5-2022

Theranos: Case Study and Examination of the Fraud Triangle

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by

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An Honors Thesis in partial fulfillment of the requirements for the degree Bachelor of Science in Business Administration in Finance

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May 14, 2022

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Introduction

Fraud is a serious issue which carries significant implications. Fraud committed by top level managers is particularly grievous, as it ripples through a firm, harming the company's shareholders, employees, and credibility, while posing a threat to individuals and society (Zahra, et al.). A common framework in auditing, the fraud triangle, outlines three factors that if present, increase the risk or enable fraud to occur. The three factors are incentive, opportunity, and rationalization to commit fraud (Barlow).

In 2018, the Securities and Exchange Commission (SEC) charged Elizabeth Holmes, founder and CEO of a supposedly groundbreaking health tech company, Theranos, with what they referred to as "massive fraud" in a press release ("Theranos, CEO Holmes"). Following, in 2020, the United States charged Holmes with twelve counts of conspiracy and wire fraud (United States District Court for the Northern District Sa.).

In consideration of the effects of fraud committed by top level managers, this thesis serves to offer an insight into how corporate fraud occurs via a case study on Theranos. An overview of the fraud triangle is first presented to discuss to how fraud is often carried out by top level executives. Analysis of the legal proceedings brought against Holmes will provide insight and understanding to the true scope and effects of fraud committed under her operations at Theranos. Finally, application of the fraud triangle will provide a narrative of how the conditions and management at Theranos enabled fraud to occur.

Fraud

Fraud is defined as an illegal act or set of actions taken by an individual to intentionally deceive, conceal, or violate the merit of trust for personal gain (Bekiaris). Fraud threatens corporations and consumers as it leads to severe implications and can affect millions of people, as demonstrated by several major corporate scandals in the last decade. The discovery in 2001 that Enron Corp. used fraudulent accounting practices and led shareholders to lose over $74 billion caused stakeholders to lose trust in big business. In 2008, investors were conned out of $65 billion, due to a Ponzi scheme carried out by Bernie Madoff, founder of Bernard L. Madoff Investment Securities LLC. The Lehman Brothers hid over $50 billion in loans in 2008, through fraudulent accounting, which devastated the financial system ("Top Accounting Scandals"). As stated by the FBI, "Fraud is not a victimless crime." Fraud schemes can poison a company, damage financial systems, devastate one's life savings, and flush investors out of billions of dollars ("White-Collar Crime").

Notably, the concept of "white-collar crime" encapsulates all fraud committed by businesses and government officials, which includes bankruptcy fraud, computer and internet fraud, credit card fraud, financial institution fraud, government fraud, healthcare fraud, insurance fraud, mail and wire fraud, securities fraud, and phone and telemarketing fraud ("White-Collar Crime"). In a white-collar crime, there is no physical violence, strong financial motivations are present, and individuals who are said to be respectable members of society are often involved. Fraud committed by top level managers, such as CEOs who are likely referred as respectable members of society, is especially offensive because it harms a firm's shareholders, employees, and other stakeholders, and can ruin the reputation of the firm, which is a particularly important intangible asset (Zahra, et al.). Fraud committed by top level managers creates an unethical atmosphere, or tone, in the workplace known as "tone at the top" ("Tone at the Top"). When the leadership at a company foregoes ethics, employees at the company are more prone to committing fraud ("Tone at the Top").

When fraud is discovered within a firm, the potential consequences are severe. The penalties for white-collar crimes, specifically fraud, entail fines, home detention, responsibility for the cost of prosecution, forfeitures, restitution, and imprisonment ("White-Collar Crime"). With such risks, why do top level managers commit fraud?

The Fraud Triangle

The "fraud triangle" is a framework which explains why individuals commit fraud. It is composed of three factors which are often associated with individuals who commit fraud (See Figure 1). As suggested by the American Institute of Certified Public Accounts, to perpetrate fraud, "... involves incentive or pressure to commit fraud, a perceived opportunity to do so, and some rationalization of the act…" (Lederman).

Figure 1

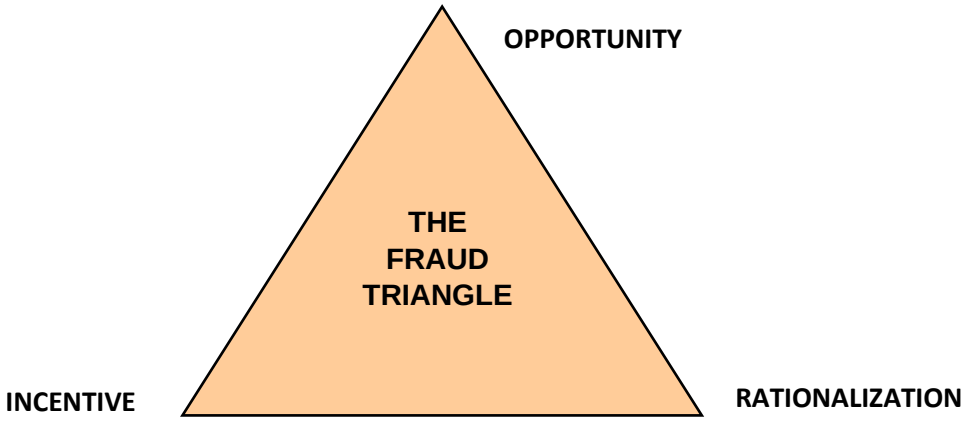

Figure 1 – The Fraud Triangle
Source:
Lederman, Leandra. "The Fraud Triangle and Tax Evasion." UIowa.edu, University of Iowa, https://ilr.law.uiowa.edu/assets/Uploads/A3_Lederman-v2.pdf.

The first element often associated with fraud is a perceived pressure, motivation, or incentive to commit fraud. Pressure arises from various situations and factors. Top level managers may feel pressured from internal or external forces, which may be financial, political, social, or other non-financial forces (Mansor). For example, compensation based on performance may create pressure for employees to meet certain goals or deadlines, which pushes them to commit fraud. Meeting shareholder expectations and financial forecasts may also induce pressure. Debt or poor financial performance by the firm can build pressure. Personal factors, such as the need to uphold a particular social image, greed, or self-esteem issues add pressure on an individual, among other forces ("Fraud Triangle").

Another element associated with fraud is one's perception that there is an opportunity to do so. Although there may be ample pressure to commit fraud, an individual will not do so unless there is an opportunity available. Opportunities commonly arise due to the nature of the industry of the firm, ineffective internal controls, and weak corporate governance (Bekiaris). Weak internal controls, including poor segregation of duties, improper supervision or management, and little or faulty documentation of processes within a firm can undermine its

accounting and financial information ("Fraud Triangle"). As aforementioned, a lack of ethics and integrity at the top of a firm puts the entire firm at a higher risk of fraudulent behaviors (Bekiaris). The Association of Certified Fraud Examiners finds that an ethical tone at the top is critical to overall company success. When top-level managers fail to provide an ethical example of leadership, their employees struggle to maintain an ethical work environment, which creates a culture of workplace fraud, giving way to one believing there may be an increased opportunity to commit fraud ("Tone at the Top").

A strong board of directors at a firm is essential in preventing potential opportunities to commit fraud. Notably, CEO duality may lead to an increase in opportunity to commit fraud. CEO duality is when an individual acts as both the CEO and board chair (Krause, Ryan, et al.). If the CEO dominates the board of directors, the board may be weakened, giving way to fraud if the CEO lacks integrity (Huang, et al.). Additionally, the composition of the board of directors affects the opportunity to commit fraud. The board size, number of independent members and outside members, the percentage of firm ownership, management ownership, and blockholders' ownership, changes made in the board, insider holdings, and voting rights will largely affect the effectiveness of the board (Huang, et al.).

The more opportunities available to commit fraud and the lower the perceived risk of being caught, the higher the firm is at risk for fraudulent behaviors (Bekiaris). Those who feel they can override fraud controls are more likely to feel they can commit fraud without being caught (Mansor).

