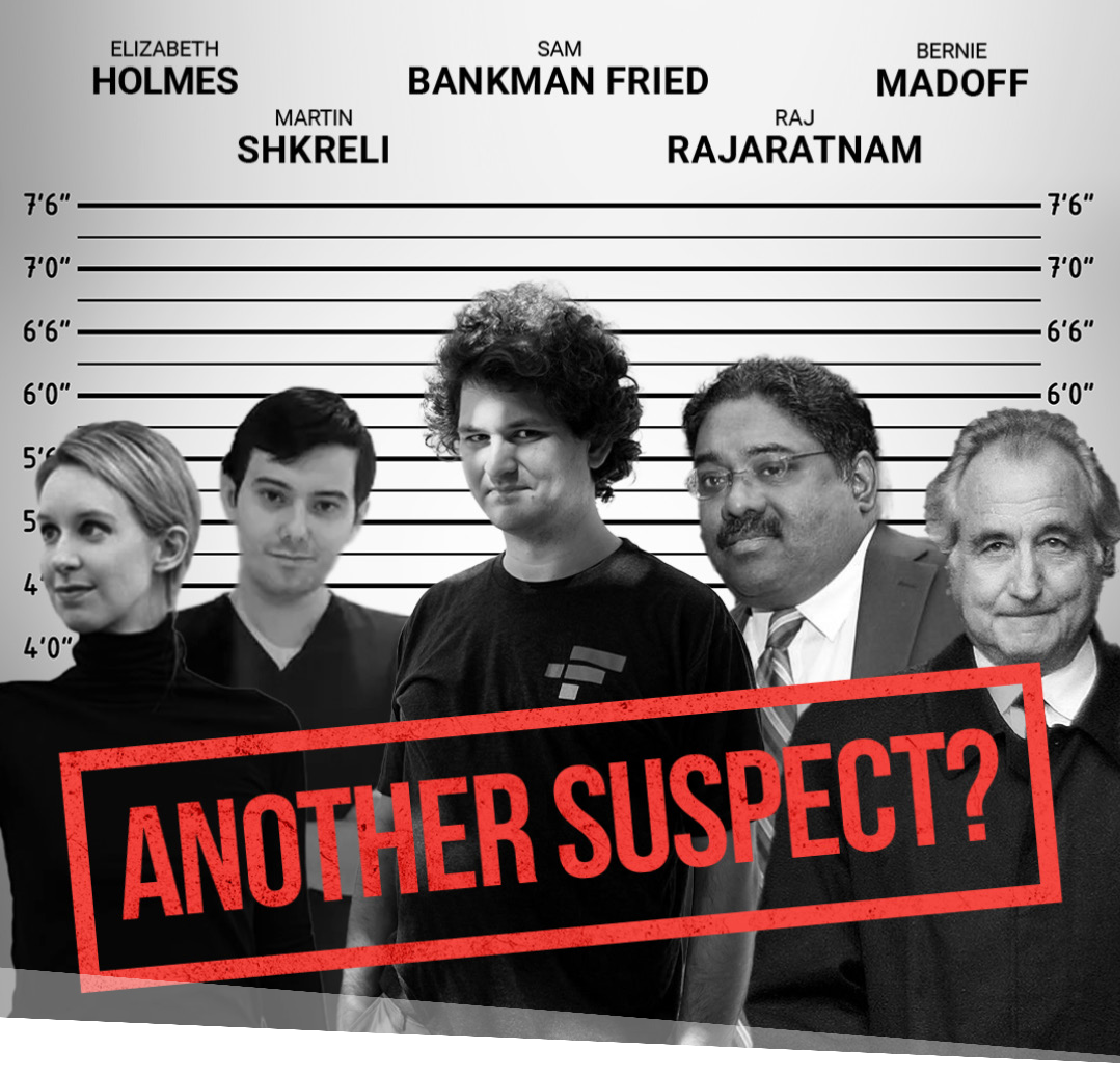


LESSONS FROM FTX:

