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Sam Bankman-Fried's FTX

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When he was 16-years old, Nishad Singh ran an ultra marathon for charity. Overcoming the asthma that plagued him as a child, Singh completed the 100 miles in just over 23.5 hours, setting a world record for the fastest 100-mile run by a 16-year old.[1] A TED Talk describing his impressive feat followed soon after. At the time, Singh was an honors student at an elite private school in Silicon Valley. One of his close friends was Gabe Bankman-Fried, the younger brother of Sam Bankman-Fried, informally referred to as SBF.

Five years later, after graduating from the University of California, Berkeley with a degree in electrical engineering and computer science, Singh began working for Alameda Research (Alameda), a crypto trading firm founded by SBF and Tara Mac Aulay, an Australian mathematician,[2] and eventually led by CEO Caroline Ellison. Within a short period of time, Singh was wearing two hats: in addition to his engineering role at Alameda, he led engineering at FTX, the crypto exchange founded by SBF and Gary Wang. (See **Exhibit 1** for equity breakdown for Alameda and FTX.)

By early 2022, FTX was the second-largest crypto exchange in the world. It, purportedly, ended 2021 with $388 million in income on $1.02 billion in revenue.[3] In February 2022, after its series C fundraiser, the 3-year-old exchange was valued at $32 billion (**Exhibits 2 and 3**). For the first half of 2022, FTX had a trading volume of $76 billion, a 19% increase over the same period the year before,[4] with more than nine million customer accounts.[5]

But then, everything came crashing down and fast. On November 11, 2022, FTX filed for bankruptcy. On December 12, the U.S. Department of Justice charged SBF with eight counts of fraud, money laundering, and campaign finance offenses[6] and summarily arrested him. He was charged with funneling billions of dollars of FTX customer funds to Alameda, which went toward startup

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This case was prepared by Professor Nemit Shroff and Cate Reavis, Associate Director of Curriculum Development.

investments, real estate purchases, political donations, and personal expenditures.[7] SBF pled not guilty. Wang and Ellison faced similar charges. They pled guilty.

In February 2023, Singh, who held a 5% equity stake in FTX,[8] was charged and pled guilty to six criminal counts, including conspiracy to commit securities fraud, conspiracy to commit money laundering, and conspiracy to violate campaign finance laws. Singh admitted to writing software code that allowed SBF to divert FTX customer funds to Alameda. He admitted making illegal political contributions using Alameda money and hiding the source of the funds. He also admitted to inflating FTX's 2021 revenues by about $50 million, thereby pushing the company's year-end revenue to more than $1 billion by making up new transactions and then backdating them in the company's transaction history. All of these actions were at the request of SBF.[9]

The meteoric descent of FTX left many confused as to what had happened, why it had happened, and how it had been able to happen? Who was to blame? And what could be done to prevent it from happening again?

Sam Bankman-Fried

Sam Bankman-Fried was an easily recognizable eccentric.[10] Unless testifying before Congress, he dressed in shorts and T-shirts, even while making formal presentations. His hair was wildly unkempt. He was known to sleep in a beanbag chair in his office. He played video games, loved "League of Legends," and was once caught playing it while pitching FTX to investors from the venture capital firm Sequoia.[11] Since moving FTX from Hong Kong to the Bahamas in 2021, after China outlawed crypto trading, SBF had lived with nine other colleagues, including Wang, Ellison, and Singh, in a $35-million luxury penthouse, which Alameda paid for.[12] SBF would end up having an on again, off again relationship with Ellison for two years.

SBF grew up on the Stanford University campus where his parents were law professers. His father was a renowned tax expert. He was raised as a utilitarian: a theory of morality that advocates decisions that foster the greatest happiness or pleasure for the greatest number of people.[13]

During his undergraduate years at MIT, where he studied math and physics, SBF became an adherent of effective altruism or EA: a philsophy that seeks "to do good in the most clear-sighted, ambitious, and unsentimental way possible."[14] He committed himself to an offshoot of EA known as "earning to give," which urges followers with lucrative careers to earn as much as they can before giving it away.[15] SBF ventured into his professional career guided by this philosophy.

After graduating from MIT in 2014, he took a job with Jane Street—a quantitative trading firm that specialized in arbitrage trading strategies. While there, he gave half his salary to charity.[16] He also discovered the world of crypto.

Crypto

On October 31, 2008, amidst the economic turmoil brought on by the global financial crisis, the pseudonymous Satoshi Nakamoto published a paper entitled "Bitcoin: A Peer-to-Peer Electronic Cash System."[17] The paper's purpose was to introduce "a new electronic cash system that's fully peer-to-peer, with no trusted third party," such as a bank. In other words, there was no private or public sector entity overseeing the system. Operating outside the banking system meant that Nakamoto's Bitcoin, the world's first cryptocurrency,[i] would not be "marred" by the destabilizing bank runs that sometimes occurred in traditional finance.[18] Users of this system could send and receive cryptocurrency over the Internet without needing to involve a bank or an app like PayPal or Venmo.[19] The first commercial use of Bitcoin was in May 2010 when a customer paid 10,000 Bitcoins (equivalent to $40 at the time) for two Papa John's pizzas. In November 2021, when the price of Bitcoin hit its peak,10,000 Bitcoins were worth $688 million.

Crypto exchanges like FTX allowed hundreds of different cryptocurrenices and tokens to be traded in exchange for other crypto assets or fiat currency (legal tender issued by a country).[20] The more prominent exchanges were Coinbase, Binance, and FTX.