Finally, fraud is often associated with rationalization, that is, an individual will often rationalize committing fraud for several reasons. Rationalization allows an individual to disassociate or find a morally acceptable reason to commit fraud (Bekiaris). If an individual cannot find justification for their intended behavior, it is unlikely they will carry out the fraudulent activity (Mansor). Rationalization to commit or not commit fraud typically stems from an individual's own personal code of conduct and ethics (Mansor). Rationalization for one's behavior occurs before an individual acts (Lederman). Once rationalization is reached and a bridge is formed between the opportunity to commit fraud and the incentives to do so, an individual will be sufficiently empowered to commit fraud (Bekiaris).

Theranos

In 2004, Elizabeth Holmes dropped out of her second year as a chemical engineering undergraduate student at Stanford University in hopes of becoming an entrepreneur. She strived to revolutionize healthcare technology at only 19 years old (Theranos' Bad Blood).

Earlier, in 2002, Holmes approached Dr. Phyllis Gardner, a Stanford Medical Professor, to discuss her goals. Holmes introduced an idea to Gardner to create a patch which could scan a patient and release medications as needed. Gardner explained why the patch would not work, as the antibiotics Holmes intended to use in the technology would have to be given at much higher doses than scientifically possible (Pflanzer). Though Gardner disapproved of her idea, Holmes continued to consult with other Stanford faculty. After interning with the Genome Institute in Singapore, Holmes returned to Stanford in 2003, with a patent application for the patch, which she named the 'Therapatch' ("Bad Blood"). As Holmes originally described, the Therapatch was an adhesive patch which would automatically sense a patient's drug needs through a blood analysis obtained by drawing small amounts of blood via microneedles. The Therapatch would also be able to send a user's information to their physician ("Bad Blood").

Soon after leaving Stanford, she founded the healthtech company, Theranos. The word "Theranos" (Θερανος) in ancient Greek mythology is the name of the god of blood and phlebotomy (Bruening). The start-up gained swift momentum, due to investments from wealthy family connections ("Bad Blood"). By 2005, Theranos had $6 million worth of investments (Berk).

However, Holmes quickly realized Gardner was right about the Therapatch. Instead, Holmes and her lab pivoted to create a process which would upheave industry-standard laboratory methods for blood sampling and diagnostics. Using a single drop of blood, versus the traditional venipuncture method, Theranos developed a machine said to be a medical laboratory on a chip. The new "Edison Machines" could test a patient's single prick of blood for multiple diseases and medical conditions, ranging from cholesterol to cancer (Fiala). Further, patients would be able to select, order, and analyze their own tests without physician oversight (Fiala).

The proposed technology truly could have revolutionized health care ("Bad Blood"). In addition to helping the standard patient, Holmes boasted that the technology could be outfitted for the battlefield, enabling rapid diagnostics and treatment in crucial situations ("Bad Blood").

By 2006, investments in Theranos totaled $45 million (Berk). Theranos was universally acclaimed. In 2009, American Businessman, Ramesh "Sunny" Balwani guaranteed Theranos a $13 million line of credit and became the President and COO of Theranos (Berk).

By 2014, Holmes had received over $900 million in funding, and Theranos had obtained a $9 billion valuation (Fiala). Holmes pioneered the company, operating as CEO and holding over a 50% stake (Wilson). Major, high-profile investors continued to back the company due to its promising technology (Theranos' Bad Blood). In 2015, Fobes named Holmes the youngest self-made billionaire, evaluating her worth at $4.7 billion (Theranos' Bad Blood).

In 2013, Walgreens and Theranos partnered to install Theranos technology in 40 of its stores across Arizona (Berk). In 2015, Theranos partnered with insurance giant Capital BlueCross and the Cleveland Clinic (Fiala). Other partners initially included Pfizer and GlaxoSmithKline who used Theranos for clinical trial testing (Wilson). Additionally, in 2015, the FDA approved Theranos for the herpes blood test (Berk).

Despite the strong media presence and strides being made by the company, concerns arose about Theranos' operations, clouding the company with skepticism. In 2015, an article published in *The Wall Street Journal* unearthed Theranos as a hoax. Investigative journalist John Carreyrou met with former Theranos' employees and physicians in partnership with Theranos ("Bad Blood"). He discovered the company relied on industry-standard technology, the kind they insisted they revolutionized, to perform its blood tests. Furthermore, due to honorable whistleblowers at Theranos, Carreyrou found that Theranos failed to give accurate diagnoses to patients and falsified results, as the technology failed to perform, time and time again, despite Holmes and Theranos fronting it as a success to investors and patients alike (Wilson).

The day the article broke, one of Holmes' first skeptics, Gardner who was quoted in it, was attending a Harvard Medical School board of fellows meeting, in the presence of Holmes, who had been appointed to the board (Pflanzer). Gardner stated, "I support women. I always have. I've gotten in trouble for it. I've pushed hard. But I'm not going to support a fraud – I don't care what your gender is" (Pflanzer).

Holmes disagreed with the article, publicizing that Carreyrou had the wrong story. She responded to skeptics, saying, "This is what happens when you work to change things, at first they think you're crazy, then they fight you, and then, all of a sudden, you change the world" (Pflanzer). Holmes continued to push the company's technology, on news outlets and

conferences, coupling it with stories of her success (Pflanzer). Following the article's release, Holmes contacted Theranos' shareholders and explicitly refuted the findings in the Wall Street Journal, as shown in emails later released in federal court (See Figure 2) (United States District Court).

Figure 2

From: Theranos
Sent: Sunday, November 01, 2015 2:23 PM
Subject: For our shareholders

Dear Shareholder,

I want to first thank all of you who have reached out to share your support of the company, and experiences of being faced with stories like these, as we've undergone attacks through the media over the past week and a half. It has meant so much to me, and to everyone in our company.

You have likely seen recent media coverage discussing Theranos, spurred by recent *Wall Street Journal* articles about Theranos.

I went down to the *Wall Street Journal* conference to refute the false statements in their articles in person, and we posted *Theranos Facts* on our website, which comprehensively rebut the many false accusations and misrepresentations resulting from the *Journal's* coverage.

Statement by the Theranos Boards of Directors and Counselors

As individuals – engineers, doctors, senior government officials, public health experts, scientists, corporate leaders, builders and professors – familiar with the objectives and workings of Theranos, its leadership, and its mission, we stand wholeheartedly behind the management, achievements, vision and commitment of this company.

Theranos is a revolutionary business, founded and led by a remarkable engineer and businesswoman – joined by a team of professionals who have, at their core, embraced her mission to serve humanity through innovation in health care. Theranos' technology is both transformative and transparent: our blood tests are faster, less expensive, and require less blood than traditionally required. Fundamentally, the technology is designed to serve those who most need care and those who can least afford health care today. Doing this with as little pain as possible, this humane innovation, over time, will impact the lives of millions – including the very young and the very old, cancer patients and those with chronic disease. This same mission will drive price transparency, empowering individuals and reducing their costs. As a group, we embrace this promise and stand with Theranos.

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As we wrote in a public statement recently: Theranos is the same company offering the same services as we were two weeks ago. And, while we'll continue to set the record straight when there is false coverage about us, we have not for a minute lost focus on building our business.

We have the privilege of being reminded every day of the importance of our work by the people we serve – those who most need care and who can least afford health care, and the people who are now detecting disease earlier because we've made it more accessible. And that is why we will fight this battle as many times as it takes to win it.

We have enclosed the facts and statement links as well as the video I referenced above. Please feel free to share as you see fit. And if anyone has questions about any aspect of the recent press after reading the attachments, please respond to this email and let us know. With so much false information being disseminated by the press, it is especially important to me to make sure each of you have accurate information.

I welcome any feedback or ideas you all have as we counter and correct the falsehoods. We have such an incredible group of people in our investor base, and I deeply value your insights.

Finally, we welcome you to keep us informed of any press contact you receive, via pr@theranos.com, and we are happy to provide you with any relevant information related thereto.

Thank you for the support you have shown us in working toward our mission, and building a great company not just for today but also for the very long term.

