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UNLOCKING BLOCKCHAIN'S POWER

The shipping industry is rife with antiquated processes, a problem that Joshua Wolfe, a former U.S. Customs agent and CEO of CargoSprint, has spent the past decade working to solve.

Based in Peachtree City, Georgia, CargoSprint facilitates payments between freight forwarders — the company or person organizing a shipment — and cargo facilities, such as a shipping company or airline. When the company got its start in 2012, checks were the only way to pay handling fees for these huge, round-the-clock international shipments. "A customer would request payment online, and we would print the check through Google Cloud Print," Wolfe says. "[Sometimes], we'd actually attach a check to the paperwork that flew with the goods."

Wolfe estimates that upwards of 30% of his company's transactions fall outside of so-called regular business hours due to the 24/7 nature of the business. Checks are slow. They can get lost. They're labor intensive. "What our customers want is speed and accuracy and efficiency, because they want their goods; they want [them] fast. And if a payment is misplaced, or if it's slow, it's going to delay the delivery of goods."

BY EMILY MCCORMICK

Signature Bank, Customers Bancorp and others are leveraging blockchain-based payments platforms to serve commercial customers and so far, it's a win for all parties.

That dilemma led Wolfe to Signature Bank, which was exhibiting at an industry event two years ago. "We're used to seeing the same players at these events, and it's unusual to see a bank," Wolfe says. "We built a relationship from there."

Wolfe was drawn to Signature Bank's Signet platform, which it launched in 2019. Based on the blockchain, the platform enables real-time, instant transactions, on any day and at any time, to occur between two parties — so long as they're both clients of New York-based Signature Bank. The blockchain is a digital ledger that can be shared publicly — it's transparent to anyone with the technical know-how to view it. Alternatively, it can be private, operating in a closed loop system that can be viewed by the clients involved, the financial institution and its regulators. That second approach describes Signature's system.

"[Y]ou have to be a client," Signature CEO Joseph DePaolo said at a conference in December 2018, ahead of the platform's launch. "We're not allowed to go outside that walled garden. That could be down the road. And that's mainly because you need to do your KYC, your AML, your BSA. You need to know who is transacting." Payments are instant, occurring in under 30 seconds — a Ferrari among stagecoaches in the commercial payments space. "It's safer, it's more reliable and it's transparent. So the opportunities are enormous."

New York-based Signature Bank, at $122 billion in assets, had already grown tremendously, operating a relationship-based, client-centric business bank that's been fueled by organic growth over the past 20 years. "They basically went to a lot of the talented relationship people at bigger banks and said, 'Come work for us — we'll pay you more money, you'll have less bureaucracy to deal with, and you will be the single point of contact with your customers,'" explains Mark Fitzgibbon, head of financial services research at the investment bank Piper Sandler & Co. Signature then successfully replicated that model on the West Coast as it added offices there. "They're always in close contact with their commercial customers; they're not a retail bank," says Fitzgibbon. "They went to those folks and said, 'What would be the most helpful for you?'"

The answer to that question? The ability to move money, digitally, around the world in an instant. So Signature partnered with a company called Tassat Group to make it happen.

Tassat, also in New York, was founded five years ago, when long-time investor Kevin Greene saw the potential for blockchain to revolutionize payments. "We saw instantly the applicability in the payment world," says Greene, Tassat's CEO and chair. The typical payment bounces from bank to bank, with no transparent means to understand — by both parties — when the payment went through. "We said, 'Let's create a real-time payments solution, but one that operates entirely within the U.S. banking industry.'"