Coinbase was a publicly traded exchange. Based in the U.S., it offered consumers a user-friendly interface and trading experience[21] and followed a basic exchange model: A customer opened an account and asked the exchange to buy one Bitcoin with the money in their account. Coinbase bought the Bitcoin and held it for the customer in a custody account while charging them a fee for the transaction. Because Coinbase did not use customer funds to make loans or investments with the objective of earning a return for the company, it had the liquidity to return money to customers when requested. Coinbase was considered a bank-run-proof business: it did not have to worry about an adverse liquidity event even if all its customers simultaneously asked for their money back.[22]

The largest cryptocurrency exchanges—Binance, founded by Chinese billionaire Changpeng Zhao (known as CZ), and FTX—specialized in higher-risk derivatives and leverage trading. Derivative contracts allow traders to speculate on the price movements of cryptocurrencies without actually owning the underlying asset. Leverage trading (or margin trading) with crypto is when an investor borrows crypto from a broker to create a bigger position in a trade, beyond what they could buy with their own cash. Managing risk was a critical component for these two exchanges. **Exhibit 4** demonstrates the risks incurred by exchanges in facilitating derivative and leverage trading with crypto. Derivatives and leverage trading of crypto were prohibited in the United States. Both Binance and FTX operated separate exchanges in the U.S. that complied with its stricter trading regulations.

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[i] Cryptocurrency refers to a digital or virtual currency secured by cryptography and based on a network that is distributed across a large number of computers.

Some exchanges issued their own crypto tokens. Exchange tokens are designed to increase an exchange's liquidity, by incentivizing trading activity. They could also be bought, sold, and traded like coins, but while crypto coins (e.g., Bitcoin) were like dollars, tokens were more like coupons or vouchers.[23] Exhange tokens could also serve as collateral. FTX's token, which it minted itself,[24] was known as FTT. As an exchange token, they could be traded on secondary markets or held for speculative purposes. FTTs were not available to trade on any major U.S. crypto exchanges.[25]

Owners of FTTs received discounts on FTX trading fees, the ability to earn interest, and various benefits on the FTX exchange. They could also be used to trade derivatives.[26] From time to time, FTX would use its profits to buy back and "burn" (retire) FTTs (permanently taking tokens from circulation), thereby reducing the supply of the token, which potentially increased its price. As a result, the value of FTTs was loosely tied to the performance of FTX. While exchange tokens weren't stocks—i.e., they didn't represent an ownership interest in the issuing company—they acted like stocks in that they represented a bet on a crypto company's future.[27]

Regulating Crypto

Regulation of crypto varied significantly from country to country. Japan had one of the most progressive crypto policies[28]—it began recognizing Bitcoin and other digital currencies as currency in 2016[29]—while China outlawed crypto in 2021. In the Bahamas, where FTX moved its headquarters in 2021, regulations were favorable to digital asset firms.[30] Bahamian Prime Minister Philip Davis was a crypto fan, saying crypto entrepreneurs were "better wired for innovation and change than most people on the planet."[31]

In the U.S., there were rules prohibiting certain crypto trading instruments (including derivatives) that leveraged bets—the very instrument that made up 80% of FTX's global revenue.[32] But there was one overarching question hampering regulatory efforts: who should be the sheriff of crypto? The answer seemed to depend on whether crypto should be considered a security or a commodity. Or should it depend on the type of token?[33]

The Securities and Exchange Commission (SEC), responsible for enforcing regulations, protecting investors, and ensuring fair markets, believed cryptocurrencies were securities (like stocks and bonds) and should be registered with the government and follow the same rules. The purpose of registration was to provide investors and the government details about management and business practices and at least two years of audited financial data. Registration could take several months and cost over $1 million.[34] Of the thousands of crypto tokens in circulation, only a tiny fraction were registered with the SEC.[35] When it came to crypto exchanges, the SEC believed that they, too, should be registered and follow the same rules as the NASDAQ and the New York Stock Exchange. But none were.[36]

Meanwhile, the Commodities Futures Trading Commission (CFTC), which regulates derivatives trading of commodities,[ii] believed cryptocurrencies fell under its jurisdiction.[37] The commission used the example of Bitcoin: because Bitcoin was "interchangeable on exchanges, each Bitcoin is of identical worth, just like how a sack of corn is equal to another sack of corn of the same grade," and therefore should be treated as a commodity.[38]

SBF wanted digital assets to be treated like commodities and regulated by the CFTC.[39] In February 2022, he testified before the U.S. Senate Committee on Agriculture, Nutrition, and Forestry, highlighting his support for regulation and for the CFTC as the appropriate regulatory body. The CFTC was considered a less-aggressive regulator than the SEC.[40]

The Founding of Alameda Research and FTX

During his time at Jane Street, SBF began experimenting with crypto arbitrage. He bought Bitcoin in the U.S., sold it in Japan for a 10% premium, and pocketed the difference. SBF left Jane Street, and in November 2017, he and fellow effective altruist Tara Mac Aulay co-founded Alameda. SBF had no management experience and Mac Aulay had no financial background but was successful at crypto trading which she did in her spare time.[41] Wang, SBF's MIT roommate, described as a recluse who hardly ever spoke, was hired as CTO. Singh joined them a month later as director of engineering. The startup focused on crypto arbitrage and made $20 million in its first three weeks.[42]

Initially headquartered in Berkeley, California, Alameda soon moved to the more crypto-friendly Hong Kong, where there was little oversight over the nascent industry[43] and where it wasn't shunned as it was by U.S. banks and Wall Street firms because of its lack of regulation and oversight.[44] SBF owned 90% of the company. Most of the people Alameda hired in its early days were EAs without experience trading in financial markets or, for that matter, interest in money. As Michael Lewis wrote in his intimate portrayal of SBF and his businesses in *Going Infinite*, "Most [employees] neither knew nor cared about crypto; they had just bought into Sam's argument that it was this insanely inefficient market in which they might use his Jane Street-like approach to trading to extract billions."[45] Soon enough, Alameda was making over 250,000 trades a day.

But SBF's grip on Alameda was tested in early 2018. His management team lost confidence in him when, among mounting trading losses, he reported losing track of over $4 million worth of XRP, a cryptocurrency issued by the exchange RippleNet. He told Alameda managers that in his estimation "there was an 80% chance that it would eventually turn up. Thus they should count themselves as still having 80% of it."[46] Singh, who was described as painfully considerate, saw the merit in both sides of an argument, and adept at easing internal tensions tried to calm the growing discord between SBF and Alameda managers.[47] But to no avail.