THE COST OF IGNORING ODD

CASTLEHALL

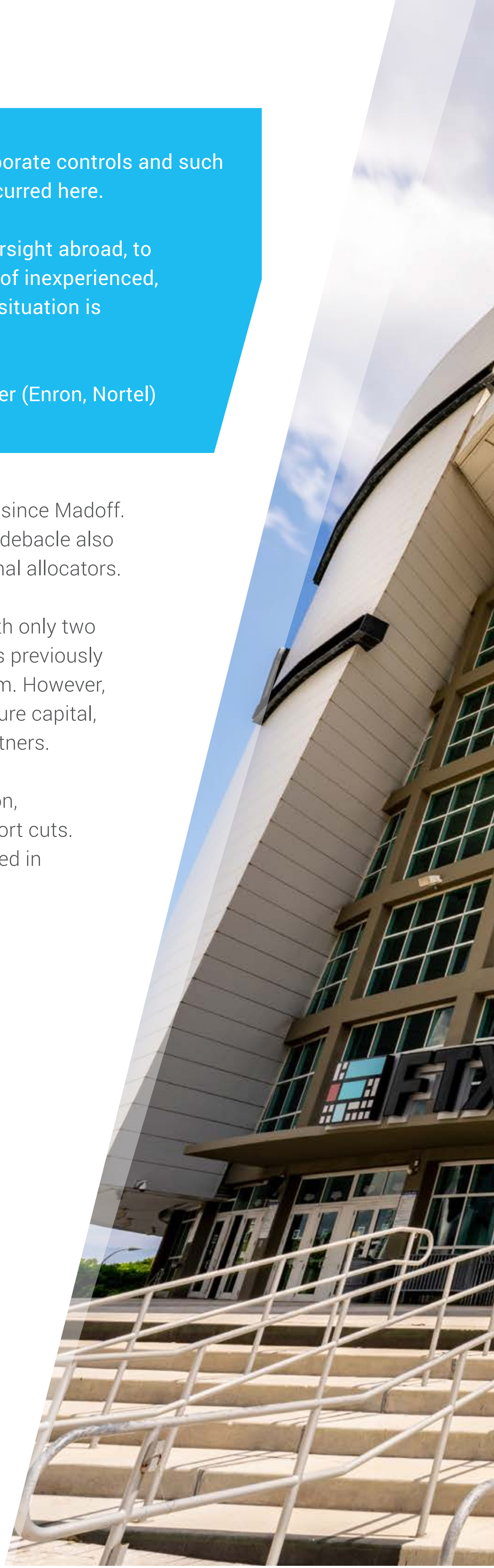
The Due Diligence Company

> “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.”
>
> John Ray III, new CEO of FTX and veteran insolvency practitioner (Enron, Nortel)

The collapse of FTX is likely the biggest financial industry failure since Madoff. Aside from its direct impact on the digital assets space, the FTX debacle also raises foundational questions around due diligence for institutional allocators.

As we will explore in this white paper, FTX had no CFO, a COO with only two years of prior experience, and a Chief Regulatory Officer who was previously involved with an online poker company caught in a cheating scam. However, these - and other - red flags were ignored by a who’s who of venture capital, including some of the very largest asset managers / General Partners.

As financial bubbles burst and markets enter periods of disruption, investors are frequently reminded of the cost of due diligence short cuts. This white paper explores some of the key issues already identified in the evolving FTX scandal.




GET PULLED OVER
FTX ARENA
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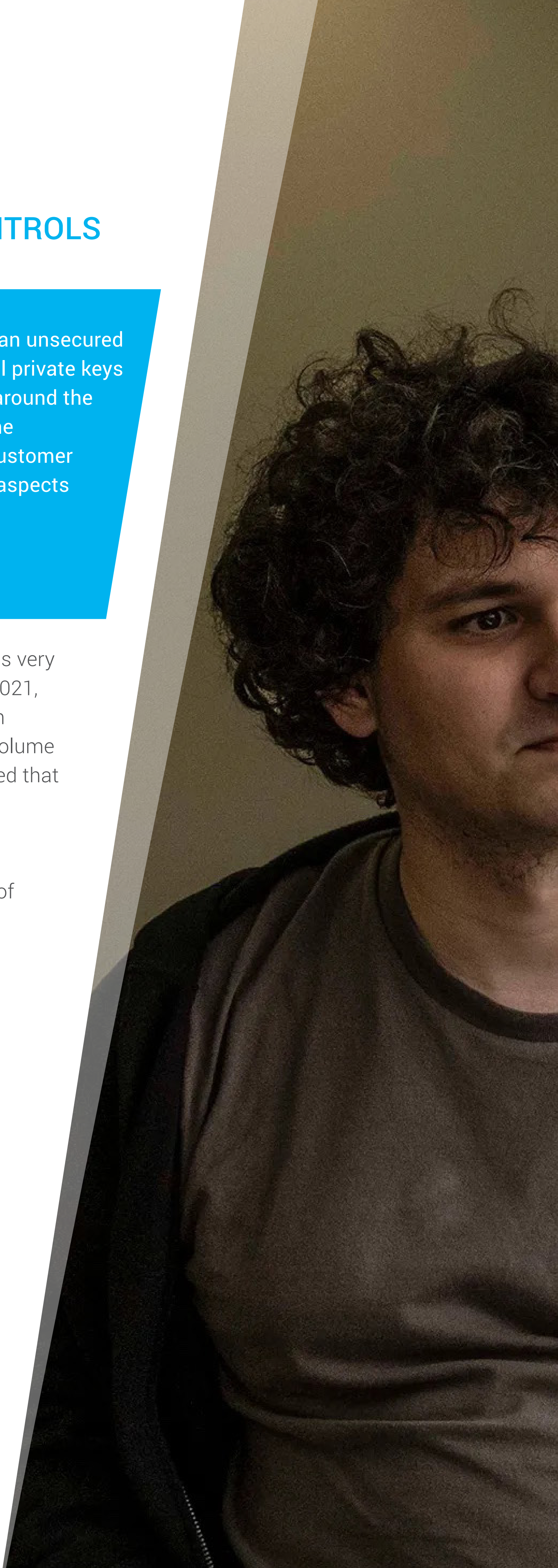
FTX arena

1

BACK OFFICE RESOURCES AND CONTROLS

"Unacceptable management practices included the use of an unsecured group email account as the root user to access confidential private keys and critically sensitive data for the FTX Group companies around the world, the absence of daily reconciliation of positions on the blockchain, the use of software to conceal the misuse of customer funds [and] the secret exemption of Alameda from certain aspects of FTX.com's auto-liquidation protocol."