With my best regards,
Elizabeth

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Figure 2 – Elizabeth Holmes Email to Shareholders and Statement from Theranos Board of Directors and Counselors regarding recent publication in the Wall Street Journal, Exhibit No. 10523 from U.S. v. Elizabeth Holmes
Source:
United States District Court FOR THE NORTHERN DISTRICT OF CALIFORNIA Sa. UNITED STATES OF AMERICA, V. ELIZABETH A. HOLMES and RAMESH "SUNNY" BALWANI, . 28 July 2020.

Following the Wall Street Journal article, the Food and Drug Administration (FDA) and the Centers for Medicare and Medicaid Services began to investigate Theranos (Pflanzer). Investors, pharmaceutical partners, and the State of Arizona sued Theranos, after more evidence arose following the findings published by The Wall Street Journal (Pflanzer). In 2016, Forbes revised its initial estimate of Holmes net worth "to nothing" (Wilson). Walgreens and other partners promptly ended their partnership with Theranos (Berk).

In 2018, the Securities and Exchange Commission (SEC) formally charged Theranos, Holmes, and former Theranos President Ramesh Balwani with fraud. The SEC cited that Theranos, Holmes, and Balwani raised, "... more than $700 million from investors through an elaborate, years-long fraud in which they exaggerated or made false statements about the company's technology, business, and financial performance" ("Theranos, CEO Holmes"). According to the SEC, Theranos' technology could only perform a small number of blood tests and relied on traditional methods manufactured by other companies to run lab tests. The United States Government later charged Holmes and Balwani with conspiracy and wire fraud (United States District Court Northern District of California Sa.).

Theranos fell quickly. Its egregious secrets spilled. In the years to come, Theranos and Holmes would become a poignant example of what committing massive fraud truly entails

U.S. Securities and Exchange Commission vs. Elizabeth Holmes and Theranos, Inc.
SEC Charges Elizabeth Holmes and Theranos with Fraud

In the complaint filed by the Securities and Exchange Commission against Elizabeth Holmes and Theranos on March 14, 2018, the SEC outlines fraudulent activities carried out at Theranos and charges the plaintiff with two claims (United States District Court Northern District of California San Jose Division). Further, the SEC filed a separate complaint against Balwani (United States District Court Northern District of California San Jose Division).

The SEC describes the defendant, Holmes, CEO and Chairman of Theranos, as receiving a salary between $200,000 to $390,000 in years 2013 through 2015, while exercising 53.7 million stock options, giving her the majority of the voting control of Theranos (United States District Court Northern District of California San Jose Division).

In its filing, the SEC specifies that in Theranos' early years, it focused on developing the Theranos Sample Processing Unit (TPSU) to analyze blood and perform clinical trials. However, the TPSU could only perform a few tests. When Balwani joined Theranos in 2009, he guaranteed a line of credit for Theranos, as they ran short on funds. Thereafter, Theranos began developing a new TPSU, which could perform more tests, which became known as the miniLab (United States District Court Northern District of California San Jose Division).

Although the miniLab was not ready, Theranos sought to commercialize. Theranos backed that the miniLab could conduct a wide array of blood tests and could be released to partners, including a pharmacy named Pharmacy A in the complaint and grocery store named Grocery A, by Q4 in 2010. Holmes told potential partners that the miniLab was already being deployed by the Department of Defense (DOD) on military helicopters and had the ready ability

to conduct blood tests in less than an hour and beat competitor's prices (United States District Court Northern District of California San Jose Division).

Based on these claims, executives from both the pharmacy and grocery store depicted in the complaint, entered into a contract with Theranos to offer patient testing sites in stores (United States District Court Northern District of California San Jose Division).

In 2011, executives from the pharmacy sought FDA approval for the miniLab before installing them in stores. Holmes agreed to change the partnership, to reflect a later timeline, to receive approval. In 2013, the miniLab was due to launch; however, the miniLab had still not been FDA approved for patient testing because Theranos failed to scientifically validate its methods. Therefore, Holmes used Theranos' earliest TSPUs for patient testing and to meet the demands, Holmes approached engineers to also modify industry-standard technology from third-party laboratories to perform the blood tests. However, Holmes never disclosed this with her partners (United States District Court Northern District of California San Jose Division).

When executive partners came to Theranos for a demonstration, Holmes instructed employees to use the modified third-party machines to perform blood tests, under the premise they were utilizing Theranos' miniLabs (United States District Court Northern District of California San Jose Division).

From 2013 to 2016, Theranos never used the miniLab on patient samples, and instead utilized its earlier TPSU and modified third-party machines or standard technology. Had Pharmacy A and Grocery A known about the issues, they would not have continued the partnership (United States District Court Northern District of California San Jose Division).

Regarding the claims made by the press, such as those published in The Wall Street Journal, the SEC finds that Holmes continued to misrepresent Theranos' ability, citing the findings to be false (United States District Court Northern District of California San Jose Division).

In 2013, in need of further research and development, Theranos needed to raise more money. In doing so, Holmes convinced Theranos' Board of Directors and shareholders to create a new class of shares, "Class B Shares," which split Theranos' stock in a 1 to 5 ratio (United States District Court Northern District of California San Jose Division). The decision decreased the market price of individual shares for shareholders and gave Holmes superior voting power (United States District Court Northern District of California San Jose Division). Holmes owned over half the company's outstanding shares yet had over 99 percent of voting rights as a result (United States District Court Northern District of California San Jose Division).

In its complaint, the SEC further details how Holmes raised funds, based on false statements to potential and current investors. Potential investors met with Holmes, saw the miniLab in use, and gave their blood sample to be used on the miniLab. However, Theranos usually took the investors' samples away to be used on third-party machinery (United States District Court Northern District of California San Jose Division). Additionally, a binder of materials, including clinical trials, financial forecasts, partnerships with pharmaceutical companies, and positive media about Theranos was given to potential investors. On some of the materials, logos of pharmaceutical companies Theranos had not partnered with were displayed on Theranos documents touting its technology (See Figure 3) (United States District Court Northern District of California San Jose Division). For example, a document with photographs of the Theranos' developed technology the Edison Machine sent to potential investors showed a Pfizer endorsement logo on the top right corner. In federal court, Holmes later admits to adding the logo herself without Pfizer's permission (See Figure 3) (Kruppa).

Figure 3

Figure 3 – A Document Sent to Potential Theranos' Partners with False Endorsement from Pharmaceutical Giant Pfizer

Source:
Kruppa, Miles, and David Lee. "Elizabeth Holmes Trial: The Key Evidence Jurors Will Consider." Financial Times, 10 Dec. 2021, https://www.ft.com/content/7281dc2d-43e1-41ec-8b9e-4a7c12e350f2.

As aforementioned, Holmes led investors to believe Theranos had significant backing by the Department of Defense. However, Theranos' technology was never utilized on a helicopter or on a battlefield. Although Theranos raised $300,000 from three DOD contracts, the DOD only used Theranos' technology in a singular study, and never utilized it further. Holmes continued to mislead investors to believe the Department of Defense utilized Theranos in Afghanistan and on helicopters under crucial conditions (United States District Court Northern District of California San Jose Division).

While Theranos' contracts and partnerships with Pharmacy A and Grocery A were stalled, the SEC finds that, Holmes continued to promote these relationships to investors and included them in financial forecasts (United States District Court Northern District of California San Jose Division). In 2014, Theranos and Grocery A fell out of communication; however, Holmes continued to tell investors later about an ongoing partnership with Grocery A (United States District Court Northern District of California San Jose Division), misleading them.

In gathering potential investors, Holmes assured that FDA approval was not necessary for Theranos' miniLab and tests. Holmes cited that Theranos only sought FDA approval because it was the "gold standard," though it was unnecessary. However, Pharmacy A and others informed Holmes FDA approval would likely be necessary. In 2014, the FDA approached Holmes and relayed that approval would be necessary for any tests and diagnosis performed by Theranos' technology. During this period, Holmes appealed to investors, claiming they were voluntarily seeking approval (United States District Court Northern District of California San Jose Division).

