price did not fluctuate as crazily as it does now because it was just a form of payment. Bitcoin was never created as something people buy and sell. That's when the price of crypto kind of went crazy," says Mak.

A Satoshi for Your Thoughts

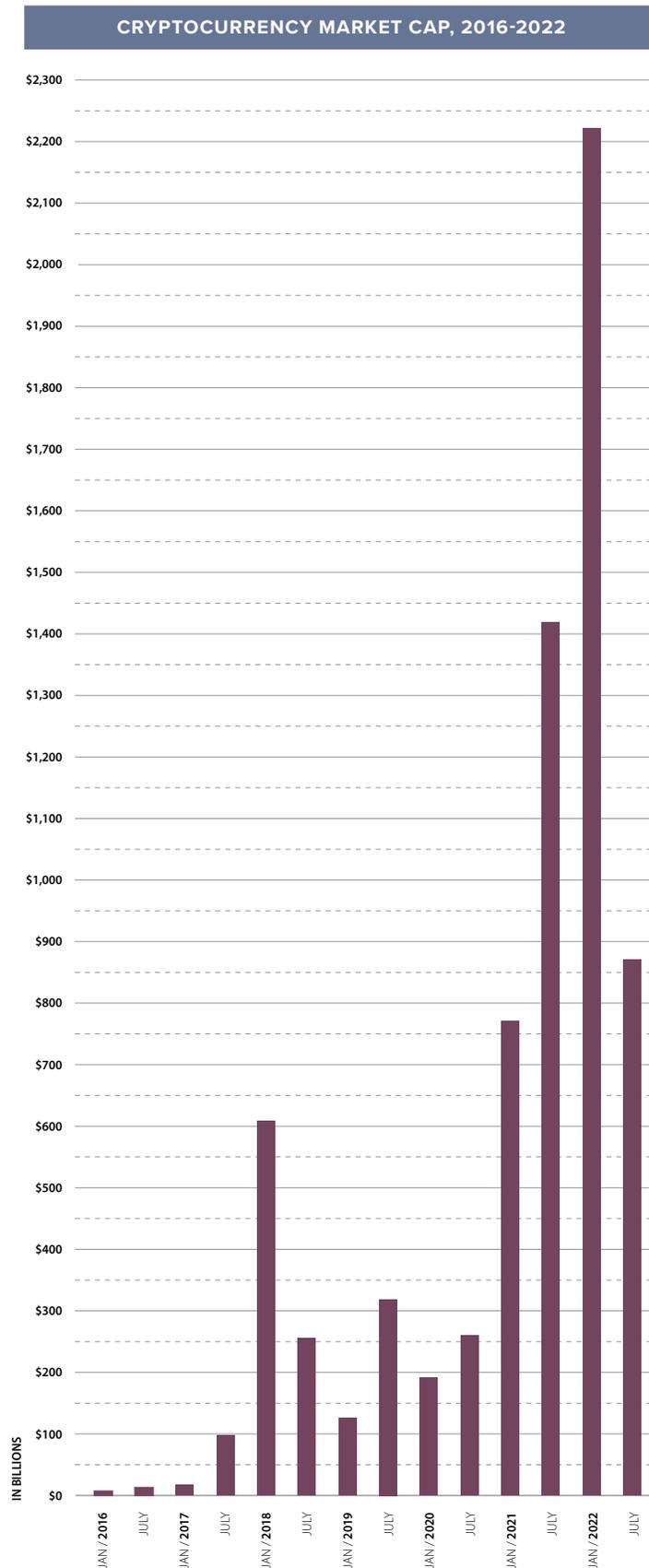
Like dollars and cents, cryptocurrencies have smaller denominations, allowing people to purchase or send fractions of a cryptocurrency. For example, a satoshi is the smallest denomination of bitcoin, equaling just 0.00000001 of one bitcoin.

← 1 Bitcoin ↑ 1 Satoshi

Compared to one satoshi, one bitcoin is equivalent to the background image on this page.

Sources: Investopedia; CoinDesk

EXHIBIT 2



Source: CoinMarketCap

To date, bitcoin's all-time highest value was nearly \$69,000 in November 2021. In the first half of 2022, its value fell more than 50 percent, according to CoinDesk, following the same trajectory as other cryptocurrencies. By the middle of June, it dipped



Simon Mak,
Caruth Institute for
Entrepreneurship at Southern
Methodist University

below \$20,000 — a price not seen since December 2020.