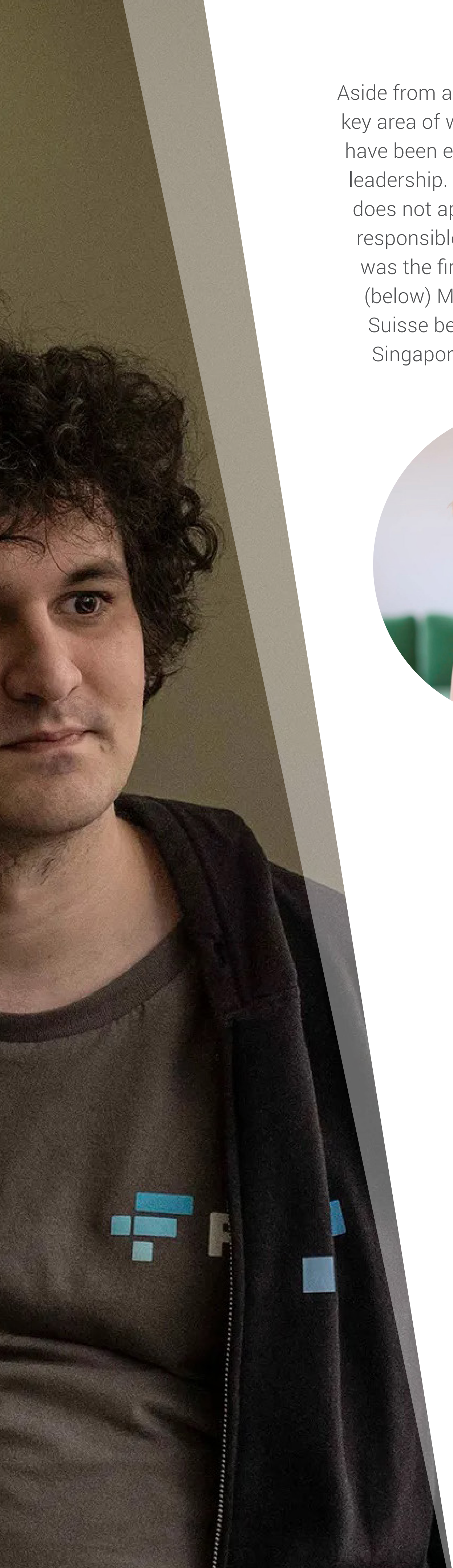
John Ray III, new CEO of FTX



FTX appears to have had about 300 staff in total. Despite this very small team, Mr. Bankman-Fried claimed that, by the end of 2021, around $15 billion of assets were on the FTX platform, which according to him represented approximately 10% of global volume for crypto trading at the time. Mr. Bankman-Fried also claimed that FTX.com, as of July 2022, had "millions" of registered users.

It seems very unlikely that FTX had an adequately resourced back office commensurate with the volume and complexity of customer transactions.

The initial bankruptcy review has identified critical errors around basic reconciliation tasks (as above). John Ray III, FTX's new CEO, also states that "FTX did not have the type of disbursement controls that I believe are appropriate for a business enterprise. For example, employees of the FTX Group submitted payment requests through an on-line 'chat' platform where a disparate group of supervisors approved disbursements by responding with personalized emojis."



Aside from a small team and apparently deficient controls and procedures, another key area of weakness in the FTX structure - that due diligence could reasonably have been expected to uncover – was the lack of experienced back office leadership. First, FTX, despite the scale of its operations and number of users, does not appear to have had a Chief Financial Officer. The primary executive responsible for back office operations, aside from Mr. Bankman-Fried himself, was the firm's Chief Operating Officer, Constance Wang. From her LinkedIn profile (below) Ms. Wang reports two years of experience in analyst level roles at Credit Suisse before an 8 month period working with Huobi, another crypto firm in Singapore. In May 2019, Ms Wang joined FTX.

Experience

Chief Operating Officer
FTX: Cryptocurrency Derivatives Exchange
Mar 2019 - Nov 2022 · 3 yrs 9 mos
The Bahamas

As the COO of FTX, I'm primarily responsible for global user growth, partnershi ...see more

Business Development Manager, APAC
Huobi Global
Aug 2018 - Mar 2019 · 8 mos
Singapore

- Formulate and implement business development strategy in Singapo ...see more

Credit Suisse
2 yrs
Singapore

Analyst, APAC Risk and Controls
Aug 2017 - Jul 2018 · 1 yr

1) Managerial Information Report:
- Led the initiatives of re-designir ...see more

Analyst, Private Banking AML/KYC
Aug 2016 - Aug 2017 · 1 yr 1 mo

APAC Due Diligence
1) Relationship Acceptance Revie ...see more

The firm's other senior business operations professional was Daniel S. Freiberg, initially General Counsel and subsequently Chief Regulatory Officer. Mr Freiberg is an attorney who was, earlier in his career, associated with an online poker company, UltimateBet. UB was involved in a cheating scandal - apparently the online poker software included a "God mode" which allowed insiders to see other online players' cards.

As reported by CoinGeek in August 2021,"[1] In 2013, an audio recording surfaced that made mincemeat of UB's [UltimateBet's] original version of events. The recording of an early 2008 meeting with the principal cheater (Russ Hamilton) features Daniel S. Friedberg actively conspiring with the other principals in attendance to (a) publicly obfuscate the source of the cheating, (b) minimize the amount of restitution made to players, and (c) force shareholders to shoulder most of the bill."

Interestingly, this information was available from CoinGeek before the October 2021 and January 2022 FTX funding rounds where several high profile managers and institutions made initial or follow on investments in FTX.

Due Diligence Observation

In any asset management business, ODD should consider the overall structure and depth of operational infrastructure. Is the back office, in terms of personnel, systems, controls and procedures, sufficient to support the scale and complexity of the transactions undertaken by the asset manager? Is the back office led by a CFO and / or COO with sufficient industry experience and qualifications? Is the CFO and / or COO sufficiently authoritative to assume ownership and be accountable for the accuracy of books and records and the protection of investor capital?