In meetings with potential investors, Holmes shared Theranos' financials. In the binders, Theranos forecasted it would generate over $100 million in revenue in 2014 and $1 billion in 2015, through commercialization. In 2015, Holmes shared historical financial information with investors, with net revenues in 2014 totaling $108 million; however, actual financial information failed to align with Holmes' representations. In 2014, Theranos recorded slightly over $100,000 or about $99.9 million short of what was promised to investors (United States District Court Northern District of California San Jose Division)

In 2016, Grocery A and Pharmacy A terminated their partnerships with Theranos. Theranos refocused its efforts on developing the miniLab, after inspections of Theranos' labs and manufacturing facility pushed them out of patient testing.

In 2017, Holmes and Theranos settled a lawsuit brought by a defrauded investor. Theranos also reached a settlement agreement with Pharmacy A, which sued for breach of contract. In the same year, Holmes returned 34 million shares to Theranos due to a tender offer to recapitalize some investors. Theranos could not issue new equity or amend bylaws without a majority shareholder vote due to the offer (United States District Court Northern District of California San Jose Division). Later that year, Theranos received a term loan, on the brink of bankruptcy, giving Theranos about one year to continue to develop the miniLab (United States District Court Northern District of California San Jose Division).

In recognition of the alleged fraud committed by Elizabeth Holmes, the SEC filed two claims for relief, the first being *Violations of Section 10(b) of the Exchange Act and Rule 10b-5* (United States District Court Northern District of California San Jose Division) and the second *Violations of Sections 17(a)(1), (2), and (3) of the Securities Act* (United States District Court Northern District of California San Jose Division).

Section 10(b) of the Exchange Act and Rule 10b-5 are a part of the Securities Exchange Act passed in 1934, created to deter securities fraud. The rule, known as Employment of Manipulative and Deceptive Practices, makes it illegal for anyone to:

"…directly or indirectly use any measure to defraud, make false statements, omit relevant information, or otherwise conduct business operations that would deceive another person in the process of conducting transactions involving stock and other securities" (Chen).

To prove a violation, the defendant must be proven to have acted with scienter ("Securities Act of 1933").

Sections 17(a)(1), (2), and (3) of the Securities Act are a part of the 1933 Securities Act. Under this rule, though closely resembling Rule 10b-5 defendants are accused of negligence only, rather than have acted with scienter ("Securities Act of 1933"). In its findings, the SEC claims that Holmes and Theranos:

"... directly or indirectly, in the offer or sale of securities… with scienter, employed devices, schemes, or artifices to defraud… obtained money or property by … untrue statements or material fact or by omitting to state a material fact necessary… and engaged in transactions, practices, or courses of business which operated or would operate as fraud or deceit…" (United States District Court Northern District of California San Jose Division).

In its complaint, the SEC requests that the court finds Holmes and Theranos in violation of Section 10(b) and Rule 10b-5 of the Exchange Act and Section 17(a) of the Securities act, requiring Holmes to pay a monetary penalty. Further, the SEC requests the court to require Holmes to return her stock shares in Theranos, convert Class B common stock shares in Theranos to Class A common stock shares, and prohibit Holmes from serving as an officer or director of a public company (United States District Court Northern District of California San Jose Division).

Settlement

Following the complaint, Theranos and Holmes agreed to settle the fraud charges. Holmes paid a $500,000 penalty, was prohibited from serving as an officer or director of a public company for 10 years, returned her 18.9 million outstanding shares, and surrendered her voting control through reclassifying her shares to Class A common stock shares ("Theranos, CEO Holmes").

U.S. v. Elizabeth Holmes, et al.

The Indictment

On July 28, 2020, the United States Federal Government charged Elizabeth Holmes and Sunny Balwani with two counts of conspiracy to commit wire fraud and nine counts of wire fraud ("U.S. v. Elizabeth Holmes, et al.").

According to the indictment, filed in northern California, Holmes and Balwani schemed and defrauded investors to obtain millions of dollars through false statements and misrepresentations (United States District Court for the Northern District Sa.). As paralleled in the complaint filed by the SEC, the United States alleges in the indictment that Holmes knowingly misrepresented the capabilities of Theranos' technology, financial performance, and partnerships with other companies to investors (United States District Court for the Northern District Sa.). Further, Holmes knowingly used implicit claims and omitted necessary information about Theranos' capabilities to defraud hundreds of patients and physicians (United States District Court for the Northern District Sa.).

The indictment names the aforementioned Pharmacy A as Walgreens. Further, the U.S. alleges that Holmes largely misrepresented Theranos' relationship with the DOD in discussions with investors. The indictment also outlines how Holmes intentionally misled investors to believe Theranos' TPSU, Edison, or miniLab technology did not need FDA approval. The U.S. notes that Holmes used false approval stemming from several pharmaceutical companies and research organizations to mislead investors (See Figure 3). Holmes' misstatements and failure to give relevant information to the media and the press resulted in false publications, which were shared which were shared with potential investors and the public (United States District Court

for the Northern District Sa.). Finally, the United States asserts that Holmes and Balwani were aware of the failing technology at Theranos, and continued to misrepresent information to investors, patients, physicians, and the press ("U.S. v. Elizabeth Holmes, et al.").

The United States alleges that between 2010 - 2015, Holmes and Balwani defrauded investors, in violation of *Title 18, United States Code, Section 1349 and 1343* (United States District Court for the Northern District Sa.).

Under Title 18, United States Code, Section 1349 (18 U.S.C. § 1349), federal law asserts that conspiracy to commit fraud is defined as, "Any person who attempts or conspires to commit any offense under this chapter shall be subject to the same penalties as those prescribed for the offense, the commission of which was the object of the attempt or conspiracy" ("18 U.S. Code § 1349 - Attempt and Conspiracy").

Title 18, United States Code, Section 1343 (18 U.S.C. § 1343), states those who have committed wire fraud as those having intended to scheme or artifice to defraud, in the intentions to gain money or property through false pretenses, representation, or promises via wire, radio, or televised communication in commerce, or through writings, signs, or other signals used to carry out the scheme will be fined or imprisoned to no more than 20 years, or potentially both ("18 U.S. Code § 1343 - Fraud by Wire, Radio, or Television").

Of the eleven counts charged against Holmes and Balwani by the United States the first two fall under 18 U.S.C. § 1349. Count one is conspiracy to commit wire fraud against Theranos' investors (United States District Court for the Northern District Sa.). Count two is conspiracy to commit wire fraud against Theranos' patients.

Counts three through eight fall under violation of 18 U.S.C. § 1343. The indictment describes five fraudulent electronic funds transfers from investors to Theranos' bank account, which is a corporate bank account maintained in Palo, Alto, CA at Comerica Bank (United States District Court for the Northern District Sa.). Counts three through eight account for approximately $155 million worth of investments (see Figure 4) (United States District Court for the Northern District Sa.).

Figure 4

COUNT NUMBER *US V. ELIZABETH HOLMES, et.al.* Indictment	DATE WIRED	AMOUNT WIRED	WIRED FROM
3	12/30/2013	$99,990	Alan Jay Eisenman
4	12/31/2013	$5,349,990	Black Diamond Ventures
5	12/31/2013	$4,975,000	Hall Phoenix Inwood Ltd.
6	2/6/2014	$38,336,632	PFM Healthcare Master Fund
7	10/31/2014	$99,999,984	Betsy DeVos
8	10/31/2014	$5,999,997	Mosley Family Holdings LLC

Figure 4 – Fraudulent Electronic Funds Transfers from Investors to Theranos
Source:
UNITED STATES DISTRICT COURT NORTHERN DISTRICT OF CALIFORNIA SAN JOSE DIVISION. SECURITIES AND EXCHANGE COMMISSION, Plaintiff, vs. ELIZABETH HOLMES and THERANOS, INC. Defendants. . 14 Mar. 2018.

Counts nine through twelve also fall under violation of 18 U.S.C. § 1343. They account for four instances in which Holmes knowingly communicated false laboratory and blood test results and accepted payments for false advertising to patients and doctors. Specifically, count twelve surrounds a $1,126,661 electronic funds transfer for the purpose of Theranos to advertise its Wellness Centers (United States District Court for the Northern District Sa.).

If convicted, Holmes will face a maximum prison sentence of 20 years, a $250,000 fine, and restitution, for each count, in accordance with the United States Sentencing Guidelines and federal statutes ("U.S. v. Elizabeth Holmes, et al.").