The recent volatility partly is due to stablecoins, a type of cryptocurrency.

“Stablecoins were one strategy to try to minimize the volatility of the cryptocurrency.

And the original strategy was to tie

one stablecoin to one U.S. dollar,” says Mak.

“The problem has turned out [to be] that in practice one stablecoin really wasn't backed by one dollar; it was backed for like 50 cents.”

Additionally, some stablecoins were backed by other assets, including other cryptocurrencies. Algorithmic stablecoins, in particular, have been involved in cryptocurrency's falling values. These stablecoins were supposed to be tied to algorithms that maintain supply and demand between the stablecoin and another cryptocurrency. However, the algorithms could not keep up with aggressive selling, and a domino effect occurred that impacted the entire crypto market.

Part of the problem, Ion says, is that stablecoins haven't been regulated, and it's often unclear how much is being pegged. “And as we've seen, stablecoins are not as stable as initially thought,” she says.

SECURITY CONCERNS

A 2020 report by Chainalysis, a U.S. blockchain analysis firm, stated that about 20 percent of mined bitcoin is considered lost. And because it's decentralized, once lost, it's gone forever. High-profile stories of lost fortunes have included a hard drive tossed into a landfill or a forgotten password.

“If you hold a digital asset, it is accessed via a private key. Ensuring the security of this private key password is very important to keep the funds safe,” says Ion. “If the private key to a digital wallet was to become lost or compromised, the funds would be lost, or [a] third party can gain access to them.”

“The blockchain infrastructure, I think, is probably something that gets the attention of the investment world the most, beyond the cryptocurrency.”

– Anca Ion



Blockchain — the technology behind all cryptocurrency — is considered very secure because the platform uses cryptographic algorithms and stores information on multiple computers, removing the risk of an attack on a single device.

“When you hear about people stealing bitcoin and crypto in the media, it’s not because they hacked the blockchain; it’s because they hacked the user account,” says Mak.

BUILDING BLOCKCHAINS

“The blockchain infrastructure, I think, is probably something that gets the attention of the investment world the most, beyond the cryptocurrency,” says Ion.



Anca Ion,
Texas Treasury Safekeeping
Trust Company

Developers see real-world applications for blockchain networks outside of cryptocurrency, in industries that could benefit from optimized information sharing and tracking, such as health care and real estate as well as in industry supply chains. That’s attracting a lot of money and interest from venture capitalists, but unlike cryptocurrency, people cannot invest in blockchains as an asset.

In blockchain business ventures, the blockchains might be private and available only to specific persons. Examples of blockchain technology being used in supply chain settings include Walmart and Sam’s Club. Both are utilizing VeChain’s

blockchain technology to implement a food traceability strategy in their China stores to increase supply chain transparency and help ensure food safety.

Supply chain applications of blockchain extend to health care, where it can be important to track a pharmaceutical. Additionally, some experts see blockchain as a secure way to store patient records in a place where every doctor — primary care physicians and specialists, out-of-network and in-network — can see a patient’s full medical history. Still others are looking at how blockchain might streamline contract management.

“Everyone is trying to become the standard blockchain for a specific industry. There’s a big battle right now. That’s why so much money is being invested. If you can be the dominant blockchain in health care, for example, the return on investment is basically unlimited,” says Mak. “They all want to be the Google search engine for blockchain.”

A REVOLUTION?

Cryptocurrency has been called a revolution. At less than 15 years old, the original Bitcoin is still young, and it’s hard for anyone to determine its long-term impact. Some imagine this is leading to a world without cash, where all payments are digital. The blockchain infrastructure, meanwhile, has entrepreneurs and venture capitalists exploring business uses for this emerging technology.

“We try to understand how the future is going to look. Everything is still in terms of testing and being tested,” says Ion. **FN**

To learn more about the Texas Treasury Safekeeping Trust Company mentioned in this article, visit TTSTC.org.



OPPORTUNITIES AND CHALLENGES IN MINING DIGITAL COINS

In 2008, the city of Rockdale lost about 80 percent of its workforce following the closure of the Alcoa steel plant. Today, the old Alcoa plant is occupied by Riot Blockchain's Whinstone facility, believed to be the largest single Bitcoin mining operation in North America. As an industry that relies on high levels of electricity, the company was drawn to the facility due to its existing power infrastructure, including valuable high-voltage transmission lines and large substations.

