

The Past, Present, and Future of Forensic Accounting

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Abstract

The purpose of this thesis is to conduct an in depth and comprehensive exploration of the forensic accounting profession. By doing so, everyone who reads this thesis will understand how this profession has become an integral part of many transactions and what impact it can have on an individual's life. To bring all of this together, the thesis will begin by examining how the circumstances of our world stimulated the need for the field of forensic accounting, then move into what the profession currently encompasses, with insight from current professionals, and lastly, a short discussion, with input from professionals currently working in the field, about what the future of the profession holds.

Key Words: accounting, forensic, exploration, professionals

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The Past

History and Historic Case

There is evidence that forensic accounting has been around a lot longer than what we read online or hear about in the accounting world. However, the term “forensic accounting” was coined by New York CPA Maurice Peloubet in 1946, who drew inspiration from the idea that the purpose of the job was to reconstruct financial paths to find evidence of fraud and embezzlements. (What is Forensic Accounting?, n.d.)

Though there is significance behind the coining of the term “forensic accounting,” the beginning of modern forensic accounting is tied into the infamous case of Al Capone from the 1920s. Al Capone, commonly known as “Scarface,” was a famous gangster and crime lord in Chicago who became rich by fostering illegal activities such as bootlegging, gambling, prostitution, and so on. He rose to power when his former boss, Johnny Torrio, retired. At that time, the 18th Amendment had been passed, which prohibited the manufacture and sale of alcohol. When something is illegal, someone who can work beneath the sights of the government can make lots of profit, and so, many gangs worked to make money by making and selling alcohol. The gang that Capone was involved with was familiar with evading the law and made millions under his leadership. (Editors, 2018)

To stay on top of the illegal business, Capone locked down Chicago by literally wiping out his competition. His violent ways earned him the title “Public Enemy No. 1” in the news, and the FBI was aware of his name and crimes. However, he was always able to evade charges against

him because no case was strong enough to indict him. However, there was one track that Capone could not completely cover, and that was his financial track records. (Editors, 2018)

Frank Wilson is credited with the beginnings of forensic accounting, because in 1930, as a licensed CPA and a special agent in the Intelligence Unit of the Internal Revenue Service (IRS), he was put on a task force to investigate Al Capone. Career criminals are hard to track as they know how to cover up evidence. Most know not to keep records in their own names, and that was the case for Capone and his associates, as there were no bank accounts and very few financial records uncovered that could be directly connected to the gang, and most eyewitnesses refused to speak out due to Capone's violent reputation. It took scouring through around two million documents for Wilson to find evidence that Capone had not reported some payments as income to the IRS. In June 1931, Capone was indicted for federal income tax evasion, and by October of the same year, he was convicted and sentenced to prison for 11 years, plus fines. If it was not for the investigative work and testimony of Frank Wilson, it is likely that Al Capone would have terrorized Chicago and evaded proper punishment for a lot longer, and because of the vital role forensic accounting took in this case, it established its importance in the history of forensics and the accounting field. (Editors, 2018)

The Gaining of Momentum

The Effects of the Al Capone Case

The Al Capone case has had a lasting impact in America. It ushered in an era in which the IRS became more present in every-day American's lives, and many people who had lapsed in filing their income tax returns made sure to do so after Capone's conviction. The Intelligence Unit of the IRS is also well-known for its investigative prowess, and since the 1930s, it has expanded

its work to investigate tax evasion by people that are not criminals, such as ordinary people and government officials. Eventually, in 1978, the Intelligence Unit was renamed “Criminal Investigation” and investigations began to branch into money laundering and currency violations. However, tax evasion, money laundering, currency violations, and other criminal activities are not the only areas relating to money and accounting that need to be investigated, because the world is constantly changing and becoming more complex. Therefore, the need for forensic accounting work began to rise because forensic accountants have the knowledge and experience to investigate and draw conclusions while taking all relevant factors into consideration, including but not limited to detailed regulations, laws, policies, procedures, and rules, all of which is outside the scope of expertise of other types of investigators. (Editors, 2018)

A Catalyst of Sarbanes-Oxley: The Enron Scandal

The Enron Scandal, along with a handful of other major company scandals, was a huge talking point in the early 2000s. Enron Corp. was an energy company that was created by a merger in 1985, and that merger put the company into debt. However, using innovative business strategies, created by Jeffrey Skilling, the company was able to generate cash and profits and gained momentum in the energy market throughout the 1990s. Then, in December of 2001, the company declared bankruptcy, causing thousands connected with the company to lose a lot of money. (Thomas, 2002)

Some of the accounting decisions the company made may have been the start of its downfall, such as their mark-to-market (MTM) accounting method, which was uncovered during the FBI investigation. The MTM method measures the fair value of accounts that can change over time, which makes the account balances subjective and easily manipulated because the balance is based on estimation if fair value is not determinable. This allowed the company to make entries of

estimated profits as actual profits, which inflated the numbers on their financial statements. The company took advantage of the MTM method whenever they could, and if the actual revenues did not meet the estimated amount, the company would transfer the asset or project to an “off-the-books” corporation, known as a “special purposes vehicle (SPVs)” and never reported the loss. (Segal, 2021) An SPV is created as a completely separate company with its own balance sheet, which would effectively hide the debt, as was the intention and idea of Andrew Fastow. (Hayes, Special Purpose Vehicle (SPV), 2021) Arthur Anderson LLP was the accounting firm that audited Enron’s accounts, and signed off on the financial statements each year, despite the questionable accounting policies. 2001 was the downfall of the company and the scheme ended with the company declaring bankruptcy. (Segal, 2021)

This case, which deeply affected the lives of shareholders and employees of Enron, was one of the catalysts that led to the federal government passing new regulations and legislation that would increase oversight of public companies to help prevent such scandals from happening again. Sarbanes-Oxley was a major piece of legislation that continues to impact the accounting profession. (Segal, 2021)

What is Sarbanes-Oxley and How Does it Impact the Accounting Profession?

The Sarbanes-Oxley Act of 2002 is all encompassing, in that all public organizations, no matter their size, must comply with the regulations written within the bill. One of the big pieces of this act was the establishment of the Public Company Accounting Oversight Board (PCAOB). The purpose of the PCAOB is to issue auditing standards that must be followed during the audit of publicly traded companies. Using these standards, auditors gather evidence to provide reasonable assurance to stakeholders that the company under audit has fairly reported relevant financial information. The Act is arranged into eleven titles, but five sections that are discussed under those

titles are the most important in relation to accounting. They are sections 302, 401, 404, 409, and 802. (SoxLaw.com, n.d.)

Section 302 is under the third title of the act, and it relates to “Corporate Responsibility for Financial Reports.” This section seeks to ensure that the financial statements put out by public companies are accurate and fairly present their financial condition. It also places more responsibility on the signing officers, which forces them to be more involved with their company’s internal controls, because they must sign all the reports, verify that the information is true, and would be held responsible if a material misstatement was discovered. Ultimately, this took away the denial of knowledge defense that signing officers of corporations had used in previous lawsuits. (SoxLaw.com, n.d.)