The Trial

In *U.S. v. Elizabeth Holmes, et al.*, the prosecution called 29 witnesses, including scientists, doctors, executives, patients, former employees, and former government officials (O'Brien). The prosecution sought to explain to the jury, "What Holmes knew, when she knew it, and whether she intended to deceive investors, patients, and doctors" (O'Brien). Assistant U.S. Attorney Jeff Schenk stated in the prosecution's closing argument that Holmes' actions were, "... not only callous, but also criminal" (Carson).

In her defense, Holmes testified that she was not fully aware of the failings at Theranos and that she never intentionally meant to mislead or misrepresent findings to those vested in Theranos (O'Brien). Holmes verified that the company used third-party devices, used pharmaceutical logos on Theranos' documents, and did not move forward past the study with the DOD (O'Brien). However, Holmes cited she led Theranos in good faith (O'Brien).

The Verdict

On January 3, 2022, a federal grand jury found Elizabeth Holmes guilty of Count 1 in U.S. v. Elizabeth Holmes, et al. of the charge of conspiracy to commit wire fraud against Theranos investors (United States District Court Northern District of California Sa.). Holmes was not found guilty on Count 2, conspiracy to commit wire fraud against Theranos patients. Counts 3 through 5 were undecided; the jury did not come to a unanimous vote. Holmes was found guilty on counts 6 through 8, charged with wire fraud against Theranos' investors. On counts 10 through 12, she was found not guilty of wire fraud against Theranos' patients (See Figure 5) (United States District Court Northern District of California Sa.).

In the coming weeks, Holmes will remain free on bond and face those penalties as outlined in the aforementioned indictment at a sentencing hearing ("Theranos Founder Elizabeth Holmes Found Guilty").

Figure 5

United States District Court
Northern District of California

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN JOSE DIVISION

UNITED STATES OF AMERICA, Plaintiff, v. ELIZABETH A. HOLMES, Defendant.	Case No. 5:18-cr-00258-EJD-1 **FINAL VERDICT FORM**

We, the members of the Jury in the above-entitled case, unanimously find the defendant, Elizabeth Holmes:

1. Guilty [GUILTY / NOT GUILTY] of the charge of Conspiracy to Commit Wire Fraud against Theranos investors in violation of 18 U.S.C. § 1349, as charged in Count One of the indictment.

2. Not Guilty [GUILTY / NOT GUILTY] of the charge of Conspiracy to Commit Wire Fraud against Theranos paying patients in violation of 18 U.S.C. § 1349, as charged in Count Two of the indictment.

3. _____ [GUILTY / NOT GUILTY] of the charge of Wire Fraud against Theranos investors, in violation of 18 U.S.C. § 1343, in connection with a wire transfer of $99,990 on or about December 30, 2013, as charged in Count Three of the indictment.

United States District Court
Northern District of California

4. _____ [GUILTY / NOT GUILTY] of the charge of Wire Fraud against Theranos investors, in violation of 18 U.S.C. § 1343, in connection with a wire transfer of $5,349,900 on or about December 31, 2013, as charged in Count Four of the indictment.

5. _____ [GUILTY / NOT GUILTY] of the charge of Wire Fraud against Theranos investors, in violation of 18 U.S.C. § 1343, in connection with a wire transfer of $4,875,000 on or about December 31, 2013, as charged in Count Five of the indictment.

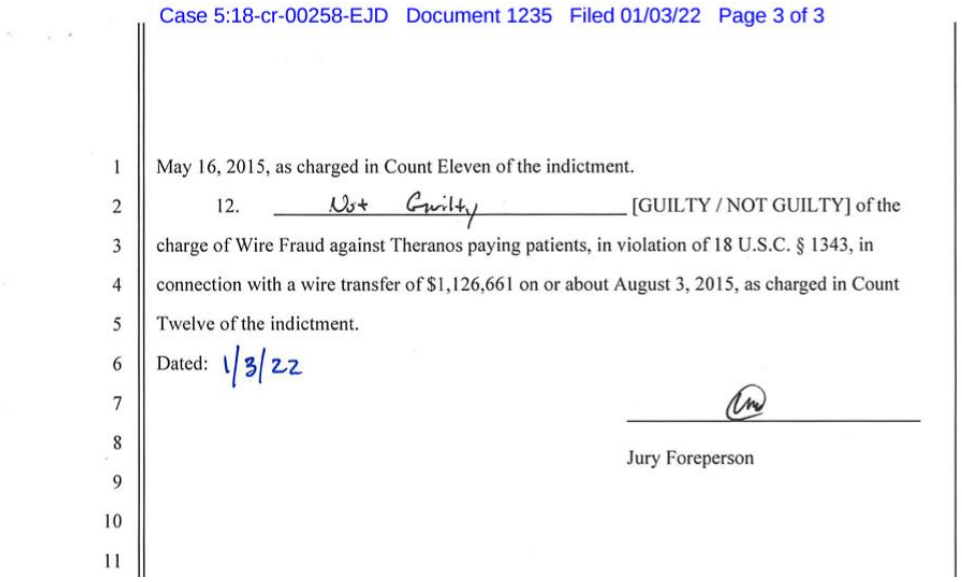
6. Guilty [GUILTY / NOT GUILTY] of the charge of Wire Fraud against Theranos investors, in violation of 18 U.S.C. § 1343, in connection with a wire transfer of $38,336,632 on or about February 6, 2014, as charged in Count Six of the indictment.

7. Guilty [GUILTY / NOT GUILTY] of the charge of Wire Fraud against Theranos investors, in violation of 18 U.S.C. § 1343, in connection with a wire transfer of $99,999,984 on or about October 31, 2014, as charged in Count Seven of the indictment.

8. Guilty [GUILTY / NOT GUILTY] of the charge of Wire Fraud against Theranos investors, in violation of 18 U.S.C. § 1343, in connection with a wire transfer of $5,999,997 on or about October 31, 2014, as charged in Count Eight of the indictment.

10. Not Guilty [GUILTY / NOT GUILTY] of the charge of Wire Fraud against Theranos paying patients, in violation of 18 U.S.C. § 1343, in connection with a wire transmission of Patient E.T.'s laboratory blood test results on or about May 11, 2015, as charged in Count Ten of the indictment.

11. Not Guilty [GUILTY / NOT GUILTY] of the charge of Wire Fraud against Theranos paying patients, in violation of 18 U.S.C. § 1343, in connection with a wire transmission of Patient M.E.'s laboratory blood test results on or about



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May 16, 2015, as charged in Count Eleven of the indictment.

12. Not Guilty [GUILTY / NOT GUILTY] of the charge of Wire Fraud against Theranos paying patients, in violation of 18 U.S.C. § 1343, in connection with a wire transfer of $1,126,661 on or about August 3, 2015, as charged in Count Twelve of the indictment.

Dated: 1/3/22

Jury Foreperson

Figure 5 – Jury Verdict United States v. Elizabeth A. Holmes, et al.
Source: United States District Court FOR THE NORTHERN DISTRICT OF CALIFORNIA Sa. UNITED STATES OF AMERICA, V. ELIZABETH A. HOLMES and RAMESH "SUNNY" BALWANI, . 28 July 2020.

Application of the Fraud Triangle

In order to understand how such massive fraud occurred at Theranos, application of the fraud triangle and its three components, incentive, opportunity, and rationalization, will provide insight on why and how Elizabeth Holmes committed fraud.

Incentives

Holmes encountered several incentives to commit unethical behavior at Theranos. In large, Holmes felt pressure to meet investor and analyst expectations, to upkeep her and Theranos' heroic reputation, and to make the world a better place.

Financial Incentives:

Etched deep within the culture of Silicon Valley, Holmes founded Theranos on the philosophy of "fake it 'til you make it." Investors put up funds on a vision to change the world, rather than a scientifically validated technology. As investors' dollars kept coming into the company, the pressure became greater and greater to actually develop and validate the Theranos' technology.

In vetting investors, Holmes often advertised Theranos' contracts with the DOD. However, when the DOD discovered that Theranos had not been FDA approved, they shut down the deal (Neto). Yet, by 2011, when the deal fell through, Holmes had already told multiple investors that Theranos' technology would be used on military aircraft to save lives, which created pressure to upkeep the lie.