The Whinstone operation has added 300 direct jobs and an additional 900 to 1,200 indirect jobs to the city. For the first time in the city's history, sales tax revenues are on track to exceed \$1 million this year, Rockdale City Manager Barbara Holly testified to the Texas Work Group on Block Chain Matters. (The Texas Work Group was created by the Texas Legislature in 2021 to develop a master plan for the expansion of the blockchain industry in the state and to recommend state investments related to blockchain technology.) She called Whinstone's operation "an extremely positive economic impact."

Notwithstanding the city's recent good fortune, there are reasons to be cautious. Mining operations are tied to the price of bitcoin, a highly volatile digital currency asset that has suffered sharp losses in recent months. And mining's energy requirements are substantial — by 2030, mines in Texas could demand as much energy as the city of Houston.

Despite the uncertainty, Bitcoin and its related blockchain technology have strong advocates in the state. The Texas

Work Group is a testament to the potential benefits of blockchain technology. And a few local areas are diving in — in April, Fort Worth became the first city government in the U.S. officially to mine bitcoin.

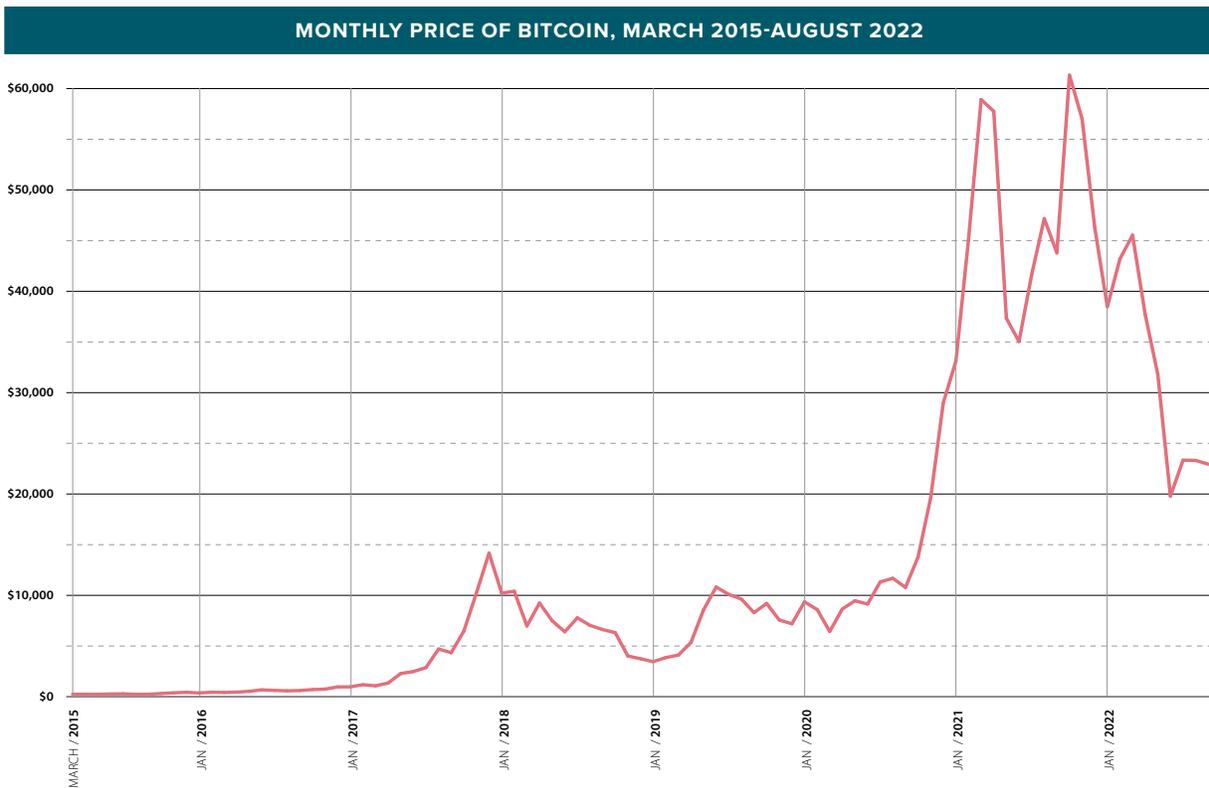
THE MINING PROCESS

Cryptocurrency is "mined" by computers solving a series of difficult mathematical problems needed for processing transactions. A "reward" in the form of cryptocurrency (e.g., bitcoin) is supplied to the machine that solves the problem first. Computers that can do more calculations per second have a higher chance of receiving a reward, and thus are favored by miners. The transaction is then added to the blockchain — a secure, perpetually generating ledger of transactions.