2

CONFLICTS OF INTEREST AND RELATED PARTIES

Sam Bankman-Fried created Alameda Research, a proprietary trading firm, in 2017. FTX was created afterwards in May 2019: in essence, FTX was an “exchange” owned by a hedge fund.

In reality, FTX was not really an exchange at all. The world of digital asset / crypto “exchanges” is entirely different from highly regulated and globally recognised stock exchanges such as those in New York or London. FTX also operated very differently from a commodities exchange such as the Chicago and New York mercantile exchanges (CME and NYMEX respectively), where various Futures Commission Merchants (“FCM”) trade customer funds via the central venue of the highly regulated exchange. FTX, at the parent company level in the Bahamas, is perhaps best described as an unregulated broker dealer, taking client deposits to thereafter allow the purchase and sale of securities. Further, all client deposits were held internally without the use of an external custodian or other third party safekeeper.

Caroline Ellison, CEO of Alameda Research and a reported romantic partner of Mr Bankman Fried

Alameda, per the initial report from John Ray III as the new FTX CEO, engaged in strategies including “arbitrage, market making, yield farming and trading volatility”. Evidently, there is a pervasive and highly material conflict of interest when an exchange / trading venue is under common ownership with a hedge fund trading the same assets. It would clearly be valuable for Alameda to have insider access to details of client trading flows and client positions when constructing its prop trading strategy.

Of course, a highly robust information barrier, enforced by effective compliance teams within both FTX and Alameda, could have at least partially mitigated these concerns. However, it does not appear that FTX had any such compliance procedures in place.

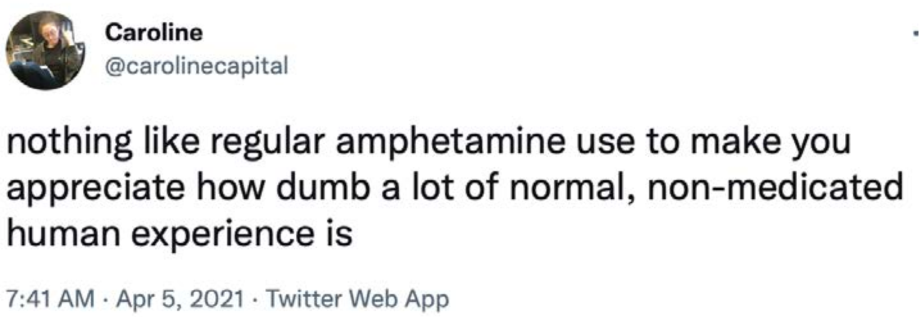
Other conflicts have also arisen in relation to Alameda. Per an article from Bloomberg[2], some clients sending money to FTX actually did so by wiring money to Alameda. This represents a fundamental lapse in even the most basic controls around client money protection and segregation.

“Some FTX customers were instructed to send wire transfers via Alameda, which was allowed to have accounts at Silvergate Capital Corp., a cryptocurrency and fintech bank, the people said. Some FTX customers continued to send wire transfers as recently as this year, according to one of the people, who requested anonymity discussing private transactions.”

Bloomberg continues:

“The arrangement further spotlights the tangled relationship between FTX and Alameda, which emerged as a quagmire of lax record-keeping and poor centralized controls at the heart of the empire’s unraveling. Advisers overseeing the group’s ruins have more broadly pointed to a potential commingling of digital assets, raising concerns about misuse of customer funds and making ties between the two firms a likely focus for regulators and investigators probing the collapse.”

Alameda also raises a separate conflict in that the CEO of Alameda was Caroline Ellison, reported to be Mr. Bankman-Fried’s romantic partner at least during some periods of FTX’s history. Ms. Ellison was, equally, someone with limited financial service experience: like Bankman-Friend, her exposure to asset management prior to joining FTX was solely with Jane Street, a New York based proprietary trading fund. Reputational Due Diligence on Ellison’s social media posts would have identified a range of controversial opinions, including her views on working under the influence of amphetamines.



Due Diligence Observation

Conflicts of interest and related party transactions should be a focus for every due diligence review. What related parties are involved, and what are the scope of transactions between them? Do information barriers exist, and are they policed by sufficient compliance professionals within an evidenced, robust compliance program? More subjectively, nepotism within an organization should be disclosed and thereafter evaluated by investors.