Section 401 is under the fourth title of the act, and it relates to “Disclosures in Periodic Reports.” This section seeks to ensure that the financial reports published by public companies are accurate and do not contain any incorrect statements. It also requires that the financial statements include all material liabilities/obligations/transactions, so that off-balance sheet items do not stay hidden and ruin the material aspects of the financial statements, such as net profit and total assets and liabilities. Most importantly, this section clearly states that public companies must adhere to Generally Accepting Accounting Principles (GAAP), which are written and codified by the Financial Accounting Standards Board (FASB). (SoxLaw.com, n.d.)

Section 404 is under the fourth title of the act, and it relates to “Management Assessment of Internal Controls.” The main purpose of this section is to ensure that public companies maintain effective and efficient internal controls to limit the risk of misstatements on the financial statements. It placed more responsibility on the officers and accountants of public companies to ensure that internal controls are maintained and up to date. (SoxLaw.com, n.d.)

Section 409, also under the fourth title, relates to “Real Time Issuer Disclosures.” The entirety of this section makes it pertinent that public companies disclose any material/significant changes in their financial condition or operations as they arise. This is to ensure that stakeholders can make informed decisions in relation to the company. Also, the information that is released must be easy to understand, known by many to mean “written in plain English, with limited technical terms.” (SoxLaw.com, n.d.)

Section 802, relating to “Criminal Penalties for Altering Document,” imposes fines and/or imprisonment for “altering, destroying, mutilating, concealing, falsifying records, documents or tangible objects with the intent to obstruct, impede or influence a legal investigation.” This raised the stakes of being a Chief Officer in a public company, as well as any accountant that handles a public company’s auditing and financial reporting. (SoxLaw.com, n.d.)

Overall, the Sarbanes-Oxley Act of 2002 emphasized the importance of accurate financial reporting and placed the burden on the Chief Officers and accountants of public companies to ensure that the financial statements issued by public companies are accurate so that stakeholders can make informed decisions. By issuing such harsh regulations, this act intends to improve the quality and accuracy of financial reporting, as it provides an incentive for signing/chief officers and accountants to do their jobs properly. However, despite these harsh regulations and an all-encompassing oversight board, fraud can still slip through, and that is where forensic accountants can help put the pieces of the puzzle together. (SoxLaw.com, n.d.)

The Present

Becoming a Forensic Accountant

Skills

A professional in the accounting field states that communication and a love for learning is key, because when it comes to working in this field, there is usually a lot of teamwork/collaboration and with the constant changes in laws and standards, a person hoping to enter this field should be dedicated and willing to learn throughout their professional career. Professionals that practice forensic accounting generally agree that natural curiosity, the ability to recognize patterns (both in data and in human psychology), and analytical skills are what will bring you far in this niche of the accounting profession. These skills are important because within an investigation, a forensic accountant must always be on their toes and want to get to the bottom of whatever the case may be. Being able to draw conclusions based on analysis of data, as well as body language during interviews, can raise red flags that push the investigation in the way that it needs to go in order to uncover the truth (Cassiello, 2022). (Levy, 2022) (Unger, 2022)

Education

Due to the nature of the work, it is important that forensic accountants have a base knowledge of the skills that professionals need in the work environment. The first step in gaining that knowledge and becoming a forensic accountant is typically done by obtaining a degree. According to the Association of Certified Fraud Examiners, forensic accountants must have a bachelor's or master's degree in forensic accounting, accounting, finance, or some other related field. A bonus would be to gain an education in criminal justice or law enforcement because that

would give an individual a deeper understanding of behaviors and motives that are typically present in those that commit crime and the criminal justice system. However, that education is not a requirement. (ACFE, n.d.) (University, n.d.)

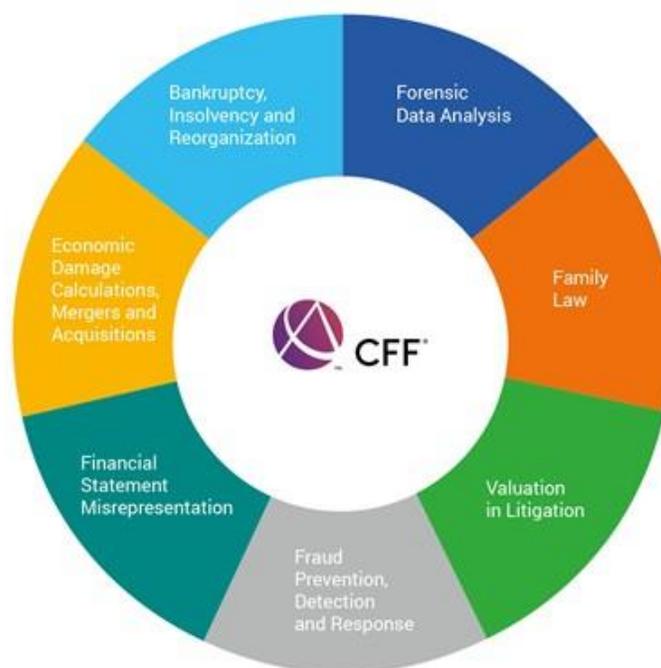
Certifications and Licenses

After completing the required education, it is also highly encouraged that hopeful forensic accountants hold a relevant professional license or certification, because such shows their commitment to continuous skill development and a deep understanding of important practical skills and concepts. Some of the licenses and certifications that a forensic accountant can pursue to differentiate themselves include: the Certified Public Accountant (CPA) license, which is highly recommended for anyone practicing in the accounting profession, the Certified in Financial Forensics (CFF) credential, the Accredited in Business Valuation (ABV) credential, the Certified Fraud Examiner (CFE) credential, the Certified Valuation Analyst (CVA) credential, and/or the Chartered Accountant (CA) credential. Holding one or more of these licenses and/or credentials may make starting a career or moving forward in the profession of forensic accounting more successful. (AccountingEdu.org, 2021)

The Cases a Forensic Accountant Handles

Forensic accounting is an area of specialization in the accounting field, but even so, the specialization can be broken down even further. According to the AICPA, “forensic accounting services generally involve the application of specialized knowledge and investigative skills possessed by CPAs to collect, analyze, and evaluate evidential matter and to interpret and communicate findings in the courtroom, boardroom, or other legal or administrative venue.” (AICPA, n.d.)

From the definition given by the AICPA, a distinction can be made in the role that a forensic accountant can fill, either individually or simultaneously: litigation support and investigation. Litigation support generally involves being an expert witness in a lawsuit, in which the forensic accountant must analyze documentation to understand the case, identify areas of financial loss that can support or refute a claim in court, support the lawyers in cross-examination question preparation, and assist in negotiations and settlements. Complementary to litigation support is the investigation, in which forensic accountants use various methods of data collection and testing to reconstruct financial records to determine if any fraud or illegal financial activities have occurred and been covered up. These specialists are sometimes referred to as fraud auditors or fraud examiners and they often work directly with law enforcement. However, many investigative cases relate to civil disputes rather than illegal activities. No matter which role the forensic accountant fills, if a distinction can even be made (as a case can fall or lead into both categories), it is clear that the sole purpose of their work is to collect information relating to the finances, accounting, and internal controls of whatever entity is being examined to determine if anything illegal is occurring or if anything is abnormal in such circumstances, as their expertise and experience allows them to track such information, which can be hidden in various ways under certain accounting procedures and policies. (AccountingEdu.org, 2021)



The AICPA gives a diagram (above) of the different categories of specialization within the forensic accounting profession. (AICPA, n.d.)

