2020 blockchain symposium: the emerging technology is maturing as real-world applications expand.

INTRODUCTION

To say a lot has happened since last year's Blockchain in Accountancy Symposium would be an understatement. This is true on an international scale, of course—most notably, countries, economies, and health systems around the world have grappled with the spread of COVID-19— but it also applies to Blockchain technology specifically. In the last year since 2019's event, there has been a significant amount of activity and investment as the technology continues to be integrated into core operations across industries, including healthcare, finance, and agriculture. As a whole, the space looks very different than it did a year ago.

To be clear, it's not so much the technology itself that has changed as it is the "acceleration and adoption," Erik Asgeirsson, president and CEO of CPA.com, said in his opening remarks. "What's changed most isn't the technology itself but the acceleration and growing acceptance of blockchain," Erik Asgeirsson, president and CEO of CPA.com, said in his opening remarks. "We're seeing major players in business and finance validating blockchain by implementing it in their systems and exploring new uses for it. And this is all occurring in a year otherwise marked by retrenchment, economic uncertainty and disruption, so innovators clearly see the promise here."

Formed in 2017, the Blockchain Symposium is an annual event that brings together blockchain experts, solution developers, and practitioners to learn from one another and discuss how to think about, prepare for, and guide the accounting profession as the technology matures. While blockchain will impact all industries, the technology seamlessly aligns with accounting and auditing. As more enterprises move data onto the blockchain and engage in the transfer of digital assets, they will require practitioners who understand the implications across tax, audit, and finance.

Convened by the American Institute of Certified Public Accountants (AICPA) and CPA.com in partnership with the Wall Street Blockchain Alliance (WSBA), the 3rd annual event was a

virtual conference held on September 21st and 22nd. Hosted by Asgeirsson, Susan Coffey, CPA, CGMA, executive vice president, public practice at the Association of International Certified Professional Accountants (AICPA and CIMA), Kacee Johnson, strategic advisor at CPA.com, and Ron Quaranta, chairman of the WSBA, the event was attended by 85 luminaries in the space.

BLOCKCHAIN AT AN INFLECTION POINT

In the public consciousness, hype for blockchain initially manifested as a fascination with bitcoin, particularly its hockey-stick price increases. But as bitcoin lost value and continued to exhibit incredible volatility, interest subsided.

Meanwhile, use cases around blockchain—the technology supporting bitcoin and other crypto assets—were emerging, albeit more quietly. At this year's Symposium, there was a real sense among speakers and attendees that the technology is on the precipice of far broader applications, to the point where once-esoteric concepts such as wallets and stablecoins become accessible for mainstream users and consumers.

Over the past year, the WSBA's Quaranta has watched the influence of digital assets and blockchain-based supply chains grow. "We are beginning to see 'classic financial markets'—firms that you didn't think would be involved—now becoming participants in the blockchain and crypto asset space," he said. Longer-term, this raises questions about the impact of crypto assets and other digital assets on global payments—and, by extension, the accounting profession.

As digital assets and the underlying technology gain traction, existing uncertainties are coming to the fore. According to Quaranta, there are still several major outstanding questions, including how digital assets are treated from a valuation, tax and audit perspective. "These are challenging times, but interesting times as well," he said.

Given that the rate of change is accelerating, it can be difficult to keep pace. "Within the past few months, we've seen the rise of decentralized finance or 'DeFi,'" Quaranta said. Worth about $9 billion at the time of the Symposium—a number that continues to rapidly expand and was at $14 billion just 2 months later —the total might not seem like a lot compared to capital markets, which have trillions in assets, but it represents a growing willingness among firms to engage in the decentralized finance economy.

BREAKING: BANKS TO OFFER CRYPTO CUSTODY SERVICES

One of the most exciting recent developments? Wyoming's decision to grant the crypto asset exchange Kraken a bank charter. As such, Kraken will become the first special-purpose depository institution to provide digital asset services. This landmark designation addresses a major problem that has long plagued the blockchain space: enterprises operating within it "have had a terrible time obtaining audits," Avanti Financial Group's Caitlin Long said, primarily because audit standards have yet to be established. (In October, Avanti Financial Group also received a license to operate as a national bank in Wyoming.) The existence of chartered banks that handle crypto assets increases the pressure to begin laying standards out. "It should be enough to cause the internal committees at big auditing firms to reconsider the situa-

tion," Long said, particularly given the fact that many practitioners are already dealing with clients who handle crypto assets in other countries.