As more transactions are conducted, however, the mining difficulty increases and requires greater computing power. Today's successful mining operations are essentially specialized data centers, filling entire warehouses with thousands of interconnected network servers.

Winning the rewards race and verifying transactions comes with substantial benefits for miners. Bitcoin prices rose sharply in 2021, closing above \$61,000 on Nov. 1 (**Exhibit 1**), and trading as high as \$68,790 later in the month. Although prices over the last several months have dropped significantly, mining remains profitable in some areas, largely depending on the input cost of electricity.

EXHIBIT 1



Note: Monthly price data are equal to the prices on the first day of the month.

Sources: Yahoo! Finance; CoinMarketCap

AN APPETITE FOR ELECTRICITY

Bitcoin is only one type of cryptocurrency but serves as a useful example of the increase in mining. As bitcoin's price has risen, so, too, has the mining activity to verify transactions and secure the lucrative rewards. According to Digiconomist, a web platform focused on digital currencies, the worldwide power demands of bitcoin mining nearly tripled in 2021, rising from an annualized rate of 78 terawatt-hours (TWh) of electricity to 204 TWh (**Exhibit 2**). Recently though, the power demands have fallen sharply, coinciding with declines in bitcoin prices.

In mid-July, the global electricity used in bitcoin mining equated to an annualized rate of about 132 TWh of electricity, comparable to the power consumption of Argentina. A single bitcoin transaction used nearly 1,452 kilowatt-hours (kWh) of electricity, equal to the power consumption of an average U.S. household for nearly 50 days.

Mining's power demands — and its associated environmental effects — are one reason that China, which was the global leader in mining activity, imposed a ban on cryptocurrency mining in September 2021. The Chinese government also cited efforts to curb financial crimes and financial instability caused by cryptocurrencies. Perhaps the greatest concern to China, some experts contend, was that cryptocurrency could facilitate capital flight out of the country.

Whatever the reason for China's ban, the moratorium opened the door for more activity in the U.S., with Texas being one of the most attractive destinations.

TEXAS STEPS IN

Cryptocurrency mining can operate from anywhere in the world. It is not bound by transportation networks or access to raw materials or a specialized workforce. What its data centers do require is a massive amount of electricity to cool and operate the mining machinery, and Texas provides an attractive draw for such needs.

In testimony to the Texas Work Group, Holly said miners care about three things: electricity rates, electricity availability and the speed at which massive amounts of electricity can be delivered.

Joshua Rhodes, a research associate at the Webber Energy Group at the University of Texas at Austin, says miners are drawn to Texas for its historically lower costs of electricity. "A big input to these mining operations is the cost of electricity, so the lower the electricity costs, the greater the profit."

Perhaps an even greater competitive advantage, he says, is the state's fast process to get mines connected to the electrical system.

“With mining, we could see demand growing quite a bit faster than in the past, which presents challenges because we can only build power plants and transmission lines and substations so fast.”

– Joshua Rhodes

EXHIBIT 2

DAILY BITCOIN ENERGY CONSUMPTION, FEB. 10, 2017-JULY 9, 2022



Source: Digiconomist

TEXAS' POWER CONCERNS

Cryptocurrency mining's large appetite for energy is certainly a concern for Texas, especially in the wake of Winter Storm Uri and the state's electric grid vulnerabilities. Experts believe that, per day, about 3,000 megawatts (MWs) of mining



Joshua Rhodes, Webber Energy Group at the University of Texas at Austin

operations operate in Texas, or about 4 percent of peak demand (i.e., demand for electricity on its hottest days). The Electric Reliability Council of Texas (ERCOT) projects that mining operations could rise by 6,000 MWs in the next couple years and potentially increase to 17,000 MWs by 2030. By comparison, peak demand in Lubbock is 444 MWs and in Houston about 20,000 MWs.

This potential surge in power demand presents major challenges, says Rhodes. “The Texas grid has grown year over year, and supply and demand have grown in tandem with each other. With mining, we could see demand growing quite a bit faster than in the past, which presents challenges because we can only build power plants and transmission lines and substations so fast.”

Holly expressed similar concerns in her testimony to the Work Group. A modest-sized cryptocurrency mine uses about 200 MWs of power daily, which is equivalent to the downtown area of Dallas. Making Texas home to 10 similarly sized mines could effectively de-couple power demands from the state's rapid population growth — a main driver of power supply — and could throw a wildcard into the balance between supply and demand.