However, an accounting firm that offers forensic accounting services may not cover each of the seven categories and might elect to focus on handling cases within only one specific category or a smaller handful of categories. Below is an extended outline, first broken down under the two ends of the spectrum, litigation support and investigation, then further broken down to the umbrella categories listed in the AICPA diagram, and finally to some of the specific services included under the “forensic accounting” descriptor. The specific services were placed under the AICPA categories by personal logical choice, however it is understood that for a majority of the cases, they could fall under multiple categories (such as white-collar crimes, which could be dealt with under litigation support or investigation, as both likely happen in order to handle the issue properly).

Litigation Support

Family Law

Family dispute matters (Focused on Solving Complex Matters - How Citrin Cooperman Can Help, n.d.) – There are many issues/legal cases that are handled in court that fall under this category, including but not limited to divorce, paternity and child custody, protection orders against domestic violence, name changes, guardianship, termination of parental rights and adoptions, juvenile matters, and emancipation and approval of underage marriages. (Family Law Self-Help Center, n.d.) For most of these cases, the work of a forensic accountant is unnecessary. However, it is very common for a forensic accountant to be called into a divorce case, because the biggest issue in those rulings relate to the determination of how to divide the assets and liabilities, if there were shared accounts. Forensic accountants are often called in to investigate and find assets and liabilities that may have been hidden and give a true and constructive assessment of the actual financial standing of each of the partners. Professionals can prepare such reports, often called a Net-Worth Statement, by looking into each partners' bank statements, tax returns, receipts, and any other documentation to find out the truth about the financial position of the couple and determine a reasonable split and if a child is involved, help establish a fair child support payment plan. (Gottlieb, 2015) According to Gary Cassiello, more than 50% of the cases he and his firm handle are divorces. (Cassiello, 2022)

Value in Litigation

Shareholder disputes (Focused on Solving Complex Matters - How Citrin Cooperman Can Help, n.d.) – Shareholders, by definition, are the owners of a corporation, because they invest in the stocks and obtain a financial interest. Due to the financial interest, several disputes can arise, whether they are among the shareholders or between the shareholder(s) and the company. The

disputes, in short terms, are often the result of a breach of agreement, disagreements over management decisions, breach of fiduciary duty, conflicts of interest, lack of dividend distribution, and/or concern over possible illegal conduct. (Long, 2020) In these types of disputes, forensic accountants can be called in to investigate the financial situation of the company, which can uncover fraudulent transactions and other forms of malpractice, using many of the techniques that will be discussed later in the paper, that could either corroborate or refute the claims being brought against the company. (FAC CPA, n.d.)

Partner disputes (Focused on Solving Complex Matters - How Citrin Cooperman Can Help, n.d.) – Much like shareholder disputes, partnership disputes can arise for handful of reasons, including but not limited to, a breach of fiduciary duty, disagreements about business decisions, failure to properly divide responsibilities, and the committing of a white-collar crime. (Legal Blogs - Most Common Reasons For Partnership Disputes, n.d.) (Your Guide to Understanding Partnership Disputes, n.d.) Forensic accountants are typically called into these cases when money is the forefront of the dispute, such as instances in which a partner believes the other is embezzling money or committing some form of white-collar crime. In those cases, forensic accountants can be called in to investigate the books of the partnership to determine if they are fairly presented, and if not, to trace and recover the assets. (Brown & Charbonneau, LLP, n.d.) According to Gary Cassiello and Rob Unger, these types of cases are quite common for their firm to handle. (Cassiello, 2022) (Unger, 2022)

Franchise disputes (Forensic Services, n.d.) – Franchise disputes often arise over a breach of contract of the franchise agreement, such as when the franchisee misuses the franchisor's intellectual property, the franchisee doesn't source materials from a preferred supplier, and the

franchisor isn't providing enough support to the franchisee, all instances that can be covered and dealt with in a comprehensive franchise agreement. (Common Franchise Disputes, n.d.)

For all the above *disputes*, a forensic accountant's investigation and professional report can help the parties and their legal teams determine a fair and reasonable settlement, whether that be done in a court of law or in the course of meetings.

Insurance claim analysis (Focused on Solving Complex Matters - How Citrin Cooperman Can Help, n.d.)– According to Investopedia, an insurance claim is “a formal request by a policyholder to an insurance company for coverage or compensation for a covered loss or policy event,” and insurance companies can either validate or deny the claim. (Hayes & Battle, Insurance Claim, 2021) In performing an insurance claim analysis, the role of the forensic accountant is to investigate the information given and apply accounting principles to identify what the facts are and put a correct value on the loss that is being claimed. This role is important, because in complex claims or ones in which the policyholder disagrees with the insurance adjuster, the forensic accountant can give an outside, independent, and professional view on the circumstances and give a fair report on their findings. (Forensic accounting: why it's vital and the role it plays in the insurance world, 2018)

White collar criminal matters (Focused on Solving Complex Matters - How Citrin Cooperman Can Help, n.d.) – According to the FBI, a “white-collar crime” is “characterized by deceit, concealment, or violation of trust and is not dependent on the application or threat of physical force or violence. The motivation behind these crimes is financial – to obtain or avoid losing money, property, or services or to secure a personal or business advantage.” Such crimes can happen in any business, which in turn can hurt investors, employees, owners, other individuals, and the government. (White-Collar Crime, n.d.) In working to unravel these matters, forensic

accountants will try to identify and unwind schemes and determine who was involved in setting up those schemes. By working through the investigation with an expert in accounting, a lawyer can present evidence that those experts uncovered to seek the highest level of punishment or ramification possible against the defendant. (White Collar Investigation, n.d.) However, forensic accountants can also work with companies to help deter such crimes by helping to establish effective internal controls.

Provide expert witness testimony (Forensic Accounting and Investigation, n.d.) – Expert witness testimony was and will continue to be discussed and/or referenced in all the descriptions of different cases in which forensic accountants often offer their services, because many cases are or can be handled in a court of law. By calling in a forensic accountant to investigate the situation and gather evidence that is admissible in court, it provides more credibility to a person or company's case because they are being backed by professionals, who have credentials and the experience to know and understand what they found and present it to a jury and/or judge.

Provide litigation support and dispute advisory (Forensic Accounting and Investigation, n.d.) – However, forensic accountants can do much more than just be called to the stand during a trial or hearing. They can also work behind the scenes with lawyers to handle the disputes, by advising lawyers and their clients about what a fair settlement might be, and that could potentially help them resolve the case before it reaches trial, which will save them time and money. If a settlement cannot be reached and the case does go to trial, the forensic accountant can help the lawyers prepare their arguments, by suggesting questions the lawyer could ask during their cross-examination, if relevant to a case, that would provide evidence to support their investigation and uncover the truth of the situation.