[ii] A commodity is a basic good like wheat, coffee, or oil that is interchangeable with other goods of the same type.

After discovering SBF's ineptitude for managing the buinsess and realizing that in order for SBF to leave Alameda, he had to want to leave, Mac Aulay, most of its management team, and half of Alameda's employees, quit en masse in April 2018.[48] Wang, who held a 10% stake,[49] Singh, and Ellison, who was hired in March 2018, remained. The missing XRP eventually turned up and Alameda resumed making millions of dollars in profit monthly.[50]

SBF soon became frustrated with how existing crypto exchanges were run and decided to start his own.[51] Again with Wang, he founded FTX in May 2019. Incorporated in Antigua and Barbuda and located in the Bahamas, FTX specialized in crypto derivatives and leveraged products, both of which were prohibited in the U.S. FTX made money by taking a cut of two basis points (or two one-hundredths of 1%) on most transactions.[52] Shortly after its launch, FTX introduced FTTs for $0.10 a token. In the beginning, SBF saw FTTs as a way to secure loans and build an equity cushion for FTX.[53] Alameda owned 60% to 70% of FTTs and was able to get loans more easily. By September 2021, FTTs reached a peak of $80. Various crypto lenders ended up giving Alameda $9.4 billion in loans.[54]

FTX offered customers a number of services. Through the company's spot market platform, customers could trade crypto assets with other FTX customers in exchange for fiat currency or other crypto assets. Its spot market trading service allowed customers to trade using assets they did not have (trading on margin) by posting collateral, including FTTs, in their FTX accounts and borrowing crypto assets through the spot market on the FTX platform. FTX also allowed customers to lend their crypto assets to other FTX customers who would then use them to spot trade.[55] Alameda was FTX's largest customer.

Trading through the exchange was easy. As one journalist wrote, "FTX serves as a portal to the crypto world. With the click of a button, a curious investor can turn dollars into Bitcoin, Dogecoin, or Ether. It's as simple as buying paper towels from Target."[56]

Not only was trading easy, it was safe, according to SBF. With software code developed by Wang and Singh,[57] the exchange had built-in protections to manage risk. The company's risk engine calculated a customer's margin every 30 seconds. If the collateral on deposit fell below the required margin level, the automated system would start selling assets from the customer's portfolio until the collateral on deposit exceeded the required margin level.[58] As SBF tweeted in October 2022, FTX's approach to risk management was "conservative and handles apparent large moves gracefully" and was "probably the most important thing we do at FTX."[59] SBF touted the importance of having protections to manage risk in his testimony before the U.S. House of Representatives Committee on Financial Services: "[I]f you look at what precipitated some of the 2008 financial crisis, you will see a number of bilateral, bespoke, non-reported transactions happening between financial counterparties, which then got repackaged and releveraged again and again and again, such that no one knew how much risk was in that system until it all fell apart."[60]

The White Knight

FTX seemed to be everywhere at the beginning of 2022. Athletes and celebrities including Steph Curry, Tom Brady, Gisele Bundchen, and Matt Damon were featured in various television and print media ads promoting the brand. The company paid $6.5 million to air a Superbowl commercial starring Larry David and $135 million for the naming rights to the Miami Heat's arena.

Then the crypto industry crashed. May 2022 was dubbed the crypto industry's "Lehman moment," referring to the 2008 collapse of the financial services firm Lehman Brothers at the start of the global financial crisis.[61] With rising interest rates, growing inflation, and the war in Ukraine, the crypto industry was struggling in the early months of 2022. Investors were pulling back. Lenders began calling in their loans, including those to Alameda. Worth $2.9 trillion in November 2021, the global cryptocurrency market fell to $926 billion by June 2022.[62]

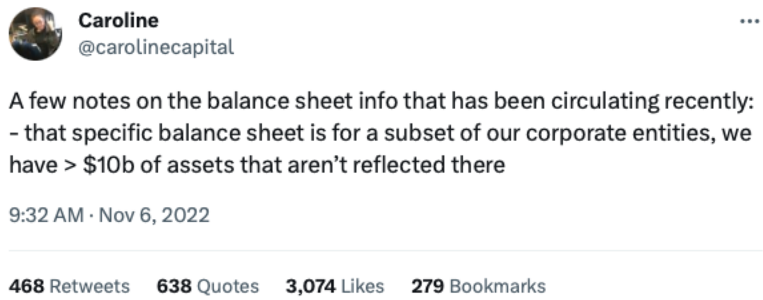
FTX, and its sister trading company, Alameda, which had been co-led by Ellison since October 2021,went on a spending spree to help prop up failing crypto companies in order to prevent a contagion. The press began referring to 30-year-old SBF as the industry's modern-day J.P. Morgan, its white knight.[63] Alameda, FTX, and SBF himself—he was at that time worth over $21 billion[64]—made substantial investments in a number of crypto firms at risk of going under. In May, Alameda loaned crypto lender Voyager Digital nearly $446 million, only to have Voyager declare bankruptcy weeks later. In June, FTX provided crypto bank BlockFi with a $400 million credit facility with an option to buy the firm for up to $240 million. (BlockFi had been valued at $4.75 billion a year earlier.[65]) It wasn't the first time SBF and his companies had propped up the crypto industry. A year earlier, FTX had given Japanese crypto exchange Liquid $120 million in financing. FTX acquired Liquid in March 2022 for an undisclosed sum.[66]

SBF explained that his investments were meant to backstop customer assets of the companies he was investing in and stop a potential crypto contagion. "I want to be in a position where when we work with people, we're a little more generous than we have particular reason to be," he said. "The bigger piece of this is a trust thing where I don't want to have to worry when I'm doing a deal about whether the other side is going to try and f*ck me in 20 ways I'm not anticipating."[67]

A Leaked Balance Sheet

While its private decent began earlier, FTX's public decent began on November 2, 2022, when the crypto trade publication *CoinDesk* leaked Alameda's balance sheet.[68] It showed the company had $14.6 billion in assets, of which 40% were in FTT. Alameda and FTX collectively owned roughly 90% of the tokens, leaving a small amount to circulate widely. The relative scarcity of the FTT in the market meant that FTX and Alameda could not sell their FTT holdings without significantly moving the price of FTT downward, raising questions about the stated value of the FTT asset on their balance sheets.[69] Importantly, the underlying value of FTT was loosely tied to the performance and value of FTX, and concerns about FTX's value led investors to begin losing faith in the value of FTT. A lower price for FTT made FTX's balance sheet look worse – and so a death spiral began.