"This should be a watershed event that I hope causes the auditing and accounting profession to realize that this is very real," Long said. "This isn't going away."

REGULATORY ACTION AT THE STATE LEVEL

For some time, Long has suspected regulatory action would originate from the states instead of the federal government. In her view, Kraken's Wyoming designation supports this. Importantly, Wyoming's charter bank status has parity with national banks—all state banks do, enabling them to offer identical services as national banks.

It's a milestone Long was expecting to come later, after the industry had taken an "enterprise detour," similar to what happened with the Internet. (In the web's early days, enterprises built closed intranets, ushering the Internet through a brief walled-garden period.)

With a special-purpose depository institution license, Kraken can do everything a bank can do, including clearing payments at the federal reserve. That's significant: Up until now, no banks in the United States were providing deposits or custody and fiduciary services for digital assets.

Previously, Wyoming had passed a set of blockchain laws, which established the special-purpose banking charter. Under these laws, virtual currency is treated as money, while digital securities are mapped onto regular securities. Wyoming also created a third-category— digital consumer tokens—which are categorized as intangible assets.

As a result of these protections, Long expects a host of entities to open up shop in the state. "If you come to Wyoming and use a Wyoming custodian, you know that Wyoming law applies." In addition, she expects to see "non-Wyoming entities voluntarily using Wyoming law to govern their contracts because Wyoming is the only state in the country that has provided this clarity."

FIXING CAPITAL MARKETS' STRUCTURE

Blockchain has yet to meaningfully reconfigure capital markets in the way its evangelists had predicted and hoped. That doesn't mean it shouldn't, or that it won't, Long said. As it stands, the capital market structure is designed to accommodate technological restraints that no longer exist.

Payment systems work within a similar archaic structure: commercial banks operate on the back end, money centers operate in the middle, and the Federal Reserve, as well as other central banks, sits at the top. Each financial transaction must move through these three layers, which are housed on separate databases, in sequence. "Counterparty risk and tied up working capital are inherent in the market structure," Long said. "If we were to redesign the market structure in financial services from scratch, it wouldn't look like it does today."

Blockchain technology presents a clean slate. Essentially a shared database that provides trusted information, it enables the creation of a single record of financial data "that everyone can share and trust," Long said. "That's a pretty radical departure from the IT system architecture of existing financial institutions."

In the early and mid-1900s, securities still existed in paper form—as market transaction volume began to spike in the 1970s, there weren't enough people to physically run these slips from the financial firms in lower Manhattan to the stock brokerages. In 1986, the Treasury did away with paper slips, transitioning to an electronic book-entry form of recordkeeping. Starting in 1996, a direct registration system was created, in which securities ceased to be actual securities and instead became security entitlements. "That changed everything," Long said, consolidating the system to a relatively small number of brokerage firms. As a result, the cost of processing power essentially became a non-issue, allowing for a far greater volume of electronic securities trading.

REGULATORY STATUS

Federal guidance on how to handle digital assets and other blockchain financial instruments has been—often frustratingly—vague. But there has been movement, as well as progress. Here are some key updates:

IRS WARNING LETTERS

Earlier this year, news of warning letters sent out by the IRS regarding crypto asset purchases made the rounds, including on social media. The AICPA reviewed digital copies of these letters, which warn taxpayers they might not have properly reported transactions involving crypto assets.

"These letters are quite vague," said Amy Wang, CPA, senior manager at the AICPA. The agency does not appear to provide recipients with the years it believes they have underreported, creating a confusing situation for CPAs and their clients. To taxpayers who have received a warning letter, Wang recommends simply making a good faith effort to comply. From conversations with the IRS, the AICPA is confident the agency is currently focused on criminal activity rather than voluntary compliance issues.