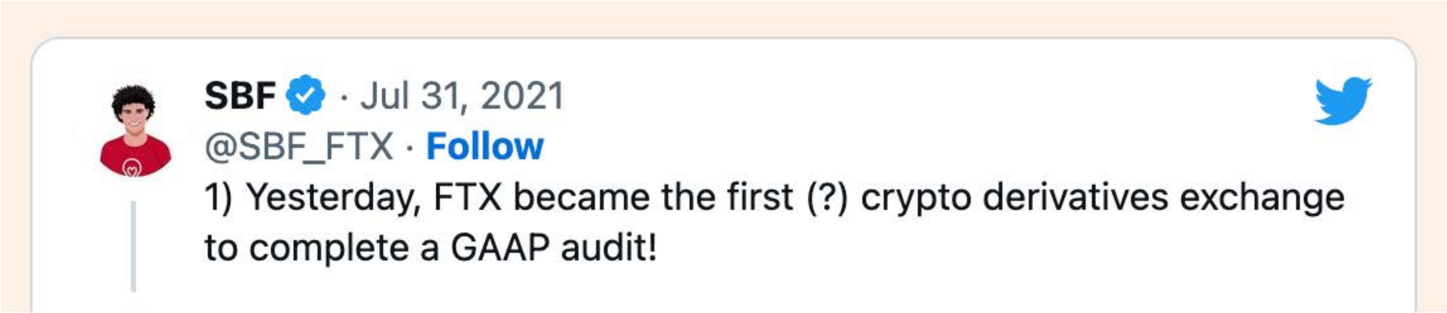
3

AUDITOR AND FINANCIAL STATEMENTS

"The FTX Group received audit opinions on consolidated financial statements for two of the Silos – the WRS Silo and the Dotcom Silo – for the period ended December 31, 2021. The audit firm for the WRS Silo, Armanino LLP, was a firm with which I am professionally familiar. The audit firm for the Dotcom Silo was Prager Metis, a firm with which I am not familiar and whose website indicates that they are the "first-ever CPA firm to officially open its Metaverse headquarters in the metaverse platform Decentraland."

John Ray III, new CEO of FTX

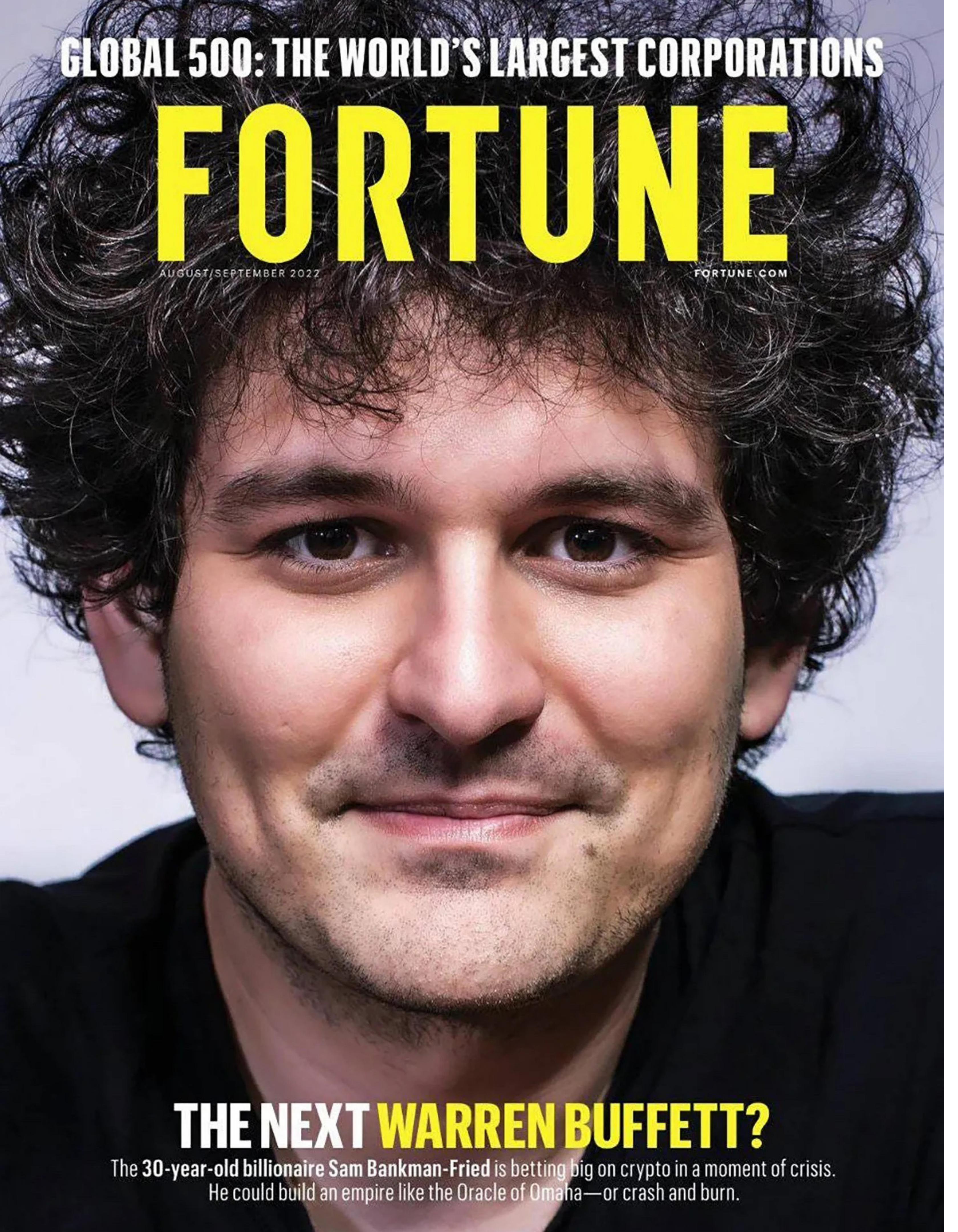
The audit process and production of independent, audited financial statements is a key foundation of any effective due diligence process. In the case of crypto and digital assets, FTX, at least per Mr. Bankman-Fried, was an outlier - it had one year of audited accounts.



As noted by John Ray above, FTX US (the WRS silo) was audited by Amanino, while the primary FTX platform being run from the Bahamas was audited by a smaller firm, Prager Metis. It seems that Alameda Research was never audited.

Two due diligence questions arise around the audit process. The first is the depth of experience, resources and overall capability of the auditor themselves. It is not necessarily the case that all funds must be reviewed by a "Big 4" auditor (Deloitte, KPMG, Ernst & Young and PwC). In this case, both Armanino and Prager Metis were plausible firms: which much smaller, Prager Metis had, per the Financial Times[3], more than $100 million in annual revenue.