Blockchain
A digital database containing information (such as records of financial transactions) that can be simultaneously used and shared within a large decentralized, publicly accessible network.
Source: Merriam Webster

"Blockchain is the future of banking," says Greene. "We actually give banks the tools they need to compete and win in the modern global economy." The blockchain allows Tassat and its

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partner banks to embed all the elements of the payment — the settlement, contract details, discounts, etc. — in one transaction. The platform has been developed specifically for business-to-business payments, with no limits on transaction volumes or size; these customers can connect their accounting systems to the platform via application programming interfaces (APIs). The payments occur via a private blockchain, meaning only the associated companies, the bank and its regulators can access the information — important for complying with Know Your Customer, anti-money laundering and Bank Secrecy Act requirements. That also makes the platform more secure, Greene says. The tokens used in the transactions aren't stablecoins, per se — a form of digital currency pegged, in a one-to-one ratio, to fiat or another physical asset. Instead, the tokens work only within the platform, ensuring that their value remains constant with the dollar. "You don't have any volatility risks with the price, like bitcoin going up and down," says Sara Krople, a partner at Crowe LLP. "You're not worried about valuation, as long as you know that the issuing bank has the coins in reserve."

Put simply, the money doesn't leave the banking system — it stays within the bank. "Everything we do operates entirely within existing regulatory frameworks," says Greene. That helps financial institutions to "deepen client relationships, increase deposits [and] increase the bank's ability to attract new clients." In three years, he says, Tassat has processed more than $400 billion in transactions — many of them through Signet.

Greene sees a world divided between banks that adopt blockchain, building market share and deposits, and those that don't. "Legacy systems are like stagecoaches," he says. "You can keep adding horses, but it can only go so fast."

Payments are slower than they could be because they rely on networks that were created decades ago, explains Christian Catalini, founder of the Massachusetts Institute of Technology's Cryptoeconomics Lab. Blockchain "can make transactions more efficient and lower cost," he says. "The reason why economists get excited is because once you make things compatible and interoperable, typically prices come down, new services are invented, and consumers, merchants and businesses in general benefit." Catalini co-created Diem, the blockchain-based payments platform spearheaded by Meta Platforms, then operating as Facebook. That project was closed by its founders in January 2022 after regulators made it clear that the project wouldn't move forward with their approval; lawmakers on both sides of the aisle didn't favor the project's ties to Facebook.

From Catalini's point of view, a private blockchain — lacking the scale and transparency of the public version — actually inhibits technological progress. Traditional institutions "try to adopt technology in a way that's extremely comfortable. But by design, technological change is going to be uncomfortable," he says.

But speed is a drawback with a public blockchain ledger; it just gets too big. "[T]he transaction processing speeds just aren't there to meet customer or user expectations," says Erin Fonté, who co-chairs the financial institutions corporate and regulatory practice at Hunton Andrews Kurth. "A private blockchain could run much faster because there [are fewer] nodes to verify. It is also kind of a walled garden that regulators do like," she adds. "There is a replicability and a trackability to each and every step of the transaction that is highly appealing to regulators." However, a private blockchain creates a ceiling by limiting the number of users to a bank's own universe of customers. Tassat announced a network of banks in late 2021 to overcome some of the drawbacks of a private loop, allowing the customers of member banks to transact with one another. The network will be owned and governed by a working group of 42 member banks.

"We remain skeptical that regulators will get comfortable with public blockchain" for payments, says Greene. And so far, that closed loop has proved a powerful marketing tool, with bank clients recruiting their own customers and vendors to the platform. "It's a force multiplier," he says. "Their customers become marketing agents for them."