TRACKING TOOLS AND ADDITIONAL GUIDANCE

In May, the AICPA spoke at the IRS' first virtual currency summit, in which the agency announced it was offering $625,000 grants to tech entities that could provide solutions for tracking virtual currencies transactions. Following the event, the IRS issued a statement of work, asking for support in its efforts to conduct taxpayer exams involving virtual currencies.

The AICPA remains hopeful that in addition to combating cybercrime, some of the agency's resources and attention will be dedicated to developing substantive and authoritative tax guidance, Wang said. As it stands, the IRS has only issued a series of non-binding online FAQs.

Another question the AICPA hopes to see the IRS answer: does it plan to instigate a wave of future enforcement actions or not? In a public comment, IRS Chief Counsel Michael Desmond said the agency believes approximately 8% of American adults hold some form of virtual currencies, which suggests these assets are being severely underreported.

OVERARCHING REGULATORY CHALLENGES

"The pace of change in this industry is very difficult for regulators to deal with," said Kavyan Sadghi, a partner at the law firm of Schiff Hardin. By the time momentum is generated to address a specific area, its relevance is often already outdated. Take, for example, the IRS' continued focus on tracking down crime within the crypto space. While important, additional, equally important issues have emerged that have yet to be addressed. "We haven't really gotten to the other core issue as much, which is to protect markets," Hardin said. In part, he suspects, this is because the crypto asset market is still relatively small: "Congress just doesn't see this as a big enough deal yet."

In addition to the challenges presented by rapidly-evolving use cases, regulators are wary that SEC measures will, if not outright kill, then significantly hamper innovation. Commissioner Hester Peirce has indicated that while centralized blockchain entities raising funds will be treated as securities, decentralized systems are outside the realm of the agency's authority. To create a pathway for entities to move from a centralized system to a decentralized one, she has floated the idea of creating a three-year safe harbor. (Significant questions remain, including what happens should an entity try to appropriately decentralize but fail to do so by the end of the three-year period.)

Overall, however, the agency has been fairly slow to act. While the SEC has issued non-binding guidance, it has walked back some of these statements. "You can tell they may have some regrets about the way things were articulated," Hardin said. As it stands, "it doesn't seem there is a path or reasonable timeframe to any binding rulemaking."

STRATEGIES FOR HANDLING DIGITAL ASSETS

Given the available information—or dearth of it—the best strategy, as of now, is simply to "be as consistent and conservative as possible," Wang said. "Keep all documentation." For practitioners, organizations like the AICPA can serve as a valuable resource: The AICPA has mined the expertise of its members to create multiple working groups, which periodically publish reports helping practitioners within the accounting, auditing, and digital asset space understand the technology and better serve their clients.

Detailed, binding federal legislation will likely be slow to arrive. While frustrating, the lack of clear-cut, uniform answers to granular questions isn't necessarily a bad thing. "There is a school of thought that the differentiation among state approaches might help find a path towards regulation that works better," than a uniform approach, Sadeghi said. "It's very much an evolving area. There is no clean solution yet."

What's more, rapid congressional action is often a cause for concern. "When we see a bill come out, we have to review it quickly because we know Congress does not understand the full technological background," Wang said.

USE CASES

A look at the technology's real word applications as they stand today.

PAYMENTS

There are a number of outstanding questions regarding crypto and digital assets, including how to handle their pricing and valuation. Kell Canty, the CEO of Verady, an audit and accounting platform for blockchain assets, believes stablecoins could serve as a template, particularly those that are fiat-backed, while creating an entry point for investors who are looking to join the DeFi ecosystem. (Stablecoins can also be backed by property or other assets, including crypto assets.)

"The case for fiat-based, one-to-one stablecoins is very clear," he said. "What is the difference between a stablecoin that represents a dollar and the data packet on the Mastercard network that represents a dollar?" From this perspective, classifying a one-to-one fiat-biased currency as a security seems incongruous.