Economic Damage Calculations, Mergers and Acquisitions

Business valuation (Forensic & Valuation, n.d.) – Business valuation is defined as “a general process of determining the economic value of a whole business or company unit.” This forensic accounting service is most typically performed when the business is trying to determine a fair selling price, establish fair and clear values in partnerships, for taxation purposes, and sometimes in divorce cases in which the business was shared by the married couple. (Hayes & Kindness, What Is a Business Valuation?, 2021) In cases in which there is a need to place an economic value on a business, it could either be for litigation purposes, such as if damages are involved, or it can be for other reasons, such as those listed above. Either way, forensic accountants have a process that allows them to “identify, explain, contradict and verify the financial data presented.” There are three common methods in which valuations can be done, including the asset approach, the income approach, or the market approach. The asset approach determines a company’s value by determining the fair market value of the assets minus the liabilities that the company owes. The income approach assumes that the value of the business is the present value of the future cash flows and determining those cash flows involves a deeper understanding of accounting and finance approaches that a forensic accountant would possess. The market approach determines value by looking at recent sales of businesses that are similar in nature, then adjusting for any significant differences, such as size, quantity, or quality. Based on the results obtained from the selected approach, the forensic accountant can place a fair value on the business. (The Crossroads of Business Valuation and Forensic Accounting, 2014) Gary Cassiello stated that he has handled due diligence cases in relation to mergers and acquisitions at his local firm. (Cassiello, 2022)

Post-acquisition disputes (Focused on Solving Complex Matters - How Citrin Cooperman Can Help, n.d.)– Acquisition of a business is a complex accounting and financial event, which in

turn can lead to disputes over claims of “breach in representations and warranties, earn-out provisions, post close purchase price adjustments, and more.” In such disputes, forensic accountants, who have the knowledge and experience to understand the processes that are involved during acquisitions, can provide objective and unbiased input. (Postacquisition Disputes, n.d.) Forensic accountants will often perform a business valuation to determine what the true financial standing of the companies were before the acquisition and provide their findings to both sides so they can try and reach a fair settlement. (Litvak, Mathieu, & Kennedy, 2010)

Business interruption [lost profit] (Forensic & Valuation, n.d.) – Business interruption is generally known as a loss of income/profit after a disaster affects a business. Such disasters could include theft, arson, falling objects, or natural disasters like wind and lightning, (What Is Business Interruption Insurance?, 2021) but also could result due to a breach of contract or an infringement on intellectual property. Lost profits are considered an economic damage, and valuing that damage is important for a case in which the affected business is looking to receive compensation from either the damaging party or from their insurance provider. Forensic accountants are called in to determine that value, and they do so by first interviewing people that have a close connection with the business, to gain an understanding of all factors that would impact sales projections. With that information, they can reasonably predict how much profits were lost during the determined period, which can be based on different factors depending on the circumstances of the damage. Then, forensic accountants also take into consideration that because the business was not operating during a specified period due to the interruption, there was a savings of costs, and thus, they need to take that into consideration when calculating their results on the amount of damage that was caused. (Bogdan, n.d.)

Intellectual property disputes (Focused on Solving Complex Matters - How Citrin Cooperman Can Help, n.d.) – There are four types of intellectual property: copyrights (protect creative works), trademarks (protect words or any distinguish mark usually used to mark goods as being from a specific company), patents (protect inventions), and trade secrets (protect secrets about the inner workings of business, very important in research and development [R&D], and often enforced using agreements/contracts). Disputes arise when an outside party infringes on the owner's right to those legal protections. (Kaminsky, 2021) Forensic accountants can provide an objective assessment on the economic damages related to such infringements by working to identify the financial information and business records that would support the notions of loss put forth by the plaintiff, including that they have the right to claim legal protection for the intellectual property. They would also be able to evaluate other factors that could have played a part in economic damages, such as product demand, alternative products, and sales capacity, and evaluate reasonable royalty that the plaintiff should receive for the infringement. (Intellectual Property, n.d.)

Breach of contract (Focused on Solving Complex Matters - How Citrin Cooperman Can Help, n.d.) – When a person claims that someone is in breach of contract, they are implying that the other person has violated one or more of the terms and conditions that the two parties had agreed upon contractually (assuming that the contract was formed appropriately in the eyes of the legal system). (Kenton, Potters, & Li, Breach of Contract, 2021) In these cases, the forensic accountant would come in to analyze any relevant financial and other information to determine if damages do exist, and if so, the extent of which they exist. (Lewis, 2020)

Environmental cost claims (Forensic Services, n.d.) – The world is ever-changing and as science becomes more advanced, we are more aware of how our decisions and actions impact the

environment around us. Therefore, more people are aware of global warming and the harm that certain activities are causing the environment. As such, governments around the world have been passing legislation to try to regulate those harmful activities, many of which businesses are involved in to produce products to make a profit. Given these changes, it comes of no surprise that environmental costs have increased for most companies, and some companies may have even violated the laws set forth, and thus, likely had to pay fines and costs related to cleaning up their “mess.” Such costs are hard to calculate, because there is no decisive or precise way to put a value on the amount of harm specific activities cause the environment. Given that, forensic accountants can be brought in to verify and reconcile calculations, by reviewing the methodology and approach through the supporting documentation and giving an opinion on the objectivity of the cost calculations. (Environmental Damage Claims, n.d.)

Personal economic damages (Forensic & Valuation, n.d.) – Personal economic damages are rewarded to an individual, or a beneficiary if the individual died, for the financial losses that resulted from a specific incident.

Loss of fringe benefits and loss of retirement benefits – Fringe benefits are “perks that employers give to their employees above and beyond any financial compensation.” (Horton & Clemon, 2021) Retirement benefits are a form of fringe benefits in which employers contribute to a retirement plan on the behalf of the employee that the employee can withdraw from after he or she retires. When an employee loses either all their fringe benefits or just the retirement benefits, forensic accountants are called in to determine a value that can be placed on the loss by comparing the benefit that is to be provided as of the current situation against the benefit that would have been provided if the circumstances that led to the loss never occurred. From there a forensic accountant

can accurately calculate the value of damages that the employee should be entitled to. (Amodio C. S., 2018)

Past and future income loss – Income loss can occur for a wide variety of reasons, for example, being involved in an incident that causes physical injury that prevents an individual from performing their professional responsibilities. According to the law, an individual will only be able to recover damages if the incident caused them to miss out on income or it will affect their ability to earn income in the future. If that is the case, then the person or entity responsible for the cause of the injury will have to provide compensation for that loss. (Blog - Past and Future Losses of Income, n.d.) To determine the amount of income loss, a forensic accountant would calculate the amount of earnings the plaintiff would have achieved if the incident never happened. This can be determined by looking through a variety of documents, such as employment history, income tax returns, paystubs, employee benefit guides, and other agreements related to compensation. Then, if the individual was able to continue working in the same capacity, the forensic accountant would use similar documentation to forecast wages and benefits that the individual will be receiving over their career. If the individual was not able to continue working at the same capacity, then residual income needs to be considered, in that the forensic accountant will compute the individual's earning capacity, with the help of other professionals who can give insight on the individual's medical records. No matter the case, the professional also considers if the change in working capacity allowed the individual to avoid any costs that they only incurred due to having to work. If so, that would reduce the amount of loss they could claim in court. (Ducey, n.d.)

Present value of future medical care – The present value of future medical care is “the value in today's dollars of the amount of money that [an individual] could earn in the future if [they invest in their] award.” (Swope & Rodante, 2013) There are a lot of components in litigation

surrounding damages related to future medical care, but the role of the forensic accountant is to analyze the estimated medical costs by projecting such costs into the future, taking inflating into consideration, and then discounting the costs to present value, to get an accurate value of the damages that should be awarded. (Amodio C. S., 2021)

No matter the case of *damages* that a forensic accountant is called to, the financial records are an important piece of the puzzle, and these experts not only understand how financial records are put together and presented, but they also have the eye to uncover any types of fraud or misstatements that would impact the determination of the correct value to place on the business or damages. Given the information that the forensic accountants collect and report, lawyers in court can present evidence that was calculated by someone whose job is to remain as objective and unbiased as possible, under reasonable conditions and set safeguards, which can support their case's validity.