Irrational expectations and investment horizons often place pressure on top-level managers (Zahra, et al.). At Theranos, Holmes promised investors certain financial projections. Holmes represented to investors that Theranos would generate over $100 million in revenue in 2014 and $1 billion in 2015. With such large financial metrics to meet, investors would be upset to know the real numbers. In 2014, Theranos generated approximately $100,000 in revenue.

During the same time frame, according to insurers, Theranos was operating at an $8-9 million monthly net loss (Aiello). Financial documents given to investors claimed that Theranos would generate $95 million, stemming from multiple streams of business from pharmaceutical services and lab services in hospitals and doctors' offices. None of those generated revenue (Aiello). Instead of being upfront, Holmes continued to defraud investors, though the penalties for being an executive and lying are severe.

In 2012, Theranos secured a contract with Walgreens to install Wellness Centers, which provided patients with Theranos technology to receive blood samples. However, before rolling-out Theranos' services, Walgreens sought FDA approval. The agreed upon deadline was September 2013. However, the technology did not gain approval because it lacked scientific verification (United States District Court Northern District of California San Jose Division). With the deadline looming on such a massive deal, Holmes turned to previous existing technology to satisfy Walgreens. Holmes assembled a team of former NASA engineers to modify third-party analyzers. Instead of introducing a new way of blood sampling, Theranos was merely copying current, industry-standard technology on heavily diluted patient samples. By the time Theranos rolled out its prototype, Theranos had already defaulted on its deadline. When the Wellness Centers opened, only 15 of 240 tests offered were run on the intended Edison machine, which frequently malfunctioned. The rest were being received by Theranos' commercial lab for analysis. Theranos used shipped patient samples on traditional machines. Earlier, Theranos had purchased Siemens blood-testing machines for alleged research in developing their own technology. However, due to Theranos' failing technology, they severely diluted patient samples and tested them on the Siemens machine, resulting in faulty test results (Aiello). One patient received notice she was having a miscarriage due to a faulty Theranos blood test. Another received a false positive HIV result. Other patients received false cancer diagnoses (Goodkind).

To avoid exposure, Holmes had to have a secret subsidiary to buy the commercial analyzers being used in the lab. Throughout their partnership, Walgreens believed the Wellness Centers and patients were fully utilizing Theranos' advertised and uniquely developed technology, when, this was a lie (Aiello). Theranos could have possibly perfected its technology; however, Holmes rushed to meet the deadline under pressure, misrepresenting to Walgreens and patients alike.

Personal Incentives:

Holmes also had large personal incentives to commit fraud. In founding Theranos, she wholeheartedly felt she would change the world and revolutionize health care. According to Holmes' attorneys, she genuinely believed that "... Theranos would revolutionize healthcare by creating a cheaper, easier, and quicker way to test blood" (Mintz). In support, Holmes' attorneys argued that she stayed at Theranos until its last days, despite many people and investors leaving the company following the Wall Street Journal article. Holmes felt enormous personal pressure to make her dream a reality and fulfill her promises to others (Mintz). In describing what she wanted to do with her life, Holmes stated that, "I decided that I was going to build a life by building this company" (Carson). Without her company, Holmes would lose her vision and what she had spent her life on.

Holmes also felt personal pressures to not only upkeep her social image, but also the reputation of her company. Holmes idolized media coverage (See Figure 6). She hired former advertising experts from Apple to market Theranos and create ad campaigns. She also hired an Oscar-winning filmmaker to direct Theranos commercials (Neto). She consistently gave

conference talks and appeared on television and magazine covers. Time Magazine once named her "One of the Most 100 Influential People in the World" (Neto). The New York Times named her one of "Five Visionary Tech Entrepreneurs Who Are Changing the World" (Neto). Holmes sought out press, and in turn, press brought in more investors. Following the expose by the Wall Street Journal, Holmes asked Rupert Murdoch, the owner of News Corporation which owned the Wall Street Journal, to kill the story. Murdoch, who had previously invested $125 million in Theranos, declined ("Bad Blood"). Despite the negative press, Holmes continued to make TV appearances, claiming good works by Theranos ("Bad Blood"). She did everything within her power to keep Theranos' reputation strong, despite being met with intense criticism and continuing to outright lie to the public and investors.

Figure 6

Figure 6 – Elizabeth Holmes in the Media
Source:
"Elizabeth Holmes - from a Communications Perspective - w7worldwide." Worldwide, 2 Mar. 2020, https://www.w7worldwide.com/V2/elizabeth-holmes/.

Opportunity

When a top-level manager, such as Elizabeth Holmes, feels significant pressure to commit fraud, they are significantly motivated to find certain opportunities to commit fraud. As CEO of Theranos, Holmes had access others lacked to commit fraud, as she could override some internal controls, largely due to ineffective corporate governance.

Board of Directors:

While shining with accolades in other areas (see Figure 7), the members on Theranos' board of directors (BOD) failed to provide quality oversight due to lack of experience or knowledge in the healthcare industry. Theranos' BOD is best described as a "...who's who of American political and business leaders" ("Bad Blood").

Figure 7

Member	Profile
Elizabeth Holmes (Chairman and CEO)	Theranos founder, Chairman, and CEO
Sunny Balwani (President, COO, and Director)	Former founder, President at CommerceBid.com. Worked as a software engineer for IBM and Microsoft. Degrees include BA in Information Systems from the University of Texas at Austin and an MBA from the University of California at Berkeley.
Henry Kissinger (Director)	Former U.S Secretary of State from 1973 – 1977. U.S National Security Advisor form 1969 – 1975. Fellow at the Hoover Institution. Active member of the Defense Policy Board from 2001 – 2016. 1973 Nobel Peace Prize Recipient. Awarded a Presidential Medal of Freedom and Bronze Star from the United States Army. Previously served as a member of ContiGroup Companies' board. Degrees include a BA in Political Science from Harvard and PhD degrees from Harvard.
James Mattis (Director)	Former United States Marine Corps General. Served as the Commander of the U.S. Central Command from 2010 – 2013 and the Commander of the U.S. Joint Forces Command from 2007 – 2010. Served as NATO's Supreme Allied Commander for Transformation from 2007 – 2009. Under the Trump Administration, was the U.S. Secretary of Defense. Hoover Institution Fellow. Degrees Include a BA in History from Central Washington University, and an MA in International Security Affairs from the National War College of National Defense University.
Riley Bechtel (Director)	Former CEO and Chairman of Bechtel Group. Director of Fremont Investors. Degrees include a JD and MBA from Stanford, a BA in Political Science, and a BA in Psychology from the University of California at Davis.
Richard Kovacevich (Director)	Former CEO, President, and Chairman of Wells Fargo. Previously served on the board of directors at Cisco Systems, Target, PetSmart, Northern States Power Company, and ReliaStar Financial Corporation. Degrees include a BS in Industrial Engineering, MS in Industrial Engineering, and MBA awarded by Stanford University.
Sam Nunn (Director)	Former United States Senator from 1972 – 1996. Previously served as the Chairman of the Senate Armed Services Committee. Former board member of Coca-Cola Co. and General Electric Company. Hoover Institution Fellow. Degrees Include a bachelor's degree and JD from Emory.
William Perry (Director)	Former U.S. Secretary of State from 1982 – 1989, deputy Secretary of Defense from 1993 – 1994, and undersecretary of Defense for Research and Engineering from 1977 – 1981. Senior fellow at the Hoover Institution. Received the Presidential Medal of Freedom. Worked as a Professor at Stanford University. Degrees include a BS and MS from Stanford and a PhD from Pennsylvania State University.