For crypto assets, new tools are emerging that allow investors to integrate into general ledger systems as well as derive reliable pricing information pulled from multiple sources. During a tech presentation at the Symposium, Neal Roche, co-founder and COO at Gilded, gave an overview of his company's capabilities. Gilded's focus is "on helping small and medium-sized businesses use crypto assets for goods and services," Roche said. As it stands, the crypto space is still built for traders and investors, leading many companies to create ad hoc—often time-consuming, not to mention error-prone—solutions. With its all-in-one payments and accounting platform, Gilded provides a far more seamless solution, enabling invoicing and accounts receivable across a variety of crypto assets. It also allows organizations to automate invoicing and billing in crypto assets or stablecoins. "This saves a lot of time for companies trying to do crypto transactions manually," Roche said.

Conversations about digital asset classifications are also picking up steam. "At Coinbase, we have a very strict policy with respect to our digital assets: what is a security and what isn't?" said Jennifer Jones, chief accounting officer at Coinbase, a crypto asset exchange. This distinction is important: without it, a number of tax issues arise. One of the entity's top priorities is to work with regulators and accounting firms to create more clarity around these categorizations, Jones said.

CREATING A BETTER BANKING SYSTEM

Fiat-backed stablecoins have the potential to fix structural weaknesses within the banking infrastructure, both domestically and abroad, Canty said. Currently, there are two major banks that offer crypto asset internal payment mechanisms: JP Morgan and Signature Bank. "People get nervous about holding digital assets: 'What does it mean, is it safe, is it trusted?'" Jones said. Having banks support and normalize them "will definitely help with adoption."

More broadly, stablecoins would make it easier for the unbanked and underbanked to participate in financial institutions. This is the case internationally, particularly in developing nations, but it also holds true in the U.S. "Something like 20% of the U.S. is unbanked or underbanked," Canty said.

HEALTHCARE & IDENTITY

"Healthcare privacy is about the individual getting to choose who they share their [health] information with," said Ali Loveys, chief privacy officer at ConsenSys Health, which builds Ethereum-based solutions for cybersecurity, compliance, privacy, bioethics and identity. Traditionally, however, patients only had two options: share their complete electronic medical record with an institution—or not. On the blockchain, health data can be broken down and shared more granularly, empowering patients to determine exactly what they want to share, and for how long.

For example, a patient could decide not to share her name with an organization, while revealing her location and Covid-19 status. "This gives the individual or an individual health practice more direct access and control over which elements of that information are shared," Harris said.

The ability to separate facets of one's online identity not only provides patients with greater autonomy over their health information, but it could help prevent healthcare fraud. Big picture, the maturation of blockchain is "a potentially accelerating event for decentralized identity and self-sovereign identity," said Kathryn Harrison, CEO of DeepTrust Alliance, a network working to combat deep fakes and disinformation.

ADOPTION

Blockchain's potential for managing healthcare data is clear. The timeline in which it will actually have an impact, however, is less so.

"It's almost akin to when we started telling people, 'Hey you can start communicating on this thing called email," Loveys said. At first, the technology was unintuitive and intimidating. The same learning curve will have to happen with blockchain, including familiarizing users with digital wallets. At present, the technology has advanced to a point where managing sovereign identities is doable, but the accessibility of the user interfaces is lagging.

"As a space, we've been so excited by the possibilities of the technology that we haven't spent nearly enough time on user experience and human-based design," Harrison said. One potential solution is to go the route of Coinbase, which creates digital wallets but packages them in a format—usernames and passwords—that users are comfortable with.

CRYPTO ASSETS

From fall 2019 to fall 2020, the number of crypto assets skyrocketed from 2,700 to 7,000, an increase of 159% "I am losing track of how quickly they are being created," said Robert Materazzi, CEO of Lukka, which turns blockchain data into easy-to-use information to support business operations.

Given the speed of change and the growing number of exchanges, enterprises often struggle with data uniformity. One of Lukka's most popular products is reference data, which allows clients to standardize data across exchanges, OTC desks, wallets, and any additional transaction sources. "You need to make sure you are comparing apples to apples," Materazzi said. This is more difficult than it initially appears: different exchanges list bitcoin under different tickers, for example. "If you are the accountant or the auditor, you need to make sure all that stuff is consistent."