Investigation

Fraud Prevention, Detection, and Response

Fraud prevention is a strategy that is implemented before any type of fraud is attempted, if ever attempted, and the goal is to reduce the risk of fraud occurring in the future that would cause financial and reputational damage. *Fraud detection*, on the other hand, takes place amid a fraud attempt, in which the goal is to uncover the fraud and develop a *response* to end the attempt in a way that causes the least amount of damage. (Fraud Prevention, n.d.)

Before getting into cases that involve fraud, it should be established that to develop prevention strategies, or start a detection investigation and response, a forensic accountant needs to have an understanding of the drivers of fraud. Many have heard of the fraud triangle, which includes pressure (there is some need to commit fraud, such as greed or financial motives),

opportunity (there is a way that the person can commit fraud, possibly by having access to the necessary software, or maybe knowing that internal controls are weak), and rationalization (the person has their own justification for committing the crime). However, some claim that it should be a fraud hexagon, to include three additional drivers: competence (the person's ability to outplay internal controls and keep their composure), arrogance (the person has a superiority complex), and undeterred (the person has a disregard for the potential consequences of their actions). By understanding these six drivers, a forensic accountant will have a general idea of the type of person behind the crimes and what they need to look for during their investigation. (Nigrini, 2020)

Complex security valuation (Forensic & Valuation, n.d.) – For most people, when they think of “securities,” they may immediately think of their IRA, Roth IRA, or 401(k) plan, which are traditional retirement plans that invest in public securities such as CDs, stocks, and bonds, as well as other investments. (McBride, 2021) However, for some businesses, security valuation is a lot more complex, because the business makes a wide variety of investments, which can make it hard to place a value on it. However, valuing and reporting a fair amount is important because securities are highly regulated and misrepresenting them on financial statements and tax records is a crime. Therefore, forensic accountants can work with such businesses to help clients understand, structure, and value those securities for reporting, tax, transaction, and strategic purposes. (Mahajan, 2020)

Healthcare, insurance and mortgage fraud (Focused on Solving Complex Matters - How Citrin Cooperman Can Help, n.d.) – Healthcare, insurance, and mortgage fraud are categorized together because similar actions are taken to commit such fraud, with some slight differences. Healthcare fraud typically involves the filing of dishonest claims to make a profit. (Healthcare Fraud, n.d.) Insurance fraud is very similar in that it involves performing acts with the intent to

receive an illegitimate payment from an insurance company. (Insurance fraud, n.d.) Mortgage fraud involves a “material misstatement, misrepresentation, or omission” as it relates to a mortgage loan, and that material misstatement, misrepresentation, or omission is relied upon by the lender. (Financial Institution/Mortgage Fraud, n.d.) No matter the phrasing, all the above types of fraud involve being dishonest about a person or entity’s situation, whether it be financial, medical, or otherwise, in order to benefit financially from those that give money to those who need it. With these types of fraud, it is best to bring in forensic accountants early on to set up proactive measures to detect and prevent fraud before it reaches indescribable levels that warrant an investigation, involving questionings and detailed reviews, testing, and analysis of documentation, such as medical bills, claims, and research into real medical costs. (Healthcare, n.d.)

Embezzlements (Focused on Solving Complex Matters - How Citrin Cooperman Can Help, n.d.) – Embezzlement can be defined as a crime in which a person or entity purposely stole, retained, or misused funds and/or assets that were entrusted to them by another individual or entity. (Hayes, Embezzlement, 2021) This type of fraud is unique because a forensic accountant does not need to follow a trail to determine who ended up with the money and where it went from there, as the suspect is a person who did not have to steal the funds and/or assets. Rather, the professional must go through the investigation steps by first understanding the case the he or she is about to conduct, by interviewing the client and understanding the circumstances that led up to this situation, including what the funds and/or assets were meant to be used for. Then, the forensic accountant must gather evidence to prove that the funds and/or assets were not used as specified by analyzing financial records, performing audits, and speaking with the suspect. (Culpepper, 2018)

IRS/state income tax fraud (Focused on Solving Complex Matters - How Citrin Cooperman Can Help, n.d.) – Tax fraud involves an individual or entity willingly and intentionally providing false information on a tax return, whether it be for federal or state, to either limit the amount of tax liability they owe or to claim a refund, though the majority are looking to receive money that isn't owed to them. Individuals or entities commit this kind of fraud by claiming deductions that they don't qualify for, claiming personal expenses as business expenses to reduce business net income, filing under a false Social Security number (identity theft), providing tax preparers with falsified documents (such as Form W-2), and/or not reporting income, whether it be taxable or nontaxable. (Chen & Uradu, 2020) (Tax Refund Fraud, n.d.) In such cases, forensic accountants are a vital member in the investigation, because they have the knowledge of terms and resources laid out by the IRS and other governmental agencies, as well as experience dealing with IRS agents in general. Therefore, calling in such professionals to collect and analyze appropriate and sufficient evidence in correspondence to the facts of the case and the relevant requirements and regulations and report on their findings in plain English brings clarity to a situation. (Foodman, How a Forensic Accountant Can Help Attorneys in Tax Fraud Cases, 2021)

Ponzi and pyramid scheme investigations (Forensic Accounting and Investigation, n.d.) / *Undercovering fraudulent activities* (Focused on Solving Complex Matters - How Citrin Cooperman Can Help, n.d.) – Fraud is considered the “crime of using dishonest methods to take something valuable from another person” (fraud, n.d.), while misconduct is a “deliberate violation of a law or standard.” (misconduct, n.d.) There are many times of fraud, of which the FBI lists about thirty-four, two of which are constantly associated with forensic accounting: Ponzi schemes and pyramid schemes. A “Ponzi” scheme promises “high financial returns or dividends not available through traditional investments,” but the funds from the unsuspecting investors are

actually used to pay “dividends” to the initial investors, and it becomes a vicious cycle. A pyramid scheme is similar to a Ponzi scheme, but in this scenario, the unsuspecting investors are also convinced to recruit more people by unintentionally paying recruitment commissions. (Common Scams and Crimes, n.d.) It is important to bring in a forensic accountant if there is a suspicion of fraudulent activity because these schemes are usually hard to detect since it comes with a lot of demanding work that is highly technical. Experts will be able to “follow the money” better than someone who would not know where to start looking. Forensic accountants would be able to work out how the scheme was set up by going through all the relevant banking records and constructing a cash flow statement to show how the funds have flowed into the scammer’s accounts. Allowing the forensic accountant to focus on uncovering the tricky details in turn gives the lawyers the concrete details they need to provide the court to put an end to the huge scam. (Sawhney, n.d.)