Alameda's CEO Caroline Ellison attempted to calm the growing nervousness and tweeted on November 6:



Ellison's tweet was useless. That same day, Binance CEO Changpeng Zhao, who owned 23 million FTT tokens worth $580 million, announced that he would be selling his holdings.[70] The price of FTT dropped by 80% over the next two days. (See **Exhibit 5** for FTT price drop.) A run on FTX ensued, with customers wanting to withdraw funds from the exhange all at once. In the 72 hours leading up to November 8, customers withdrew over $6 billion in deposits.[71]

To assuage growing doubts about FTX's solvency, SBF tweeted: "FTX is fine. Assets are fine… FTX has enough to cover all client holdings. We don't invest client assets (even in treasuries). We have been processing all withdrawals, and will continue to be…"[72] He later deleted that Tweet.

Behind the scenes, SBF searched for emergency funding to cover FTX's shortfall of $8 billion. He was turned down at various stops in Silicon Valley and the Middle East.[73] In his quest, he shared an Excel balance sheet that indicated FTX had $9 billion in liabilites and that, of its $9.6 billion in assets, only about $900 million was liquid, including $472 million of Robinhood shares.[74] (In May 2021, SBF spent $648 million of his "own money" to buy a 7.6% stake in the trading app Robinhood.[75]) The company's largest overall asset, which fell in the less-liquid column, was $2.2 billion worth of a cryptocurrency called Serum (SRM).[76] At the time SBF was searching for funding, Serum's liquid market cap (i.e., current price × circulating supply) was $88 million,[77] which suggested that the asset would be worth far less than than its paper value on FTX's balance sheet if sold into the market.[78] (**Exhibit 6** presents FTX's balance sheet as published in *The Financial Times*.) After striking out in his various financing stops, SBF called his archrival Zhao asking for a lifeline.[79]

On November 8, FTX paused all withdrawals. Meanwhile, Zhao tweeted that Binance might buy FTX after a full-scale due diligence. But within 24 hours, Zhao backed out, claiming that FTX's "issues are beyond our control or ability to help."[80] He then went on to tweet two big lessons from FTX's downfall:

"1. Never use a token you created as collateral, and 2. Don't borrow if you run a crypto business. Don't use capital 'efficiently'. Have a large reserve."[81]

The Bahamian regulator entered the picture on November 10 when it froze FTX's assets. FTX and 100 related entities, including FTX.US and Alameda, filed for bankruptcy on November 11, 2022. SBF resigned. It was soon discovered that FTX had more than one million creditors.[82]

John Ray, who oversaw the $23 billion bankruptcy following Enron's collapse in 2001, was appointed CEO and chief restructuring officer. Ray claimed FTX was the biggest mess he had ever seen:

> Never in my career have I seen such a complete failure of corporate controls and such a complete absence of trustworthy financial information as occurred here. From compromised systems integrity and faulty regulatory oversight abroad, to the concentration of control in the hands of a very small group of inexperienced, unsophisticated and potentially compromised individuals, this situation is unprecedented.[83]

Ray discovered that FTX operated with no independent board of directors—the board consisted of SBF, an FTX employee who headed over-the-counter and institutional sales who stepped down from the board in June 2022 and left the firm in October 2022, and an unnamed lawyer from Antigua and Barbuda[84]—and lacked the most basic internal controls. The company had no accounting department[85] and no CFO listed as part of its leadership team.[86]

On Monday, December 12, 2022, SBF was arrested in the Bahamas and charged in the U.S. with eight criminal counts.[iii] None of the charges involved FTX.US. SBF's net worth, which at its peak was reportedly $26.5 billion, fell to $100,000 around the time of his arrest.[87]

Claiming he was a flight risk, the judge in the Bahamas denied bail. SBF was eventually extradited to the U.S., where he pled not guilty and was released to his parents in Palo Alto, California, on a $250 million bail, secured by his parents' home.[iv] (In August 2023, SBF's bail was revoked for intimidating witnesses and he was sent to the Metropolitan Detention Center in New York City until his trial.[88]) Ellison and Wang, both 28-years-old, were also criminally charged. Unlike SBF, they both pled guilty and were cooperating with prosecutors. Days earlier, CEO Ellison had admitted to Alameda employees that she, SBF, and Wang were aware that Alameda had used FTX customer funds to meet its own

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[iii] The U.S. Department of Justice charged SBF with conspiracy to commit wire fraud on customers; wire fraud on customers; conspiracy to commit wire fraud on lenders; wire fraud on lenders; conspiracy to commit commodities fraud; conspiracy to commit securities fraud; conspiracy to commit money laundering; and conspiracy to defraud the United States and violate the campaign finance laws.

[iv] The $250 million bond that was secured by SBF's parents did not mean they put up assets totaling $250 million. But, if SBF fled while out on bail, they would be responsible for paying the $250 million bond. In August 2023, SBF's bail was revoked for intimidating witnesses and he was sent to Metropolitan Detention Center in New York City until his trial. (Jack Queen, "Explainer: How Did Bankman-Fried Secure $250 Million Bail?" *Reuters*, December 23, 2022, https://www.reuters.com/business/how-did-bankman-fried-secure-250-mln-bail-2022-12-22/#:~:text=Bankman%2DFried%27s%20bail%20was%20secured,home%20in%20Palo%20Alto%2C%20California., July 24, 2023.)

liabilities.[89] Singh, 27-years-old, was charged and pled guilty in February 2023 to six charges, similar to the conspiracy charges against Ellison and Wang and one charge for violating campaign finance laws.