Despite its heavy power needs, cryptocurrency mining offers a potentially beneficial and symbiotic relationship between power usage and power generation.

It is hard to say how many mines are operating in the state, as there are no requirements to register operations, but according to the Texas Blockchain Council, there are at least 27 mining operations, with more on the way.

One such mine, Helios, located an hour east of Lubbock, plans to have 50,000 servers occupy a 1,050-foot-long structure by the end of the year. The site's computing power is extraordinary, executing four quintillion (four-billion billion) calculations every second, with plans to generate more than 1,000 bitcoins per year. Texas has about 10 large-scale mining operations like Helios, according to state and industry officials.

AN ENERGY PARTNER?

Despite its heavy power needs, cryptocurrency mining offers a potentially beneficial and symbiotic relationship between power usage and power generation.

First, miners can participate in demand response programs, incentives offered by ERCOT to quickly turn off miners' power during periods of peak demand. When electricity prices are high or supply is straining to meet demand, miners can reduce their energy use. Supply and demand run in tandem, so if a miner stops using electricity, it's the equivalent of a power plant producing extra electricity that could assist in meeting grid demand and help with grid stability. Many large load operations already do this, such as petrochemical plants along the Gulf Coast. Between June and September of last year, for instance, Riot Blockchain shut down 72 times for up to four hours during periods of peak demand.

Second, simple economic theory suggests that increased mining activity could spur additional energy infrastructure. Mining facilities often are located near wind and solar farms that provide access to cheap electricity prices, such as in remote areas of West Texas. If mining operations increase in these areas, the price of electricity could rise, and those price increases could drive a greater supply of power plants to be built in that area.

Yet cryptocurrency mines are not like other entities that place big electrical demands on the grid, such as manufacturing

facilities or industrial chemical plants, which can be expected to be around for decades. "The difference is that bitcoin mines can come in so fast and may be gone so fast depending on the price of bitcoin," says Rhodes.

Cryptocurrency mining potentially could spur renewable generation if the mines were setting up contracts, but there isn't much evidence that mines are entering into long-term contracts with electricity providers, says Rhodes. If miners are willing to be flexible, such as by participating in a controllable load resource program, then they could be a valuable asset to the grid.

There also has been some discussion about repurposing surplus gas for crypto mining, which according to research by Crusoe Energy Systems, one of the largest Bitcoin operations in the U.S., could significantly reduce emissions. In the meantime, to help stave off concerns about crypto mining operations taxing the state's grid, ERCOT sent a memo to market participants on March 22 notifying them about a new interim process that requires reliability studies to be submitted and approved before interconnecting large loads to the grid.

WHAT'S NEXT?

Texans certainly can use and invest in cryptocurrencies as individuals, and the state is a leader in the industry. But in her address to the Texas Work Group, Holly said, if Texas wants to remain an industry leader, it will need to proactively work with the electricity industry to speed up the deployment of substations. She noted substations take 24 months to design, construct and activate, while cryptocurrency miners often ask to be operational within two to four months.

Additionally, she said Texas should renew sales tax exemptions on electricity used in data centers and that cities and counties should grant property tax abatements to the facilities.

Ultimately, however, mining at its core is a race to verify transactions in an extremely competitive industry, and what matters to miners is the price of electricity and how fast they can connect to the grid. **FN**

To learn more about the electrical grid and legislation passed by the 87th Legislature following Winter Storm Uri, visit [FiscalNotes.org/2021/oct/winter-storm-reform.php](https://www.fiscalnotes.org/2021/oct/winter-storm-reform.php).

NET STATE REVENUE – ALL FUNDS, EXCLUDING TRUST

Monthly and Year-to-Date Collections: Percent Change from Previous Year (IN THOUSANDS)

This table presents data on net state revenue collections by source. It includes most recent monthly collections, year-to-date (YTD) totals for the current fiscal year and a comparison of current YTD totals with those in the equivalent period of the previous fiscal year. These numbers were current at press time. For the most current data as well as downloadable files, visit comptroller.texas.gov/transparency.

Note: Texas' fiscal year begins on Sept. 1 and ends on Aug. 31.

1. Includes public utility gross receipts assessment, gas, electric and water utility tax and gas utility pipeline tax.

2. Includes taxes not separately listed, such as taxes on oil well services, coin-operated amusement machines, cement and combative sports admissions as well as refunds to employers of certain welfare recipients.