Financial Statement Misrepresentation

Audit and special committee investigations (Focused on Solving Complex Matters - How Citrin Cooperman Can Help, n.d.) / *Internal investigations* (Forensic Services, n.d.) / *Board investigations* (Forensic & Valuation, n.d.) – Audit and special committees are internal to a company and conduct internal investigations in order to uncover and remedy any wrongdoings, though in almost all cases, outside experts such as lawyers and forensic accountants are retained as advisors to assist them in the investigation, if needed. (Markel & Murray, 2017) Forensic accountants understand laws and regulations in relation to accounting, most importantly in the corporate world is SOX. As licensed professionals, forensic accountants are aware of the responsibilities that executives have in relation to maintaining and reporting accurate accounting/financial information, as well as the responsibilities that auditors have. However, they also have comprehensive knowledge of proper accounting practices and how fraud can be hidden,

through training and experience, and as such, can be very helpful to committees if they don't know where to start or look, or just need any advice related to accounting procedures for their investigation.

Whistleblower investigations (Focused on Solving Complex Matters - How Citrin Cooperman Can Help, n.d.) – A whistleblower is a person who obtains and reports insider knowledge about illegal activities taking place within an organization. The whistleblower can range from employees to clients to any other third party. People that come forward with such information are protected under law and various programs that ensure the law is upheld. The two major laws that protect whistleblowers are the Sarbanes-Oxley Act and the Whistleblower Protection Act, which are enforced by the Occupational Safety and Health Administration (OSHA) and the Securities and Exchange Commission (SEC). (Kenton & Beer, What Is a Whistleblower?, 2021) During these investigations, typically conducted by OSHA, forensic accountants will come into play if the allegation involves any potential for financial crime. If that is the case, the professional can dig through the records of the company to understand their accounting systems and then determine what happened, what the extent of the loss is, and if that loss can be recovered. (Whistleblower Allegations: When Should You Bring in an Independent Forensic Accounting Firm?, 2019)

Asset identification, tracing, and recovery (Forensic Services, n.d.) – These services are self-explanatory, as asset identification is the process of using unique descriptors and information to identify the asset, while asset tracing involves identifying and understanding how an asset could have been disguised and/or dispersed and then following the transactions to locate the asset, if it is a physical asset, and finally, asset recovery is all about getting the asset back, if necessary and possible. All these steps require complicated and detailed work that is best done by a forensic

accountant who knows the regulatory laws involved with tracing assets and how it can be hidden within the financial statements and company accounts. It is also typical for these professionals to have acquaintances in the legal system that can help with recovery if any legal issues that arise. (Hopkins, 2020)

Asset misappropriation (Forensic Services, n.d.) – According to the ACFE, misappropriation “involves the misuse of any company asset for personal gain.” (Wells, 2005) This type of fraud can be committed in several ways, including but not limited to stealing cash, stealing inventory, and/or using a company resource outside of its intended use. There are a handful of red flags that can detect potential misappropriation, and it is the job of the forensic accountant to follow the trails that signaled the red flag to uncover what the fraud was, who was committing it, and recommend ways to implement internal controls to catch similar crimes sooner in the future. (Foodman, Asset misappropriation - investigating people and money?, 2016) For Rob Unger, this is another category of cases that he handles quite regularly. (Unger, 2022)

Transaction and record tracing (Fraud Investigations, n.d.) – Financial transactions that are executed by a company are recorded in a permanent accounting system, known typically as “bookkeeping,” which is relevant for audit purposes to provide evidence of any assertions claimed on the financial statements, as well as performing other tests relevant to collecting audit evidence. In this case, such professionals would trace financial records back to specific transactions to verify that such an account and transaction occurred and was not recorded just to mislead the users of the financial statements.

Intangible asset valuation (Forensic & Valuation, n.d.) – Intangible assets, such as intellectual property and goodwill, are notorious for being more difficult to place a value on than tangible assets. This is due to the nature of intangible assets, in that they are unique and thus, there

is nothing to compare them to in order to assess a fair value. Given that, valuation methods had to be constructed to determine a value, and the use of a specific method is up to the accountant or whoever is doing the valuation, and that involves good professional judgement. The most common valuation methods include the relief from royalty method (RRM), the with and without method (WWM), the multi-period excess earnings method (MPEEM), real option pricing, and replacement cost method less obsolescence. RRM is often used to value trademarks and computer software, as it calculates the value of such assets based on hypothetical royalty rates the company would have had to pay if they did not own the asset. WWM determines intangible assets value by taking the difference between a discounted cash flow schedule for the business with the asset and a discounted cash flow schedule for the business without the asset. MPEEM takes the cash flows that can be associated with a specific intangible and discounts the cash flows to the present value. This method is used when the intangible asset makes up most of the company's value, based on the nature of the business. Real option pricing is used when intangibles do not generate cash, but have the potential to in the future, and in most cases, this method is tied to research and development (R&D) work as it relates to undeveloped patents. Finally, the replacement cost method less obsolescence method relies heavily on being able to determine how much it would cost if the company had to start the process of developing and/or acquiring the intangible asset all over again, and then take out obsolescence, which is the same concept as depreciation. (Group, 2021) Forensic accountants have the knowledge and experience to perform the necessary calculations that provide an accurate value on intangible assets.

Internal controls and anti-corruption risk assessments (Focused on Solving Complex Matters - How Citrin Cooperman Can Help, n.d.) – Internal controls are “a process, effected by an entity's board of directors, management and other personnel, designed to provide reasonable

assurance: that information is reliable, accurate and timely; of compliance with applicable laws, regulations, contracts, policies and procedures; [and] of the reliability of financial reporting. [They] are intended to prevent errors and irregularities, identify problems, and ensure that corrective action is taken.” (Internal Controls, n.d.) Auditors typically evaluate the functionality and effectiveness of a company’s internal controls during their audits; however, forensic accountants can take a deeper dive into the internal control process to assess a company’s exposure and help create a proactive internal control system that would help mitigate fraud risks. Also, a forensic accountant would be able to conduct a thorough investigation to identify and quantify losses associated with a breach of such controls. (Internal Control & Forensic Accounting, n.d.)

When it comes to anti-corruption risk assessments, these assessments are done to evaluate the effectiveness of a company’s anti-bribery and corruption (ABC) compliance programs, which are designed to identify and address corruption risks that may occur due to business activities, work in specific industries or geographic locations, and/or the client a business takes on. (Anticorruption and Anti-Bribery Compliance Program, n.d.) These programs are important in the United States because there are laws that prohibit the bribery of public officials with the goal to benefit financially or in some other way, and those laws apply to activities outside of the U.S. as well, if the company’s home base is in the U.S. These laws have placed scrutiny on publicly traded companies that operate internationally, and as such, it is important that such programs and policies are in place to avoid having to clean up a huge reputational mess. When assessing ABC programs, forensic accountants mainly focus on transaction record review, to identify outliers that may be the result of corruption, analyze the company’s distribution channels to identify if there are more opportunities for corrupt activities to occur, evaluate the effectiveness of internal controls, and

understand the history and present state of the client to get a background built on what might cause potential corruption. (Typical forensic accountant roles in anti-corruption due diligence, 2013)

Regulatory compliance (Forensic Accounting and Investigation, n.d.) – Regulatory compliance is all about a set of procedures that a company must follow to stay in line with the laws that have jurisdiction over their decisions and actions. Forensic accountants understand how to work through a lot of digital data and analyze the information within it to help companies set up an effective system to stay within the bounds of the law, and in cases that involve the company being litigated, can communicate properly and independently about how the company has set up procedures that are effective in applying the laws to their company. (Regulatory inquires and investigations) (Gordon, McCurry, & Singh, n.d.)