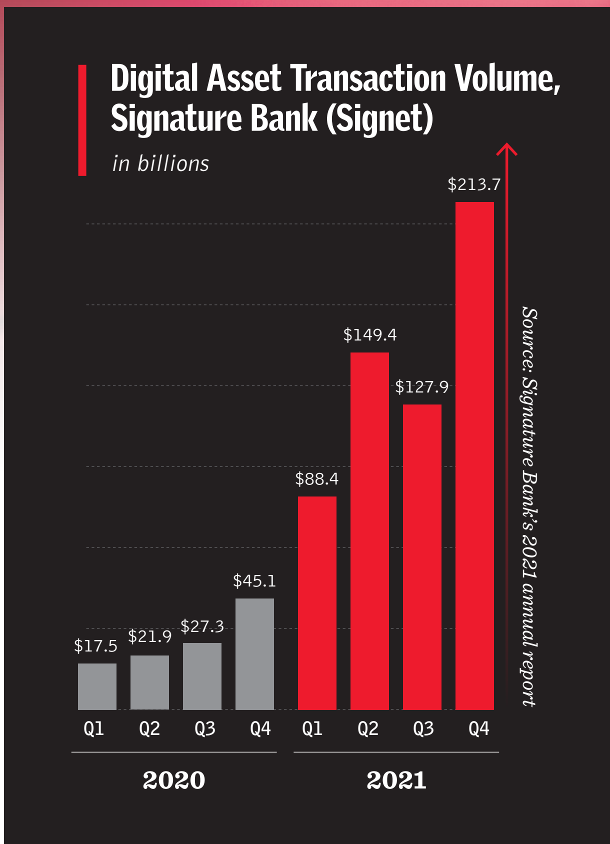
It seems to be a hit with users. "If you're a Signet customer and I'm a Signet customer, I can hit a few keystrokes and put money in your account,"

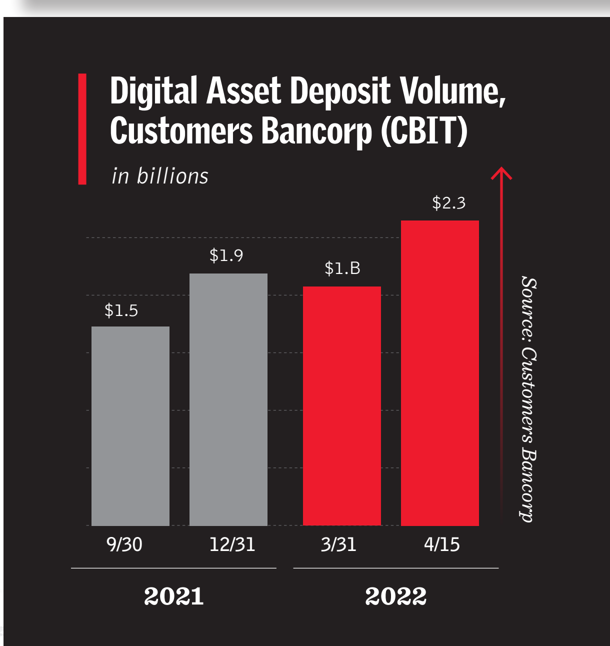
Public blockchain

Anyone can join and participate by reading, writing and auditing activities; but it's decentralized and therefore open to bad actors like hackers and fraudsters.

Private blockchain

Only open to select participants; it's a closed loop with limited interoperability and higher security.





Fitzgibbon explains.

Greene claims that corporate customers can "dramatically" reduce the number of staff devoted to payables and receivables. Adding to that, Signature doesn't charge a fee for the platform. "Once customers get used to using something and it's made easy [for them], they're more inclined to stay with it," says Fitzgibbon. That's resulted in huge growth in low-cost deposits for Signature Bank. So much, in fact, that Fitzgibbon says Signature has been creating new lending verticals — expanding into health care — to deploy that excess liquidity.

"Very few institutions have the capability to do this," says Fitzgibbon. "A lot of other banks are trying to create it and replicate it." Signature Bank has a strong track record of profitability, with a 12% return on equity reported at year-end 2018, according to S&P Global Market Intelligence's Capital IQ database. The bank had a 13.4% ROE at the end of 2021, and 14.4% at the first quarter 2022.

Signature found that its new payments platform attracted a specific type of clientele: companies in the rapidly growing, volatile cryptocurrency and digital assets space, a market that never shuts down. To be clear, none of the banks working with Tassat hold crypto assets of any kind. They're facilitating the settlement in U.S. dollars that goes alongside the transaction. Transaction volume for digital assets companies skyrocketed at Signature Bank through 2020 and 2021, from $17.5 billion in the first quarter 2020 to $213.7 billion in the fourth quarter 2021. As of the first quarter 2022, digital assets companies comprised 27% — $29 billion — of its $109 billion in deposits. Of that $29 billion, 44% came from digital asset exchanges, 25% from stablecoin issuers, and the rest from traders and other sources.