The Unveiling

In addition to the U.S. Department of Justice criminal charges, SBF faced civil charges from the SEC and the CFTC. Singh's involvement became clear when he pled guilty a few months later.

The SEC complaint that applied from May 2019 through November 2022 described activities at FTX and Alameda that were never disclosed to investors or customers. The SEC complaint[90] included the following:

Undisclosed diversion of FTX customers' funds to Alameda Research LLC. FTX customers deposited billions of dollars into Alameda-owned bank accounts, some which didn't have the name Alameda (e.g., North Dimension, which was an Alameda subsidiary). Singh helped write the code that enabled these deposits and created the website for North Dimension. Alameda commingled these funds and used them indiscriminately to fund its trading operations and SBF's other ventures, including $5 billion invested in tech companies.[91] Alameda's multibillion-dollar liability was reflected in an internal account in an FTX database known as fiat@ftx.com. The balance sheet that Alameda provided third-party lenders identified this liability as a "loan," but did not specify that it was from FTX. It combined this liability with other loans it had received from third-party lenders. In 2021, SBF had directed Alameda to borrow billions of dollars from third-party crypto asset lending firms (who act as intermediaries between crypto lenders and borrowers) to fund his venture investments and for his personal use.

Undisclosed special treatment afforded to Alameda on the FTX platform. FTX gave Alameda special privileges on the exchange including a nearly limitless "line of credit" (eventually reaching $65 billion), which was funded by FTX customer assets. FTX allowed Alameda's collateral on deposit (mostly FTTs) to fall below FTX's required margin level without having any of its portfolio liquidated by FTX's automated risk monitoring. All of this was possible due to Wang and Singh's changing code to include an "allow negative" feature (i.e., allowed Alameda to have a negative balance).[92]

In May 2022, under the direction of SBF, Alameda drew on its line of credit, diverting billions in FTX customer assets to repay Alameda's third-party loan obligations. As crypto assets were losing value, lenders, such as Genesis Global Capital,[93] began demanding loan repayment. Alameda did not have sufficient funds to pay them. SBF propped up Alameda by illegally transferring at least $4 billion in FTX customer funds to Alameda, secured by assets including FTT and shares in Robinhood.[94]

Undisclosed risk stemming from FTX's exposure to Alameda's significant holdings of overvalued illiquid assets such as FTX-affiliated tokens. Alameda's collateral on deposit consisted of enormous amounts of illiquid crypto including FTX's token FTT. FTX valued FTTs at trading prices but Alameda's collateral was not worth the value it was assigned. FTX and Alameda held the vast majority of the tokens; only a small portion was in circulation. As a result, the token's value was not really validated by the external market.

Undisclosed use of FTX customers' funds at Alameda to make undisclosed venture investments, real estate purchases, and political donations most of which were in Singh's name. Some of FTX customers' funds that were transferred to Alameda were used by FTX executives for personal reasons. SBF, Wang, Singh, and one other FTX executive received a total of $4.1 billion in loans from Alameda, money which was spent on investments, real estate, and political donations. (SBF had a super PAC which gave $5.6 million to Joe Biden and $10 million to a Democratic state congressional candidate in Oregon. Singh donated $8 million.)

Undisclosed close relationship between FTX and Alameda. SBF assured customers and investors that FTX customer assets were secure and hid Alameda's close relationship with FTX. FTX's Terms of Service, listed on its website, assured customers that their assets were secure: "[Y]ou control the Digital Assets held in your Account"; "[t]itle to your Digital Assets shall at all times remain with you and shall not transfer to FTX"; and "none of the digital assets in your account are the property of, or shall or may be loaned to, FTX Trading." The terms of service also stated: "Once we receive fiat currency we may issue you an equivalent amount of electronic money (E-Money) which represents the fiat currency you have uploaded" and "[y]ou may redeem all or part of any E-Money held in your account at any time."

The website assured investors that it segregated customer assets from its own assets across its platforms and that the exchange maintained "liquid assets for customer withdrawals…[to] ensure a customer without losses can redeem its assets from the platform on demand."

When pitching to investors, FTX provided audited financial statements that did not include information about Alameda's "line of credit" from FTX.

Where Were They?

In the weeks and months after FTX imploded, stunning customers and investors alike, questions of what happened began dominating the press. Answers as to the *what* slowly began trickling out and were communicated by investigative bodies like the SEC. But there were few answers as to *how* FTX's plunge into bankruptcy could have happened. There was much fingerpointing.

Where were the investors? FTX had raised $1.8 billion over seven rounds from more than 80 investors. Many were well-known venture capital firms such as Sequoia Capital, SoftBank, BlackRock. And yet, they invested without requiring FTX to have better governance structures in place.[95] Investors didn't demand financial audits,[96] nor did they balk at the inherent conflicts of interest between FTX and

Alameda. Meanwhile, SBF had majority ownership of FTX despite all the money he had raised. He was transparent about running his company with little oversight. One investor recalled him saying that investors should "support him and observe."[97]

What about the auditors? Where were they? As a private company, FTX was not required to be audited or to share financial results with U.S. regulators. Nevertheless, SBF announced in August 2021 that FTX and FTX.US had been audited by Prager Metis and Armanino, respectively. Both were small firms, far less reputable than the Big Four—PricewaterhouseCoopers, Deloitte, Ernst & Young, and KPMG.[98] Neither firm was asked (nor were they required) to audit FTX's internal controls.