Gary Roughead (Director)	Former U.S Navy Admiral. Graduate of the U.S. Naval Academy. Hoover Institution Fellow. Received the Defense Distinguished Service Medal, alongside many other awards.
George Schultz (Director)	Former U.S. Secretary of State from 1982 – 1989. U.S. Secretary of Treasury from 1972 – 1974. First director of the Office of Management and Budget from 1970 – 1972. U.S. Secretary of Labor from 1969 – 1970. Worked as an international economics professor at Stanford University. Hoover Institution Fellow. Received the Presidential Medal of Freedom. Degrees include a BA in Economics from Princeton University and a PhD in Industrial Economics from MIT.
William Frist (Director)	Former United States Senator and Senate Majority Leader. Experienced heart and lung transplant surgeon and a professor of surgery at Vanderbilt University. Former chairman of Cressey and Company. Former board member of Harvard Medical School Board of Fellows. Degrees include a bachelors from Princeton University and a medical degree from Harvard Medical School.
Wiliam Foege (Director)	Physician and epidemiologist. Former Director of the Centers for Disease Control and Prevention, 1977 – 1983. Former professor of International Health at Emory University. Degrees include a medical degree from University of Washington, and a Master of Public Health from Harvard.

Figure 7 – Theranos' Board of Directors in 2015
Source:
"James Mattis." Encyclopedia Britannica, Encyclopedia Britannica, Inc., https://www.britannica.com/biography/James-Mattis.

Pflanzer, Lydia Ramsey. "The Stanford Professor Who Rejected One of Elizabeth Holmes' Early Ideas Explains What It Was like to Watch the Rise and Fall of Theranos." Business Insider, Business Insider, 18 Mar. 2019, https://www.businessinsider.com/Stanford-professor-phyllis-gardner-on-theranos-and-elizabeth-holmes-2019-3.

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Though the board's composition brought a lot of attention to Theranos, in comparison to the industry standard, Theranos' board severely lacked the proper knowledge to oversee Theranos. Only two members of the Theranos board, William Frist and William Foege had relevant experience in healthcare. Due to their inexperience, Holmes was able to dupe her own board of directors, as the board could not understand the severity of the issues at Theranos or the faulty technology to the full extent (Jurkiewicz). Acting as both CEO and chairperson of the board, questions regarding CEO duality inevitably arise in this scenario.

CEO duality occurs when a CEO also doubles as the board chair (Zahra, et al.). The combination of board chair and CEO centralizes power to a single individual. For CEO duality to be carried out successfully, a firm needs strong checks and balances to maintain ethics and integrity at the top. When a corrupt individual holds both positions, it becomes easier to commit fraud and conceal it (Zahra, et al.). When different individuals are the CEO and chairperson, it is easier to uncover and discover fraud committed by top level managers (Zahra, et al.). Unfortunately, at Theranos, Holmes was able to easily conceal fraud due to poor checks and balances and a naive board of directors.

Additionally, in managing business partnerships and negotiations, Holmes had the ultimate oversight on Theranos' new ventures as the CEO. The former CEO of Safeway, which is Grocery A named in the SEC complaint, commented on Holmes' negotiation styles as a witness in the criminal trial. He stated Holmes was unusual in the fact that she negotiated "... completely on her own" (O'Brien). In negotiating on her own, Holmes micromanaged business dealings. Before Walgreens partnered with Theranos to install Wellness Centers across its stores, Walgreens attempted to do their due diligence and hired a healthcare consultant, Kevin Hunter, to investigate Theranos and the oncoming partnership. Hunter requested a study from Theranos to validate its technology and to see Theranos' commercial lab. Holmes refused. Hunter brought these issues back to Walgreens, who approached Holmes. In turn, Holmes managed to marginalize Hunter and exclude him from any future meetings (Hall, Tonya, et al.). Walgreens never gained access to Theranos' miniLab data or its financial records (Neto).

Poor Documentation:

The behavior displayed by top level management shapes an entire firm. Ethical leadership promotes strong values and ethics throughout a company, which limits fraud. When senior leadership becomes corrupt, fraud may become more widespread (Zahra, et al.). As Holmes displayed unethical behavior at the top of the company, it trickled down throughout the organization, resulting in poor documentation at the firm. Failed testing and inaccurate test results were commonly reported to supervisors at Theranos, who later changed results and data points to represent more adequate results than what the technology was able to produce (Marks). Additionally, false financial projections were often given to investors, created by upper-level management (United States District Court For the Northern District Sa.).

Charisma:

Researchers have discovered that the influence of a CEO over a firm becomes more influential when a CEO is more charismatic (Zahra, et al.). Charismatic leaders can build trust with subordinates. In turn, subordinates follow charismatic leaders in committing unethical behavior. Employees with charismatic leaders may feel less inclined to whistle blow (Zahra, et al.). In examining the leadership at Theranos, Linda Neider, chair of the University of Miami Patti and Allan Herbert Business School's Management Department, accounted that Holmes, "... possessed many of the classic characteristics that we normally associate with charismatic leaders—a captivatingly optimistic vision of the future, an exceptionally high confidence level, and adept communication skills marked by the ability to modulate her voice and mesmerize others with her piercing eye contact" (Malone). In reviewing her board, it is evident Holmes had a particular charisma which brought highly influential individuals into her scheme. This charisma exhibited by Holmes played a large role in her opportunity to commit fraud, as employees struggled to blow the whistle or come forward against her actions.

Company Management and Company Culture:

By placing employees under pressure and stress to keep up with expectations or face job loss, Holmes was able to carry out fraudulent business practices at Theranos. The toxic culture at Theranos Holmes caused employees to fall in line with her code of ethics. Lower-level employees at Theranos described working the organization as being involved in a "South American dictatorship or drug cartel" (Jurkiewicz). Employees were fearful of questioning upper-level management (Marks). Holmes micromanaged employees and isolated them to limit

communication amongst them, in the name of "keeping trade secrets" (Jurkiewicz). Holmes often retaliated against employees who voiced concerns or deeply questioned Theranos' abilities and technology (Marks). The culture was one in which, "... fear, intimidation, and turnover," were normal (Malone). Creating a comfortable company culture allows employees to express different feelings and perspectives. Diverging feelings from the tone set at the top were strongly discouraged at Theranos, which created a poor workplace culture (Malone).

In 2006, Holmes fired Theranos' chief financial officer, Henry Mosley, after Mosley had a dispute with Holmes over Theranos' inflated future revenues. Mosley understood Theranos' technology often did not work. In his firing, Holmes cited Mosley as not being a "team player" (Jurkiewicz). In 2008, a major drug company approached Theranos to use its technology on stage 3 and 4 cancer patients; however, a few Theranos employees felt unsure, namely Ana Arriola and Adam Vollmer. Arriola, one of Theranos' first employees and former Apple product designer, and Vollmer, a mechanical engineer, both confronted Holmes about Edison's inaccurate results. Holmes asked them to either fall in line with the company's practices or resign. In 2008, Vollmer and Arriola resigned (Jurkiewicz). Many other employees at Theranos stepped forward as they disagreed with the company's practices and did not trust Theranos' technology. While non-disclosure agreements (NDAs) are common in start-ups and the healthtech industry, when employees resigned, they were faced with stricter NDAs ("Bad Blood"). Often those who tried to speak out were faced with threats of lawsuits and visits from lawyers ("Bad Blood").

One of Theranos' most prominent whistleblowers, Tyler Shultz, who broke the issues at Theranos to John Carryeou, the investigative journalist at The Wall Street Journal, worked at Theranos as an intern and full-time employee. Shultz' grandfather, George Shultz who is a former United States Secretary of State once sat on Theranos' board of directors. Shultz' role at Theranos was to confirm the accuracy of blood results given by Theranos' machines. In voicing his concerns to Holmes, he was directed to Daniel Young, Theranos' Vice President and head of the biomath team. Young provided Shultz with counter arguments for his concerns, though Shultz realized the claims being made by Holmes in the media to be false. Shultz sent an anonymous email to the Clinical Laboratory Program with the New York Health Department. He inquired about Theranos' validation methods, asking if the testing process was up to medical standards. The Health Department informed him that not only was it under industry standards, but it was also a violation of state and federal regulations. Tyler brought this information to his grandfather and Holmes. After receiving an email from Balwani, accusing him of stirring trouble within the company, Tyler resigned ("Bad Blood"). However, weeks later, Theranos' counsel pressured Tyler Shults to provide the names of any other current or former employees who have spoken to the media, namely The Wall Street Journal, following the John Carreyou story ("Bad Blood"). Theranos' representatives threatened to bankrupt Shultz and his family had Tyler not signed an affidavit stating that he never spoke about Theranos to any outside parties. Shultz began to feel paranoid he was being tracked by private investigators and ended his relationship with Carreyou ("Bad Blood"). Unfortunately, employees faced even worse implications than legal threats or bankruptcy resulting from their experiences at Theranos.