It is however, important to consider potential for "auditor capture". In this instance, FTX may well have been Prager Metis' largest client, and likely its most prestigious if the firm was looking to grow its practice in the rapidly expanding digital assets space. A firm which is economically or reputationally dependent on a key client may be comprised in its ability to exercise professional skepticism during the audit process.



GLOBAL 500: THE WORLD'S LARGEST CORPORATIONS

FORTUNE

AUGUST/SEPTEMBER 2022

FORTUNE.COM

THE NEXT WARREN BUFFETT?

The **30-year-old billionaire Sam Bankman-Fried** is betting big on crypto in a moment of crisis. He could build an empire like the Oracle of Omaha—or crash and burn.

The second question relates to the quality of the audited financial statements, and whether investors can rely on audited accounts as an automatic guarantee that fraud is not present. The short answer is clearly no - there have been many instances where audits have failed to detect fraud, including most recently Wirecard.

It is also important to remember the purpose of the audit. The financial statements are the responsibility of the asset manager: it is the manager, not the auditor, who prepares the accounts. It is the auditor's responsibility to determine whether the financial position and performance of the fund, as presented in those financial statements, is materially correct. Many investors are familiar with these concepts, but perhaps focus less on the substance and conduct of the audit process. Auditors seek to gather a threshold level of evidence to support management's assertions that the financial statements are "true and fair" and are "materially" correct. The audit process is in no way a vigorous effort to seek out new evidence which could contradict or disprove management's assertions. The auditor does not impose their own accounting policies or conformity on the accounts prepared by their clients: as an obvious example, a Big 4 firm could audit 15 hedge funds all holding the same distressed debt security, and "allow" each fund to value that security at a different price.

In the case of FTX, John Ray III states "I have substantial concerns as to the information presented in these audited financial statements, especially with respect to the Dotcom Silo. As a practical matter, I do not believe it appropriate for stakeholders or the Court to rely on the audited financial statements as a reliable indication of the financial circumstances of these Silos."

Due Diligence Observation

Investors should always consider the identify of the auditor and review the audited financial statements when conducting their due diligence. Investment in an entity without audited financial statements is always of high risk. An audit conducted by a smaller audit firm is not necessarily "worse" than that conducted by a Big 4 firm, but more investor attention is needed to evaluate the capabilities and expertise of a non top tier auditor. Investors should also be aware of the inherent limitations of the audit process and that existence of audit accounts does not guarantee the absence of fraud.

4

FEAR OF MISSING OUT

“FOMO” is a dominant theme of the FTX story. The tweet below is from Marcelo Claure, who until early 2022 was a key member of the SoftBank leadership team, working alongside Masayoshi Son. It is salutary to see one of the most senior investment professionals in the world of venture capital admitting that he “totally failed” in understanding what SoftBank was investing in when his firm deployed their investors’ capital to FTX.

Another example of FOMO comes from Sequoia Capital, the near $100 billion Venture Capital firm based in Silicon Valley. On September 22, 2022 - just 49 days before FTX declared bankruptcy - Sequoia published a 17,000 word article they had commissioned from a well-known author and journalist, Adam Fisher. Now removed from Sequoia’s website, the article can still be accessed from web archive sites and is also available at www.castlehalldiligence.com[4]. This section of the article describes the pitch that Mr. Bankman-Fried made to the Sequoia team in July 2021, where Sequoia was looking for an opportunity to invest their clients’ capital into FTX.

Responding to a question as to FTX’s long term vision, Bankman-Fried explained to the Sequoia team *“I want FTX to be a place where you can do anything you want with your next dollar. You can buy bitcoin. You can send money in whatever currency to any friend anywhere in the world. You can buy a banana. You can do anything you want with your money from inside FTX.”*

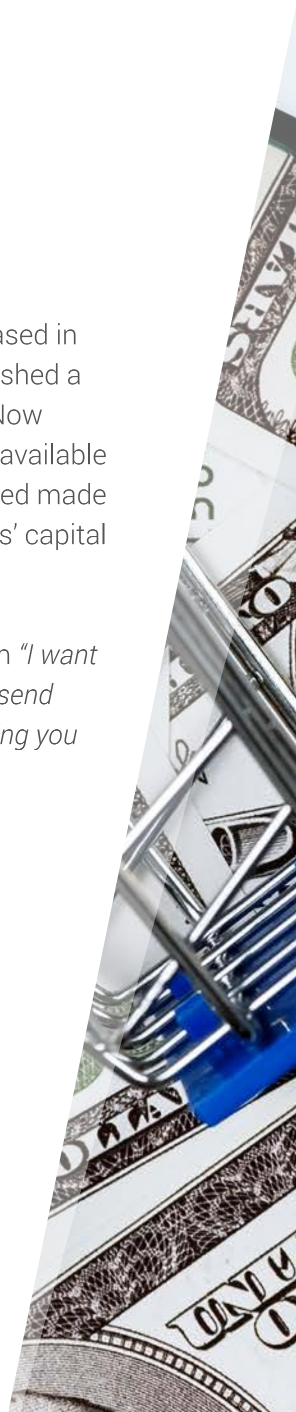
Suddenly, the chat window on Sequoia’s side of the Zoom lights up with partners freaking out.