Both Prager Metis and Armanino were among a group of audit firms targeting digital asset and cryptocurrency businesses. Some accused the firms of being crypto industry cheerleaders. Prager Metis posted a photo on social media showing its auditors attending a baseball game with FTX executives, adding "proud to support FTX US." When SBF was set to meet with a U.S. congressional committee in December 2021, Armanino tweeted, "Let's go buddy."[99] Just weeks after FTX went bankrupt, investors began filing lawsuits against Prager Metis and Armanino for being "willfully blind" to a pattern of "racketeering."[100] Did these auditors fail to do their job?

And where were the regulators? What role did they play or fail to play? FTX was an offshore crypto exchange, outside the jurisdiction of U.S. regulators. Even so, were there regulations that could have helped prevent the massive losses that millions of U.S. customers and investors faced? Or would enacting a strict regulatory system for crypto continue to push the industry away from the U.S. and to countries with weak regulation?

What about FTX customers? Were they in some way to blame for their losses for not doing their homework and trusting FTX with their funds?

One of the first groups to be singled out for blame were the athletes and celebrities who had touted FTX via television commercials, social media, and other means. Many of them were named in a class-action lawsuit that was filed just days after the collapse of FTX. Included in this group was Larry David and Tom Brady.[101]

Questions of blame included FTX employees. Where were Wang and Ellison? What did they know and when? And what about Nishad Singh? By his own account, he was first made aware during a September 2022 meeting with SBF that billions of dollars of FTX customer deposits had been spent by Alameda. He was blindsided. He felt horrified, and betrayed.[102] But even after his being told, and acknowledging his own culpability by changing FTX's code that gave Alameda special privileges, Singh stayed at the company. He did not blow the whistle. He did not quit in protest.

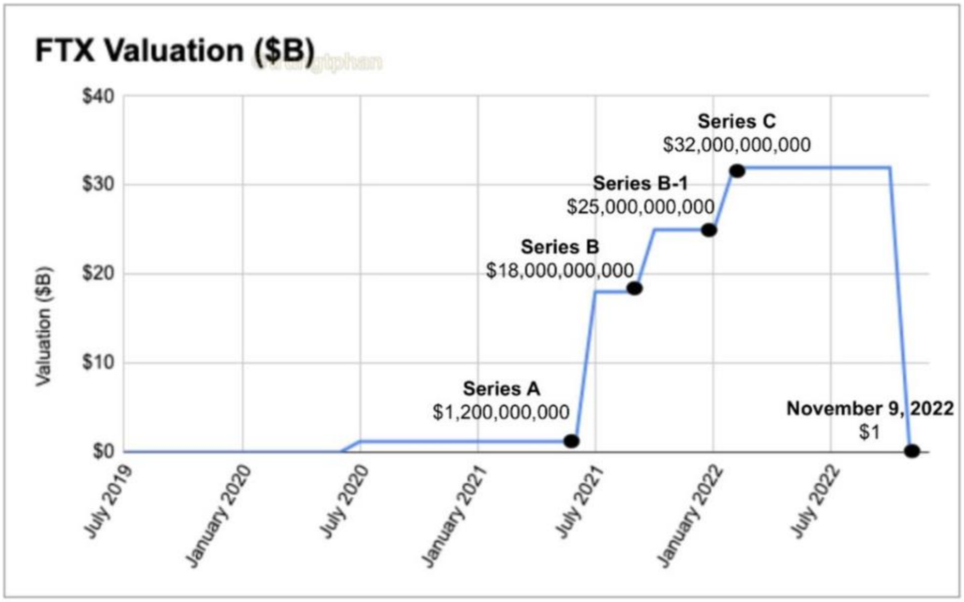
One month after his meeting with SBF, Singh spent $4 million on a 10-acre estate on Orcas Island in the State of Washington.

Exhibit 1 Alameda and FTX Key Executives' Ownership Stake

	Alameda Trading	FTX
Sam Bankman-Fried	90%	60%
Gary Wang	10%	16%
Caroline Ellison	0%	0.5%
Nishad Singh	0%	5%

Sources: Michael Lewis, "Play It Again, Sam," The Washington Post, October 1, 2023 (https://www.washingtonpost.com/opinions/interactive/2023/michael-lewis-sam-bankman-fried-ftx-crypto/, accessed January 22, 2024); Jacquelyn Melinek, "Alameda Had a $65B Line of Credit and 'Unlimited Withdrawals," TechCrunch, October 5, 2023 (https://techcrunch.com/2023/10/05/sbf-trial-gary-wang/, accessed December 5, 2023); Ben Weiss, "FTX Was a Boys' Club," Fortune, October 10, 2023 (https://fortune.com/crypto/2023/10/10/caroline-ellison-ftx-sam-bankman-fried-sbf-equity-personal-loans-gary-wang-nishad-singh-ryan-salame/, January 22, 2024).

Exhibit 2 FTX Valuation



- July 2021: Over 60 investors participate in $900 million Series B
- Oct. 2021: Raises $420 million Series B-1
- Jan. 2022: Raises $400 million Series C