3. Includes various health-related service fees and rebates that were previously in "license, fees, fines and penalties" or in other non-tax revenue categories.

4. Gross sales less retailer commission and the smaller prizes paid by retailers.

Notes: Totals may not add due to rounding. Excludes local funds and deposits by certain semi-independent agencies. Includes certain state revenues that are deposited in the State Treasury but not appropriated.

TAX COLLECTIONS BY MAJOR TAX	JULY 2022	YEAR TO DATE: Total	YEAR TO DATE: Change from Previous Year
SALES TAX	\$3,882,769	\$39,203,514	19.94%
<i>Percent Change from July 2021</i>	14.67%		
MOTOR VEHICLE SALES AND RENTAL TAXES	\$605,121	\$5,797,592	13.54%
<i>Percent Change from July 2021</i>	4.87%		
MOTOR FUEL TAXES	\$324,474	\$3,463,601	6.06%
<i>Percent Change from July 2021</i>	3.00%		
FRANCHISE TAX	\$32,136	\$5,323,433	22.76%
<i>Percent Change from July 2021</i>	-66.69%		
OIL PRODUCTION TAX	\$694,443	\$5,753,133	88.96%
<i>Percent Change from July 2021</i>	84.07%		
INSURANCE TAXES	\$902,306	\$2,825,450	12.08%
<i>Percent Change from July 2021</i>	-4.20%		
CIGARETTE AND TOBACCO TAXES	\$95,230	\$1,105,614	-10.38%
<i>Percent Change from July 2021</i>	-10.67%		
NATURAL GAS PRODUCTION TAX	\$532,305	\$3,944,800	191.52%
<i>Percent Change from July 2021</i>	184.56%		
ALCOHOLIC BEVERAGES TAXES	\$148,715	\$1,498,887	33.54%
<i>Percent Change from July 2021</i>	12.82%		
HOTEL OCCUPANCY TAX	\$73,495	\$630,483	49.29%
<i>Percent Change from July 2021</i>	22.34%		
UTILITY TAXES¹	\$78,253	\$446,500	3.30%
<i>Percent Change from July 2021</i>	27.66%		
OTHER TAXES²	\$19,781	\$239,067	39.11%
<i>Percent Change from July 2021</i>	-10.07%		
TOTAL TAX COLLECTIONS	\$7,389,028	\$70,232,074	26.10%
<i>Percent Change from July 2021</i>	17.99%		

REVENUE BY SOURCE	JULY 2022	YEAR TO DATE: Total	YEAR TO DATE: Change from Previous Year
TOTAL TAX COLLECTIONS	\$7,389,028	\$70,232,074	26.10%
<i>Percent Change from July 2021</i>	17.99%		
FEDERAL INCOME	\$6,692,137	\$67,039,071	13.05%
<i>Percent Change from July 2021</i>	13.09%		
LICENSES, FEES, FINES AND PENALTIES	\$483,995	\$5,816,494	0.07%
<i>Percent Change from July 2021</i>	-16.37%		
STATE HEALTH SERVICE FEES AND REBATES³	\$1,418,759	\$9,904,642	51.75%
<i>Percent Change from July 2021</i>	-9.74%		
NET LOTTERY PROCEEDS⁴	\$247,202	\$2,698,908	-1.66%
<i>Percent Change from July 2021</i>	15.73%		
LAND INCOME	\$460,151	\$3,852,215	102.78%
<i>Percent Change from July 2021</i>	108.96%		
INTEREST AND INVESTMENT INCOME	\$410,513	\$2,309,197	20.83%
<i>Percent Change from July 2021</i>	26.21%		
SETTLEMENTS OF CLAIMS	\$6,805	\$659,609	-13.11%
<i>Percent Change from July 2021</i>	-57.50%		
ESCHEATED ESTATES	\$362,025	\$992,237	27.00%
<i>Percent Change from July 2021</i>	45.21%		
SALES OF GOODS AND SERVICES	\$104,244	\$358,775	23.72%
<i>Percent Change from July 2021</i>	380.88%		
OTHER REVENUE	\$123,981	\$2,534,338	2.78%
<i>Percent Change from July 2021</i>	-47.49%		
TOTAL NET REVENUE	\$17,698,840	\$166,397,562	20.41%
<i>Percent Change from July 2021</i>	13.36%		



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Glenn Hegar
Texas Comptroller of Public Accounts

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