From 2005 to 2010, biochemist Ian Gibbons worked at Theranos, specializing in chemistry and blood testing. Gibbons was fired and re-hired as a low-level consultant after he questioned Holmes' "loose relationship with the truth" of Theranos' technology ("Bad Blood"). Gibbons felt the miniLab failed to meet necessary standards. In 2013, Gibbons was due to give a deposition regarding a patent lawsuit at Theranos. Gibbons felt so much pressure coming from top-level management, he became depressed and anxious, as he felt his testimony could ruin

Theranos' patents. The night before the deposition, Gibbons attempted suicide and died in the hospital a week later ("Bad Blood"). Gibbons' wife Rochelle called Holmes, grappling with Ian's suicide and hospitalization; however, Holmes never called back. Yet, a Theranos' lawyer contacted her the same day, requesting that Ian's phone, laptop, and any Theranos' files be turned in immediately. Holmes never contacted Rochelle in any manner regarding Ian's death, though he worked for the company for five years and his experiences at Theranos ultimately drove him to suicide ("Bad Blood"). In his life, Gibbons had been awarded more than 60 U.S patents. As the former Chief Scientist at Theranos, Gibbons concerns and input were significant. Gibbons struggled to, "…imagine why people were giving the company any money because there was no invention, there was nothing there" ("Widow of Theranos Scientist"). Gibbons' anxiety about the consequences of having to testify about the massive fraud occurring at Theranos is beyond compelling. It is an insanely accurate, gut-wrenching, sorrowful depiction of what life is like as a Theranos employee under Elizabeth Holmes' leadership.

Combined with being CEO, the failing corporate governance at Theranos largely allowed Elizabeth Holmes multiple opportunities to commit devastating fraud.

Rationalization

After a top-level manager feels pressure and finds an opportunity to commit fraud, they must rationalize their actions to carry out fraudulent behaviors or actions. In *US V. Elizabeth Holmes*, Holmes maintained her innocence throughout the trial, stating that she acted in good faith, signaling that she is still able to rationalize her actions. She also claimed in her defense that she was a victim of a decade-long abusive relationship with Sunny Balwani, who she claimed tried to control her nearly every move (O'Brien). Holmes cited in her defense that she herself never actually took steps to mislead investors or patients, instead, she says she was not fully aware of the happenings at Theranos (O'Brien). On the witness stand, Holmes expressed she felt what she told investors was possible to do eventually and she currently still maintains her innocence (O'Brien), despite being found guilty in the trial.

There were many instances where one may question whether Holmes acted in good faith. For example, in signing the deal to enter a partnership with Walgreens, Holmes knew Theranos would not be able to meet Walgreens' demands; however, she proceeded with the partnership (Hedgecock). Nevertheless, due to fraud occurring, on such a massive scale as stated by the SEC and according to the fraud triangle theory, Holmes felt justified to commit fraud, and perhaps she truly believed she would change the world.

Conclusion

In reviewing the extensive fraud that occurred at Theranos, several takeaways arise. Above all, acknowledging the arguably unforgivable damages that result from fraud in this case is important. Hundreds of people were harmed because of the massive fraud at Theranos. Lives were put at risk every day that Theranos continued to operate under such a cloud of secrecy. Healthy expectant mothers received false results of miscarriage. Patients received false cancer diagnoses. Chronically ill persons saw hope in a technology that never worked as advertised. Employees at Theranos felt such high levels of anxiety, stress, and despair that they felt there was no way out. One of the most distressing, poignant ramifications of the Theranos fraud is that Rochelle Gibbons became a widow far before she ever should have been. The weight of the fraud at Theranos is truly immeasurable. Elizabeth Holmes did change the world. Her leadership at Theranos showed the world how severe and personal the implications of fraud can truly be.

Regarding startup companies, seeking investor funds, and the overall Silicon-Valley culture, the fraud at Theranos changed the game forever due to its position in Palo, Alto, CA. Holmes ran on the idea of "fake it until you make it." However, there was never a point in the story in which it would be possible to make it within the timeframe and to the degree she set out to meet. Since Theranos has been uncovered, the public, investors, and legislators have lost trust in startups and big tech firms (Paul). Holmes pushed a technology that did not exist onto thousands of people, which leads to increased skepticism of legitimate companies. Many researchers have speculated that Elizabeth Holmes' conviction will forever change how these firms can operate and what they will have to disclose in the future (Paul). Operating in such a gray area as Theranos did is no longer viable. Innovators should realize the importance of telling the truth to the public, investors, and partners. Following Theranos' collapse and Elizabeth Holmes' conviction, startup culture has largely shifted, particularly in Silicon Valley. Theranos is a cautionary tale for future entrepreneurs and investors alike.

In hopes of preventing such massive fraud in the future, an important aspect to consider within the Theranos case is the poor tone at the top which invited rampant fraud into the firm. As earlier discussed, ethical strength at the top is crucial to a company's overall success. Top level managers must do the following, to set the right tone throughout the firm: "…communicate to employees what is expected of them; lead by example; provide a safe mechanism for reporting violations; and reward integrity" ("Tone at the Top"). At Theranos, Holmes and other top-level managers failed to even approach one of these four steps in the right direction. Theranos isolated and marginalized employees in the workplace. Those who reported violations or suspicion were fired, stalked, harassed, and downplayed. Companies must ethically lead their employees and listen to insider concerns. It is absolutely necessary to not only prevent fraud but also to create a healthy company culture. Understanding and exemplifying what good leadership entails is integral to a firm's growth.

The Theranos case also speaks to the importance of maintaining strong financial governance. Holmes misrepresented financial forecasts, outcomes, and projections countless times to investors and other Theranos' employees and partners. Having reliable internal controls, financial policies, audits, and validation is critical in preventing fraud ("Financial Governance"). Had Theranos upkept a high standard of financial governance, they could have ensured their financial data to investors. Without strong financial governance, a firm may expose itself to fraud such as in the case of Theranos.

Because of the naiveite of Theranos' board of directors and their lack of qualifications to govern the company for shareholders, the question emerges,, "Should there be a certain percentage of required industry experts on a firm's board of directors?" In a study conducted by Harvard Law School, researchers found that:

"…industry expertise is perhaps the most important attribute for board members because it equips directors with a deeper understanding of the risks and opportunities in a specific industry and also enhances directors' knowledge of the regulatory environment and key industry players" (Faleye).

Researchers also discovered that firm value is significantly higher, giving way to a 4.6% increase in firm value, when industry experts serve on the board of directors. Having industry experts on the board allows the CEO to better innovate and weigh risk taking (Faleye). At Theranos, perhaps if a greater percentage of the board had a scientific or healthcare background, there would have been fewer opportunities to commit fraud. Additionally, perhaps the proposed technology could have been developed with more insight into proper innovation and risk taking

within the company and the biotech industry, which could have positively revolutionized healthcare.

Overall, Theranos failed to uphold ethical corporate governance standards. Having checks and balances in a company is essential to achieving a firm's objectives and accurately carrying out its mission. The largest force influencing corporate governance is a firm's board of directors (Chen). The basic components of corporate governance, which are accountability, transparency, fairness, and responsibility, can affect all of those within a firm's reach and beyond (Chen). Theranos greatly failed to meet the basic requirements of an effective corporate governance system, which led it to unethical business practices and massive scale fraud, which harmed hundreds of people and resulted in billions of dollars lost.

The Theranos case is tragic. In consideration of how those who exposed Theranos were treated, and the bravery required by them to speak out against such an intense, years-long fraud scheme, many heroes emerge amidst such a tragic case of fraud and deceit. These people deserve to be applauded for saving so many future lives from the implications of such massive fraud.

The failures and lies stemming from Theranos largely serve as a reminder of the importance of due-diligence and strong corporate governance. Additionally, Theranos exemplifies how harmful fraud can be to the well-being of many people and society as a whole.

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