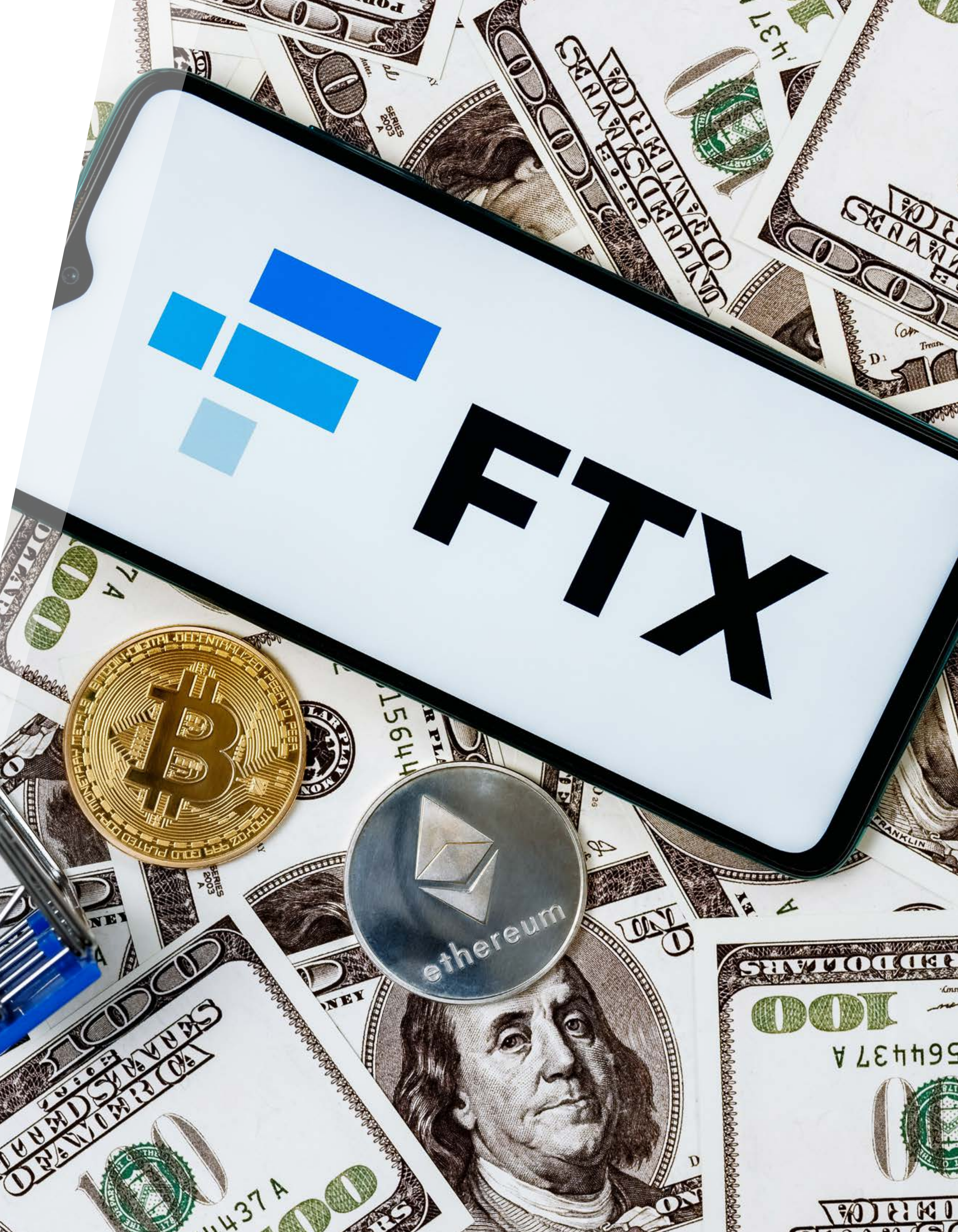
“I LOVE THIS FOUNDER,” typed one partner.

“I am a 10 out of 10,” pinged another.

“YES!!!” exclaimed a third.

There is, however, a kicker explained shortly thereafter in Fisher’s article.




FTX
ethereum

One person watching Bankman-Fried give his Zoom presentation to the Sequoia team from the FTX office in the Bahamas was Ramnik Arora, FTX's head of product. The article explains: "I sit ten feet from him, and I walked over, thinking, Oh, shit, that was really good," remembers Arora. "And it turns out that that f**ker was playing League of Legends through the entire meeting."

Due Diligence Observation

While regulation is not consistent between countries, acting as an investment advisor or asset manager is, as a matter of substance, to act as a fiduciary. A fiduciary should have a justified basis for their investment opinions and advice. As one piece of guidance, members of the profession who are CFA Charterholders can refer to the CFA Institute's Standards of Practice Guidance (2014), Standard V(A) Diligence and Reasonable Basis. This states that investment professionals should "have a reasonable and adequate basis, supported by appropriate research and investigation, for any investment analysis, recommendation, or action."

Sam Bankman-Fried testifying before a US Senate Committee on "Digital Assets - Risks, Regulation and Innovation", February 2022.


NY

5
CONCLUSION

As a first comment, everyone at Castle Hall recognizes that due diligence is highly challenging, and that some individuals in our industry are sufficiently skilled and charismatic to fool all of the people, all of the time. With the luxury of hindsight, it is often easy to identify facts and circumstances which turned out to be the "smoking gun". Castle Hall is certainly aware that our own diligence may not always catch every fraudster, every time.