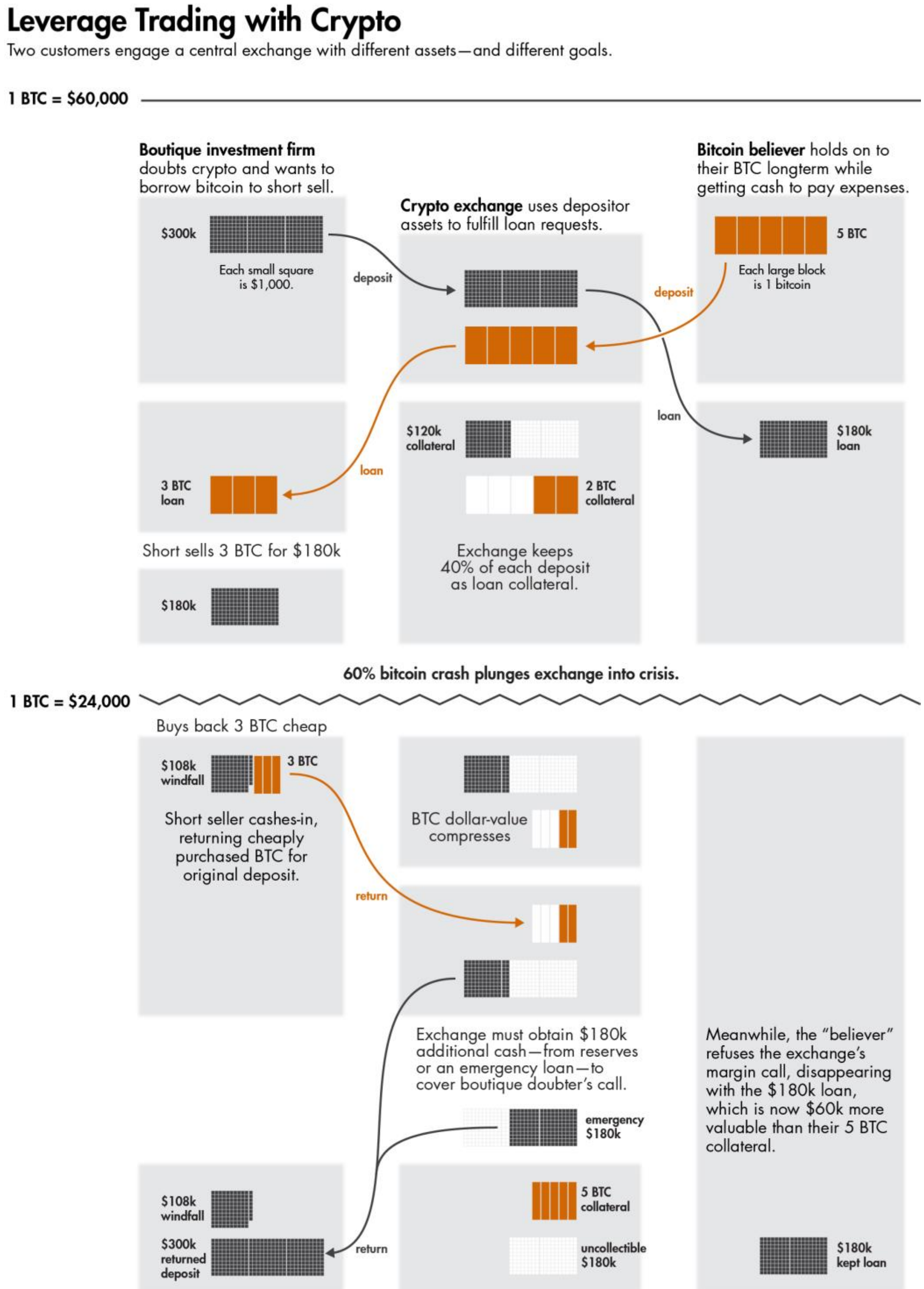
Source: https://twitter.com/trungtphan/status/1590432177761968130?s=46&t=ryMSzekJH2AjIAOrQUderA

Exhibit 3 FTX Financing Rounds

Date	Transaction Name	Lead Investors	Amount
Aug-19	Seed Round	--	$8M
Dec-19	Corporate Round	Binance	$100M
Jul-21	Series B	Sequoia Capital	$1B
Oct-21	Series B	Ontario Teachers' Pension Plan, Sequoia Capital	$420.7M
Jan-22	Series C	SoftBank Vision Fund, Temasek Holdings	$400M