INSTITUTIONAL ACTIVITY

"Over the past six to nine months we have seen a crazy amount of interest on the institutional level, including heightened interest in direct investment, direct allocation to specific assets, and increased allocations to funds," said Anton Katz, CEO of Talos, an institutional-grade infrastructure technology platform for digital asset trading.

For larger institutions, however, full-fledged adoption is "never an on-off switch," Katz continued. Instead, the trend follows a familiar format: early adopters jump at the opportunity, followed by mid-sized players, eventually trailed by large, more conservative institutions. "We have crypto players that have very mature businesses, and we have traditional banks, which are still exploring," Materazzi said.

"There is strong proof that institutions are looking to participate more," Talos said. However, for these entities, the barriers to entry—including risk appetite, complex technology assessments, integration issues, and regulatory questions—remain high.

VALUATIONS

An important outstanding question: how to determine the fair-market value for specific crypto assets. According to Materazzi, Lukka's approach is to standardize raw exchange prices from the 10 largest global liquidity providers. From there, "we apply qualitative and quantitative factors to select a primary exchange at a given point in time for a given asset." While this strategy doesn't eliminate obstacles—what, for example, should be done if U.S. regulators blacklist a popular exchange?—it provides a potential foundation for creating more uniform valuations.

TERMINOLOGY

As the space evolves, discrepancies are still working themselves out. This applies to basic terminology: "Just because someone uses the word custodian, don't assume it's the way you think of the word custodian," Materazzi said. While some businesses use the word to represent traditional, institutional custodian services, startups that simply provide wallets at the retail level are also using the term to describe their own, far less extensive services.

SUPPLY CHAIN

An immutable record of transactions, blockchain is already transforming how items are catalogued, moved, and tracked. "All supply chains will touch or run on some version of blockchain in the near future," said Phil Harris, president of ripe.io, a blockchain platform for tracking food. "The technology is a perfect piece of software to deploy, whether you are [moving] toaster ovens, golf clubs, cars, or aircrafts."

Traditional supply chains are fragmented, analog systems that create a number of problems, from poor quality control, to traceability and transparency issues, to blind spots regarding sustainability. COVID-19 amplified these weaknesses, particularly in categories such as dairy and animal protein, which were disproportionately affected by pandemic-related shutdowns. "We have seen a real test of the supply chain on a global basis, as well as domestically," Harris said. "Some areas managed to perform despite the complexity, while others shattered like glass."

While agriculture is one of the most visible examples, supply chains underpin virtually every industry, said Amanda Wilkie, a consultant at Boomer. The implications of moving these systems onto the blockchain are vast: "We will be able to build a more agile supply chain," she continued, one that is more readily able to adjust to potential disruptions at both the local and global level.

Blockchain's ability to verify data's accuracy is another invaluable asset: "Right now, humans are more likely to trust technology than we are to trust other humans," Wilkie said. For adoption to occur, however, the technology needs to be accessible. "I think there is an opportunity in the profession to help our clients understand the technology," Wilkie said, so they can begin to integrate it into their business models.

REDUCED WASTE

Thirty percent of food grown at farms currently goes to waste; broadly speaking, this means three out of 10 tomatoes never even enter the supply chain, Harris said. As the global population continues to grow and the agriculture industry grapples with the intensifying impact of climate change, this percentage will become untenable. "The system needs to become more efficient," he said.

At the same time, consumers are demanding increased transparency—many want to know exactly where their food comes from, how it was grown or raised, and the path it took to get to their kitchen. Blockchain not only enables entities to track this information, but do so in a way that is verifiable.

PROFESSIONAL UPDATES

As the needs of clients and firms evolve, so too do the skills required by the profession. As such, the AICPA has been working on an initiative to redefine the CPA designation, integrating more technology skills at the entry-level while working to develop programs that re-skill those already in the profession. "Over the next few years, we are going to redesign the academic community curriculum and revamp the CPA exam to be more reflective of the needs of the profession," the AICPA's Coffey said.

To help the profession better tackle accounting questions raised by digital assets, the AICPA formed a number of working groups. Made up of volunteer experts, these groups put forward guidance on how to approach and handle evolving blockchain issues.