Secondly, venture capital is clearly a different sector of the investment industry. By definition, VC asset managers deploy their clients' capital into start up businesses which need initial infusions of money to move beyond an idea or a small, embryonic business to a larger organization able to scale up. VC investors may be purchasing only small amounts of equity and may not have access to complete intrusive, forensic due diligence. More broadly, the philosophy of "move fast and break things" (or less charitably "spray and pray") are tactics which have been adopted by highly successful investors in the emerging technology space. Even if many VC investments turn out to be duds (including some which turn out to be frauds), a handful of winning investments in the next Facebook or Google can generate exceptional returns.

FTX, however, raises a different fact pattern. Mr Bankman-Fried and his young team had negligable financial services experience and the business infrastructure at the firm was entirely lacking given the scale of the FTX platform in 2021. The conflicts of interest with Alameda were pervasive and unmanaged. There was only one year of an audit. And quite a few investors actually seem to have admired Bankman-Fried's ability to talk to them about complicated things…while playing video games.

Perhaps the best counterpoint to the rush of investors to buy into FTX comes from Chamath Palihapitiya, the well known SPAC investor and founder of his own VC firm, Social Capital. According to Business Insider[5] Chamath discussed FTX in an episode of the "All-In" podcast.

> "Bankman-Fried pitched Social Capital while raising a $17 billion round. After a Zoom meeting with Bankman-Fried, Palihapitiya said he didn't "make much sense," so his team at Social Capital worked on a two-page deck of recommendations for next steps for FTX if the investment talks were to proceed.
>
> The first recommendation, he said, was to form a board. The second was to create dual-class stock. And the third was "some reps and warranties around affiliated transactions and related party transactions."
>
> Chamath then told listeners what happened next.
>
> "The person that worked there called us back and literally, I'm not kidding you, said, 'go f**k yourself.'"
>
> Social Capital did not invest in FTX.

FTX's now notorious 2022 Super Bowl advert featured Larry David. It can be viewed at https://www.youtube.com/watch?v=BH5-rSxilxo

6
FOOTNOTES

1. https://coingeek.com/tether-links-to-questionable-market-makers-yet-another-cause-for-concern/
2. https://www.bloomberg.com/news/articles/2022-11-28/ftx-received-some-customer-deposits-via-bank-accounts-held-by-alameda?sref=r7CPXr2V
3. https://www.ft.com/content/72c3c6cb-478a-4166-9f1c-7590fdb6b6ef
4. https://www.castlehalldiligence.com/hubfs/FTX%20CEO%20SBF%20Wants%20to%20Fix%20Crypto%E2%80%94And%20Everything%20Else%20_%20Sequoia%20Capital.pdf
5. https://www.businessinsider.com/ftx-told-chamath-palihapitiya-social-capital-go-fuck-yourself-recommendations-2022-11

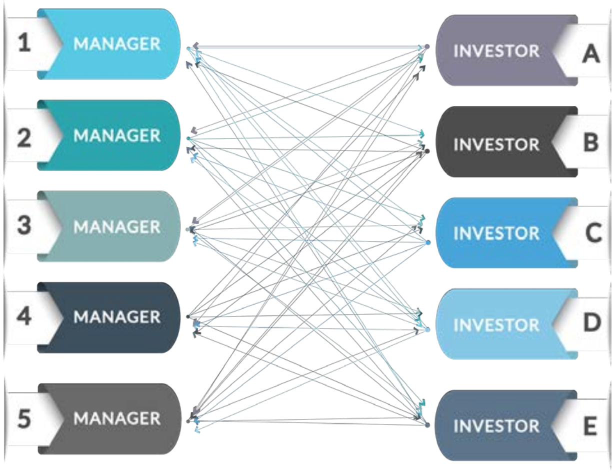
ABOUT CASTLE HALL DILIGENCE

Castle Hall believes due diligence has evolved.

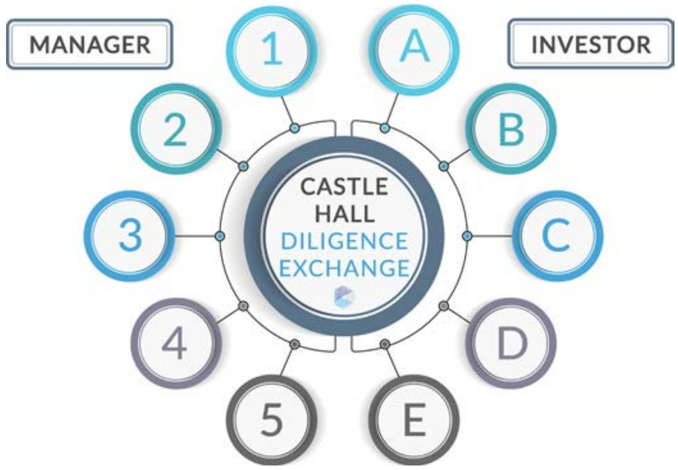
Castle Hall's fintech approach to due diligence moves beyond the legacy model of Word reports and Excel spreadsheets. Our online tools deliver powerful analytics, analysis and ongoing monitoring, across all asset classes and any asset manager.

Castle Hall uses a standardized scope and methodology to gather manager and fund reference data on behalf of our 200+ clients. The result is DiligenceExchange, the industry's largest due diligence database.

YESTERDAY'S DUE DILIGENCE MODEL



TODAY'S DUE DILIGENCE MODEL



DiligenceExchange is the industry app for due diligence. Use DXC to move up the value chain to focus on higher value questions which impact the investment decision – not core data gathering and verifications.

Watch the BRIGHT MINDS video on how investors benefit from DXC with Chris Addy FCA CFA, Castle Hall's CEO and Founder: https://bit.ly/DXC_3

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