Source: https://www.crunchbase.com/organization/ftx-exchange/investor_financials

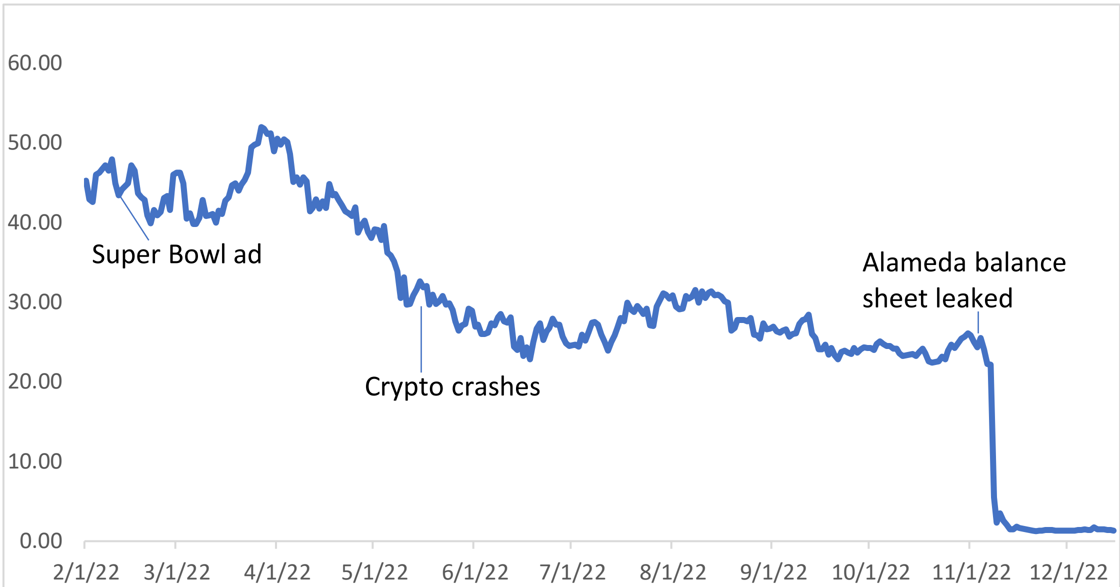
Exhibit 4 Leverage Trading with Crypto



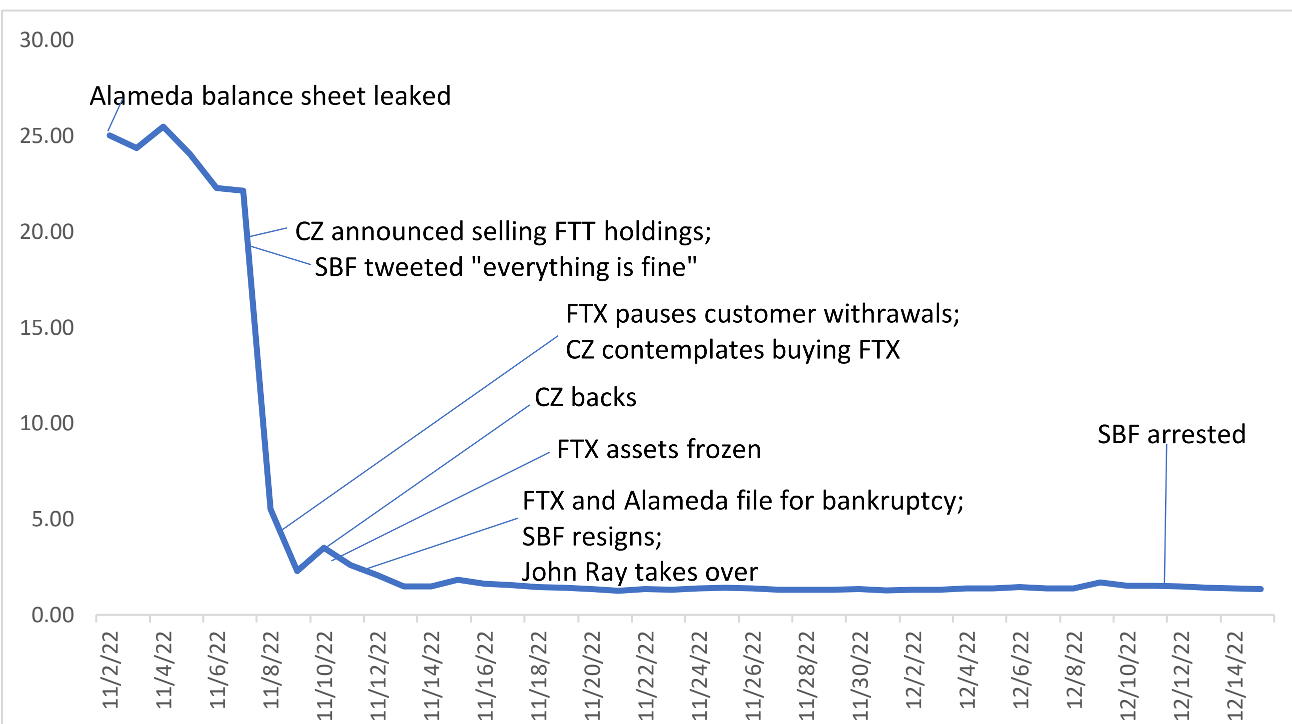
Source: RJ Andrews, info we trust

Exhibit 5 FTT Price

February 1 – December 14, 2022



November 2 – December 14, 2022



Sources: Yahoo Finance; casewriter

Exhibit 6 FTX Balance Sheet as Shared with Investors on November 8, 2022[1]

Liquid	**Deliverable now** 889,859,124[2]	**Before this week[2]** 1,012,262,574	**Less liquid**	**Deliverable now** 5,449,513,085	**Before this week** 15,415,519,517
Ticker	**Deliverable now**	**Before this week**	**Ticker**	**Deliverable**	**Before this week**
HOOD	472,291,833	579,183,374	FTT	553,903,773	5,905,299,356
USD in Ledger Prime	200,000,000	200,000,000	SRM	2,187,876,172	5,430,110,335
USDB	73,001,646	73,223,641	SOL	981,902,267	2,245,516,953
DAI	28,491,686	28,464,601	MAPS	616,372,827	865,376,279
DOT	28,384,450	32,522,098	Locked USDT	500,000,000	500,000,000
PAXG	23,767,062	23,244,430	OXY	54,008,094	100,105,976
JPY	21,758,186	21,979,251	STG	45,511,034	66,499,913
TUSD	15,991,381	16,034,265	ETHE	53,155,549	64,420,529
EURT	12,117,879	11,847,808	FIDA	36,492,962	62,127,831
BRZ	9,049,093	8,708,731	MSOL	26,558,417	60,394,582
BRL	7,017,295	6,753,417	ASD	33,946,248	49,967,401
WXRP	6,987,896	9,298,681	BITW	26,527,697	31,939,957
PAX	1,000,714	1,002,277	Others	17,860,159	29,105,657
			GBTC	3,304,945	4,387,145
			APT	312,092,943	267,602

Illiquid	**Deliverable now** 3,232,059,943	**Before this week** 3,223,752,915
Ticker	**Deliverable now**	**Before this week**
other ventures	1,475,000,000	1,475,000,000
GDA	1,150,000,000	1,150,000,000
Anthropic	500,000,000	500,000,000
PYTH	63,766,000	63,766,000
TWTR	43,293,943	34,986,915
TRUMPLOSE	7,394,877	7,394,877

1. SBF's balance sheet included the following note: "All of these are rough values, and could be slightly off; there is also obviously a chance of typos etc. They also change a bit over time as trades happen."
2. "Before this week" refers to before the week of November 7, 2022.

Exhibit 6 (con't) FTX Balance Sheet as Shared with Investors on November 8, 2022

Liabilities	**-8,859,042,572**
Ticker	**Liability**
LayerZero	-45,000,000
EUR	-114,536,254
Genesis	-200,000,000
BlockFi	-215,000,000
USDT	-796,482,404
ETH	-671,542,668
BTC	-1,412,738,406
USD	-5,135,280,129
Other	-268,462,711

Source: "FTX Balance Sheet, Revealed," The Financial Times, November 12, 2022 (https://www.ft.com/content/0c2a55b6-d34c-4685-8a8d-3c9628f1f185, accessed July 7, 2023)

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