"Deposits were growing $10 billion a quarter in 2021, and roughly 50% of it was coming from crypto," says Casey Haire, managing director at the investment bank Jefferies Group in late April. These are low-cost funds, he adds, at around 5 or 6 basis points. "It's been an explosive deposit generator."

Signature Bank declined interviews for this story. DePaolo stated at a conference in March that competitors seemed to be watching his bank's every move. "We decided not too long ago not to talk about [blockchain possibilities] anymore," he said, "because we found that by talking about them, our competitors were looking into them, too."

Perhaps Signature executives have reason to worry. Tassat and Signature Bank had a roughly 2-year exclusivity agreement, giving Signature a rapid head start with its platform. That expired, and Tassat began marketing its platform to other banks a little over a year ago. One of the first banks to join Tassat's recently opened platform was Reading, Pennsylvania-based Customers Bancorp. The $19 billion bank had been seeking niche verticals that might not catch the eye of big banks but required a technology moat of sorts to keep out other competitors. Customers saw an opportunity in the growing digital assets space. "In terms of capability, there's a limited number of banks that could participate," says Chris Smalley, managing director of digital banking. "We built the [Customers Bank Instant Token] platform [using] the same blockchain rails that Signet uses." CBIT started with 24 beta customers during its initial launch in October 2021; it now has around 125, according to Smalley. It added 74 new clients in the first quarter of 2022 alone, with deposits from that sector totaling $2.3 billion.

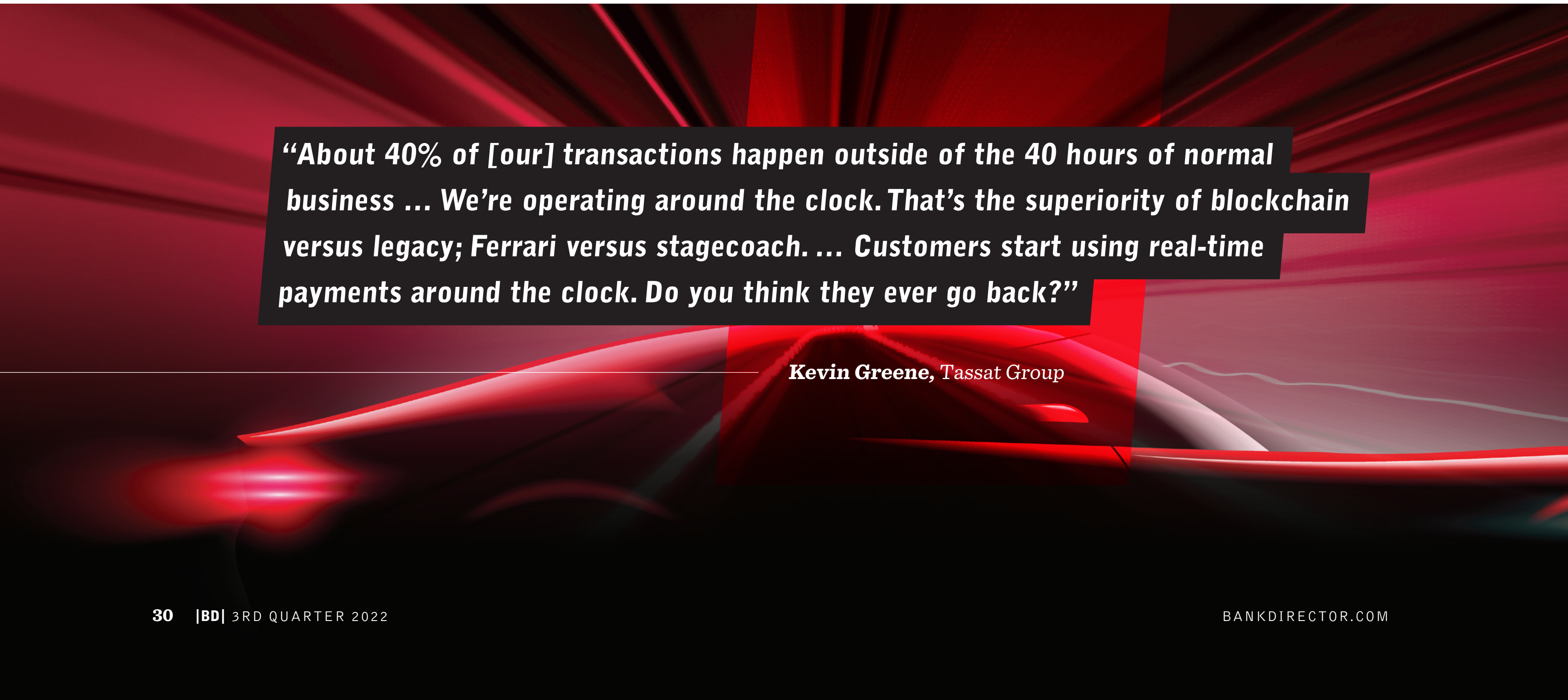
That's attractive to investors. "When you look at banks that historically have generated higher multiples over sustained periods of time, it's not driven by asset generation," says Mike Perito, a managing director at the investment bank Keefe, Bruyette & Woods, who covers Customers Bancorp. "It's driven by a superior funding model, which is highly correlated to superior profitability. … The market is fairly excited about low-cost deposit generation platforms, particularly if they can be fairly efficient." Signature, which also benefits from being asset sensitive in a rising rate environment, was trading at 1.5 times book value at the end of the first quarter, compared to 1.0 times book for the financial industry, according to S&P.