If it is not abundantly clear from the discussions above relating to *financial statement investigations*, forensic accountants have the knowledge and experience to view financial records and analyze industries, markets, and regulations to perform necessary work, including calculations if applicable, that can lead to a relatively accurate report that describes their findings in relation to the issue being investigated. Much of the work is typically described as “following the money and seeing where it goes,” which is an accurate way to describe a lot of the work that a forensic accountant does, because money can tell a very interesting and accurate story.

Bankruptcy, Insolvency, and Reorganization

According to the United States Court System, *bankruptcy* is a legal process that “helps people who can no longer pay their debts get a fresh start by liquidating assets to pay their debts or by creating a repayment plan. Bankruptcy laws also protect financially troubled businesses.” (Bankruptcy, n.d.) Businesses will typically file for bankruptcy when they are insolvent, in that their liabilities (what they owe) exceed their assets (what they have), which simply means that they

cannot pay off their debts. Whether an individual or a business, there are four common forms of fraud relating the bankruptcy: concealment of assets, intentional falsification of forms, multiple filings, and bribery. The first form is quite simple, in that the debtor will attempt to hide assets that the creditors would have a right to liquidate under the law. This can be done in a multitude of ways, including not disclosing the asset or transferring undisclosed assets to friends, family, or associates before it is discovered by the creditors. Intentional falsification is also quite a simple concept, in that the debtor might include false information or just generally fail to provide the necessary documentation for the court proceeding. Multiple filings occur when the debtor files for bankruptcy multiple times using different information or by filing in different jurisdictions. Finally, bribes are paid by the debtor or in the name of the debtor to a court trustee with the goal of making sure the court proceedings result in a more beneficial outcome for the debtor rather than the creditor. (Bankruptcy fraud, n.d.)

No matter the form, the role of the forensic accountant is to understand the facts and circumstances that resulted in the bankruptcy and look for indications of fraud or any suspicious activities. To do so for a business, professionals review the entity's internal control environment before delving deeper into financial records and business transactions, to give themselves a jumping point for their investigation that involves more than just professional skepticism, as they are very clearly looking for anomalies that could be the result of fraud. By doing this work, the forensic accountant works to retell the story up to the filing, validate the books and records, and ensure that assets were not misappropriated or concealed, so that all stakeholders understand what lead up to the filing, and the investigation could help the business work through the proceedings and restructure to continue operations in a more solvent capacity. (Saitta, Perez, & Spinella, 2021)

The process is slightly different for individual's cases, which can be viewed from the financial professional's perspective, who is owed money, or the debtor, but it is not likely that a true debtor that cannot pay back his or her debts will hire a forensic accountant, though if he or she did, it would be done so that he or she could show that he or she hasn't concealed any assets and that he or she truly cannot pay back the money. For the financial professional, the forensic accountant is typically called in to trace funds, conduct reviews, and identify and recover assets. These steps would be used to prove in court that the debtor can afford to pay back the money and to go a step further, provide substantial evidence that strengthens the position of the creditor. (How Can a Forensic Accountant Help With Your Debt Collection Duties?, 2021)

Forensic Digital Analytics

When going through the above-mentioned cases, forensic accountants, in our digital world, typically use digital sources and methods to conduct their investigations and report their findings. Some of the below discussion relates to how forensic accountants might uncover important data/information, organize that information, and use it in conducting their tests.

E-discovery (Focused on Solving Complex Matters - How Citrin Cooperman Can Help, n.d.) – E-discovery is short for electronic discovery, and it involves the investigation of electronically stored information (ESI). Anything that is on a computer, phone, tablet, smartwatch, etc. has ESI and could be potential evidence in a court case. (What is eDiscovery?, n.d.) As the world has evolved, individuals, businesses, and other entities have begun to rely more heavily on electronics to make their lives and work simpler. This change has made the work of forensic accountants more streamlined, because a lot of the financial records that they need to analyze are digital, meaning there are programs and software systems that can make investigating such

documents more efficient, and specific codes and equations can allow software to detect what the forensic accountant is looking for, depending on the case.

Data management (Forensic Litigation and Trial Support, n.d.) – Data management is “the practice of managing data as a valuable resource to unlock its potential for an organization. [It] requires having... methods to access, integrate, cleanse, govern, store, and prepare data for analytics.” (Data Management - What It Is and Why It Matters, n.d.) Such management can allow forensic accountants to acquire and organize relevant data from an electronic source to analyze trends, transactions, and documentation. (Forensic Data Analysis, n.d.)

Data mining (Forensic Litigation and Trial Support, n.d.) – Data mining is “the process of finding anomalies, patterns and correlations within large data sets to predict outcomes.” (Data Mining - What is is & why it matters, n.d.). Within this specified service comes a whole array of tests that can be performed, which are collectively known as “forensic analytics,” and most can be performed in Excel, but also can be done using Access, IDEA, Tableau, R, or almost any other data analytic software. Forensic analytic tests have much in common with audit tests, but rather than serving to provide reasonable assurance, the forensic accountant is looking to identify intentional and unintentional errors and biases within the data that has been collected and stored. (Nigrini, 2020)

The Work a Forensic Accountant Does

In handling these cases, there is a lot of work that needs to be done on a day-to-day basis. According to a few members of the staff at Axiom Forensics, with varying levels of experience, the day-in-the-life of a forensic accountant is quite hectic and busy. However, as one person states, the work of the day depends on the case that the forensic accountant is handling. Not every case

will follow the exact same trajectory, especially because the numbers and people you work with will change from case to case, client to client. No matter the case, the brunt of the work involves analyzing facts and data, and then preparing reports and presentations to either communicate the findings to the upper-level forensic accountant of the team or the client, or present them as an expert witness in court. One of the staff members made sure to include that the reports and presentations that are made must be written in “simple English” because the people that will need to use these reports are often not accountants, and therefore, do not know the lingo of the accounting profession. The work may be demanding, but each staff member from Axiom Forensics reiterates in some way that the best part of the profession is seeing how your work affects your clients, as well as having the opportunity to work on a variety of different cases, rather than just being specialized in other accounting subgroups, such as tax or audit. (Potter, Harris, Butler, & Pang, n.d.)