AICPA DIGITAL ASSETS WORKING GROUP: ACCOUNTING AND AUDITING SUBGROUPS

Intended to provide guidance on accounting and auditing for digital assets, these working groups are composed of digital asset subject matter experts from national and international accounting firms. To date, the digital assets working group has published a practice aid that provides nonauthoritative guidance based on current U.S. GAAP for non-governmental entities and "the standards that exist today," said Matthew Schell, a partner with Crowe and chair of the accounting subgroup.

Working groups notably aren't trying to interpret or define existing regulations. "We are not looking at 'What is a security? What is a commodity?...we are leaving that up to the regulators," said Amy Steele, a partner at Deloitte and chair of the auditing subgroup. "From an audit perspective, our focus right now for the audit working group is on audit assurance," with particular attention to the unique demands of auditing digital assets.

In December 2019, the working group published the first version of the practice aid, which included a list of 10 Q&As covering topics such as classification and measurement when an entity purchases a crypto asset, accounting for digital assets that are classified as indefinite-lived intangible assets, and measurement of cost basis of digital assets that are classified as indefinite-lived intangible assets.

An updated version, published in July 2020, contains sections on auditor skill sets, like the need to engage outside cryptographers, data scientists, blockchain experts, and other specialists as well as management skill sets, such as the ability to interpret shifting regulatory environments. In October 2020, the practice aid was updated again to include industry specific guidance on investment companies and broker dealers, fair value considerations, and stablecoins. Other active topics of discussion include: fair value considerations, digital asset safeguarding, transactions, monitoring, reporting,

and valuation, as well as digital assets held by third parties or on behalf of third-parties.

During a tech presentation at the Symposium, Hossein Azari, the CEO of CMORQ, demonstrated the platform's ability to help facilitate audits by solving fundamental problems related to blockchain data. A major issue? "Standardization across different blockchains really doesn't exist," he said. Just as importantly, crypto assets on the ledger are not owned by a central entity, which makes them difficult to verify. ("You can write letters to their brokerage or to the custodian, but you can't write a letter to the blockchain network" Azari said.)

CMORQ provides "support for more than 50 blockchains," Azari said, verifying what occurs on these platforms "in terms of minting assets, burning assets, transferring them, or exchanging them." By enforcing quality assurance and standardizing information across blockchains, CMORQ supplies the backend for companies to obtain and analyze audit-quality blockchain data.

WSBA ACCOUNTING WORKING GROUP

Currently, the group is focused on DeFi applications; it has previously addressed a number of additional topics, including stablecoins and central bank digital currencies. The group continuously produces a range of content, including whitepapers, online posts, and a monthly podcast. In the fourth quarter of 2019, it put together a list of open items and thoughts regarding the IRS' most-recent FAQs. "We are not focused on trying to issue guidance or be the authoritative source for any overarching themes," said Dr. Sean Stein Smith, a professor at Lehman College and the working group's chair. "Rather, our goal is to harness the expertise in the working group to bring our thought leadership, questions, and comments to raise awareness and help get these topics into mainstream conversations for broader accounting purposes."

IN SUMMARY

Since its founding in 2017, the Blockchain Symposium has brought together some of the smartest people in the profession to plan for the future of blockchain and make sure firms and practitioners are equipped with the resources they need to adapt and mature.

At the same time, 2020 has been a year like no other. For the first time, the Blockchain Symposium was held virtually, with attendees signing in from across the country and overseas. Despite the challenges of engaging through a screen, the event was an unqualified success. "It's been an amazing two days," Asgeirsson said in his concluding remarks. "Wow, has this category evolved."

Attendees were able to overcome the limitations of the virtual format to connect one-on-one and in smaller groups through side chats. Asgeirsson urged participants to make these virtual water cooler conversations ongoing as the profession looks ahead to next year.

By then, the space will look very different than it does today. "It's events like these that help us get smarter as we continue to evolve," said Coffey. The AICPA has a responsibility not only to keep up, but to actively drive policy and initiatives to help its members and their clients enter the blockchain age.