What's less clear is the compliance environment. The regulatory ground shifted a bit in 2020 and 2021, opening up space to depository institutions while also putting some guardrails in place. Communications issued by the Office of the Comptroller of the Currency — interpretive letters No. 1170, 1172, 1174 and 1179 — clarified the regulator's position on cryptocurrency custody and stablecoin, indicating that a bank must receive a notice of "non-objection" from the OCC before engaging in these activities. In April 2022, the Federal Deposit Insurance Corp. requested that institutions engaged in activities related to digital assets notify the agency. "We have yet to hear from the Federal Reserve," says Hunton Andrews Kurth's Fonté. "All three federal agencies — the OCC, Fed and FDIC — are engaged in a crypto sprint this year on the regulatory issues, so that's important to bear in mind."

Still, a handful of other banks are rolling out their own blockchain platforms with Tassat, including $16 billion Axos Financial, headquartered in Las Vegas; $1 billion Cogent Bank in Orlando, Florida; and Phoenix-based Western Alliance Bancorp., with $61 billion in assets. For Western Alliance, it's all about those low-cost deposits, says Haire. "Western Alliance is a prolific asset generator and if you can marry that with a cheap source of funding, that's the attraction."

A payments platform alone isn't enough to bank this growing sector, of course. Customers Bancorp hired an eight-person team from La Jolla, California-based Silvergate Capital Corp., a $16 billion bank that's also gained an early-mover advantage in the cryptocurrency space through its own real-time payments platform, the Silvergate Exchange Network. Silvergate recently acquired intellectual property and other assets from the shuttered Diem.

The staff that Customers poached brought critical relationships; they were also able to share their experiences around what worked and what didn't. "Response times and [availability] and onboarding timeline were real pain points for our customers on their banking journey, and those are things we corrected for on Day One," says Smalley. Customers Bancorp didn't just hire a sales team; it brought on individuals focused on everything from sales to regulatory compliance. "We embed those folks with our broader existing team," he says. "They've been



"About 40% of [our] transactions happen outside of the 40 hours of normal business … We're operating around the clock. That's the superiority of blockchain versus legacy; Ferrari versus stagecoach. … Customers start using real-time payments around the clock. Do you think they ever go back?"

Kevin Greene, Tassat Group

able to scale those best practices, and they've also been able to help us avoid pitfalls."

Before putting the platform in place, Customers spent five months reviewing the risks, pulling in employees from across the organization to identify the risks associated with the platform, build out mitigations for those risks and then understand the residual risks. Smalley believes this has resulted in a "best in class BSA review process that balances the customer onboarding journey — the speed to market — but also the security of the bank and its other customers." Smalley says they won't bank so-called "bad actors" and will terminate a relationship if a client behaves badly. Onboarding customers so quickly while also identifying risky players is the result of that up-front work.

Recent volatility in the cryptocurrency space has had an impact on deposit volumes at Signature Bank and Customers Bancorp. Bitcoin, by far the most invested-in digital asset with a market cap of $577 billion as of May 20, saw a 25% decline in its price in May through that date; over six months, its price dropped a whopping 52%. Rising interest rates tend to have a negative impact on the stock market, and digital assets are feeling these effects. But the instability has been further compounded by the dramatic drop of so-called stablecoins such as TerraUSD (UST). Since its start in November 2020, UST maintained a one-to-one peg with the U.S. dollar; that changed with a freefall that kicked off the afternoon of May 9, 2022. As of May 20, UST was valued at less than $0.07 on the dollar.

"Not all stablecoins are created equal," says Fonté. "[T]he Terra stablecoin was not backed by fiat or by readily convertible assets like Treasury bills; it was backed via an algorithmic mix of other cryptocurrencies."

Smalley at Customers says an algorithmic stablecoin like UST wouldn't have passed its KYC process. However, the episode has "eroded some level of institutional trust in the crypto community," he says. "As deposit balances in the broader crypto ecosystem decline, they decline here, and they decline [at] our competitors." He adds that clients remain well capitalized. Deposits tied to CBIT comprised 14% of total deposits in the first quarter.

In a May 20 note, Piper Sandler acknowledged the impact on Signature Bank's business model, saying the bank has certainly benefited from the development of the crypto space. "This tremendous growth in turn meaningfully benefited the company's deposits and stock price over the past [2] years. So, it is only natural that SBNY shares would also get pressured" as the crypto space has melted down, wrote Fitzgibbon. With just one crypto-backed loan, the bank's credit exposure isn't significant, but the collapse promises to slow deposit growth.

That doesn't diminish the value of its blockchain-based payments platform, according to Fitzgibbon. "[W]e continue to believe that their digital payments platform (Signet) is a valuable part of the company and will continue to be utilized by many of their clients (primarily commercial clients) to make real[-]time payments in U.S. dollars 24/7/365."

In a mid-quarter update released on May 13, Signature Bank noted that it doesn't onboard algorithmic stablecoin administrators. Further, it stated: "Balances have not been meaningfully affected by current events in the digital asset trading space."

Freefall aside, digital assets could be here to stay. Fidelity Investments recently launched an account providing a digital assets option for 401(k) plans, and the top five digital currencies alone totaled just shy of $1 trillion in market cap as of May 20. "I have 20 banks in my coverage universe," says Haire. "Three of them are doing crypto."

But for the blockchain, real value could come as more industries see the advantage of real-time, instant payments and other services built for the broader economy.

"The low-hanging fruit is the crypto business," says investor Dory Wiley, CEO of Commerce Street Holdings. "We're in the first innings" of blockchain. That includes growth in payments as well as possibilities to gain efficiencies in the mortgage space. "I see a future for a community bank ... to have a product in this space," he says. "[Blockchain] creates an opportunity for them to compete with bigger banks in more areas and services than what they have before."

At Tassat, Greene sees potential in going beyond crypto to serve the "other 98% of the U.S. economy" that needs to modernize. He estimates that 60% or so of the business-to-business market still relies on paper checks, and most transactions between bank accounts remain clunky. And not all transactions occur during the so-called business hours of 8 to 5, Monday through Friday — not in today's rapid-paced, global economy. "About 40% of [our] transactions happen outside of the 40 hours of normal business," says Greene. "We're operating around the clock. That's the superiority of blockchain versus legacy; Ferrari versus stagecoach. ... Customers start using real-time payments around the clock. Do you think they ever go back?" **|BD|**

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