According to professionals in the field, the process for preparing to provide litigation support and the process of conducting an investigation are very similar, since the two processes usually go hand in hand. According to Gary Cassiello, the first step is understanding what the goals and deliverables are for the case, which for litigation support is typically done through an engagement letter because the information needs to be used in court, and therefore, both parties need to be in agreement about what to investigate, while this step can be done orally for investigations, depending on the client. The second step is for the forensic accountant to gather resources and lock down the relevant information, because it is important that the data to be investigated is not tampered with when the other party learns of the court session or the pending investigation. The third step is to interview all the principal witnesses, to gain a deeper understanding of the situation and all the sides of the case, which can point the forensic accountant

in a direction for further testing and follow-up investigation. The fourth step is to gather the evidence to support a conclusion, and this evidence should be clearly numbered, organized, and as detailed as possible. The second to last step is reporting the findings to the client and/or lawyer, usually in a draft report, so that they understand what was uncovered and how the professional feels the next steps could go. This is the second to last step because the last step for the forensic accountant would be to take the stand. This step is in direct correspondence with step four, because to be taken seriously as an expert witness, the forensic accountant needs to have a comprehensive understanding of their conclusion, which involves ensuring that they gathered sufficient evidence to back up their conclusion, otherwise the testimony may be highly critiqued and broken down by the opposing side. (Cassello, 2022) (Unger, 2022)

As is seen in most fictional depictions of a court room, there is always drama in relation to the opposing side calling for an “objection” during the presentation of evidence, whether it be physical evidence or the testimony of an expert witness. This can be the case when a forensic accountant is on the stand, but another situation that can arise is that each side retains their own forensic accountants and those professionals produce contrary opinions on the case. When this situation occurs, it is not always a matter of who is right and who is wrong, because both expert witnesses may be correct. According to Rule 72, all evidence must be scrutinized by the trial court for reliability, and generally, reliability is determined using these factors (which vary slightly depending on the nature of the case): “(1) whether the expert’s technique or theory can be or has been tested... (2) whether the technique or theory has been subject to peer review and publication; (3) the known or potential rate of error of the technique or theory when applied; (4) the existence and maintenance of standards and controls; and (5) whether the technique or theory has been generally accepted in the [profession].” In applying these factors to a case in which forensic

accountants might be providing expert witness testimony, the court might look at the principles and methods used by each forensic accountant, ensure that those principles and methods are within the professional standards, and if so, if they have been properly applied to the facts of the case. Even after all that speculation, it is important that the expert witness is confident that his or her testimony is grounded in an accepted body of learning or experience in his or her specific field and that he or she can explain why his or her conclusion is grounded. If both forensic accountants' testimonies are made to be admissible by the court, it is then up to the opposing sides to try and breakdown the other expert's testimony to build themselves a better case. (Rule 702. Testimony by Expert Witnesses, n.d.)

The challenge for the expert witness is to uphold his or her confidence and stick to his or her findings while the other side cross examines him or her to try and tear down his or her testimony. The first way the opposition works to discredit the expert witness is by challenging the professional's credentials, or even working to point out that their expert witness has greater or more specific credentials in relation to the matters of the case. The second way the opposition works to strengthen their case is to get the opposing expert witness to make favorable remarks about their expert witness. This is done by asking questions that will in some way get the opposing professional to agree with areas of their professional's data, assumptions, and/or credentials. The third tactic used to discredit an expert witness is by questioning him or her about his or her objectivity and impartiality, by questioning his or her fee arrangements, his or her relationships with the participants of the case, and/or potential biases he or she might possess. The fourth strategy of disqualification is to point out information that the expert witness failed to comment on or tests in the investigation he or she failed to execute. Essentially, the opposition will always be looking for any way to raise uncertainty about the testimony of the opposing expert witness,

because it will either directly help their case or indirectly hurt the opposing side's arguments. (Chapter 9 "Expert Witnesses", n.d.)

For Gary Cassiello and Rob Unger in their local firm, Excel is the software of choice, because it is easy to dump the general ledger or any other accounting data into the system, sort it, and then look for patterns. They also stated that they commonly use the last-two digits test and time series analysis tests, which can help drill down and find patterns and anomalies in the data. (Cassiello, 2022) (Unger, 2022)

It is becoming more common to take on a data driven investigation when analyzing case facts, and there are multiple steps that are typically taken. The first step is to form the foundation, which is mostly about gaining an understanding of the business and pinpointing if there are any issues that stand out that might affect the reliability and completeness of the data. This foundation is typically built by running four tests: "the data profile, the data histogram, the periodic graph, and selected descriptive statistics." (Nigrini, 2020) The data profile test is used to test the completeness of the data and help the forensic accountant develop an understanding of the data that is to be examined, as that could give him or her important insight. The data histogram is a visualization of the distribution of the data, which gives information about the characteristics of the data and makes it easy to see where outliers might be, which can help lead investigators towards a specific account and/or transaction. The periodic graph is used to detect large anomalies in the data, because the graph is broken down into time periods, which could easily show any huge changes in the transactions being graphed. Finally, descriptive statistics are used to summarize and interpret the characteristics of the data, and there are a few sets of statistics. The first are the overview, which can consist of the sum, number of records, and number of missing records. This information could indicate fraud, as missing transactions could be intentional to make a certain

financial statement look better, or it could be a mistake that still could have the same impact. The second are the measures of central tendency (mean, median, and mode), which tell forensic accountants what the average of the data might be, what value is in the middle, and the most commonly occurring number, and deviations high enough from the average or middle value might be cause for concern. The third are the measures of variability (minimum, maximum, range, and standard deviation), which indicate the degree of change in the data, and large changes could be a potential fraud red flag that investigators could look further into. Finally, the last set is about the shape of the distribution. Forensic accountants generally know the typical spread of values, as many are aware of Benford's Law, which gives the expected frequencies of the digits in accounting data and gives rise to the theory that significant deviations in actual data from Benford shows a potential for abnormal duplications.

The second step is to look specifically for any abnormal duplications, and there are a multitude of tests based on Benford's Law that can indicate such activity, including the first-two digits test, the last-two digits test, and the number duplication test. Other duplication tests include the same-same-same test (SSS), the same-same-different test (SSD), and the subset number duplication test. These tests are designed to help forensic accountants find fraud, errors, outliers, biases, and processing inefficiencies. The first-two digits test is focused on finding abnormal duplications or digits and biases in the data, in which a bias is a pull towards certain numbers because of known thresholds or psychological factors, such as wanting to round up to \$1,000,000 from \$999,995 to make asset accounts seem higher but wanting to round it down to \$999,000 or lower to make liability accounts seem lower. The last-two digits test is often effective in finding invented numbers in a set of data, as it is expected that the portions of the final two digits, of which there are 100 possibilities, will be almost evenly distributed amongst the data, depending on the

type of numbers being studied. The number duplication test allows the forensic accountant to gain a deeper understanding of the data and find out what is causing the spikes on the graphs displaying the results of the first-two digits test. This can be done by running the tests in the software system, and having a graph display the results. The SSS test identifies exact duplicates, which could be the result of unintentional error, fraud, or just coincidence, but no matter what, it raises a red flag. The SSD test identifies near duplicates, which could be the result of actions taken to try and cover up fraud or errors in recording transactions. The subset number duplication test helps forensic accountants identify subsets that contain excess number duplications, which could signal number invention or other types of error or fraud. Based on the understanding of the business and case, the forensic accountant will use his or her professional judgement to decide which of these tests will help him or her uncover what it is he or she is looking for in a set of data.

The third step is to run tests to look for outliers in the data, which can be specific transactions or accounts. The summation test aims to identify abnormally large, or small, amounts in a data set that would be seen as outliers. The largest subsets test is a simple list of the largest subsets, to clearly identify who or what is the cause of the outlier. The relative size factor (RSF) test identifies “where the largest amount is out of line or does not match with the other amounts in that subset,” and is a test that has been found to be effective in detecting both intentional and unintentional errors. Outliers can be a clear indication that something may not be right in the data set, and that is why it is important for forensic accountants to be able to pinpoint such amounts and then follow through with an investigation into the cause of that outlier. Such an investigation could result in discovering fraud or it could be something explainable that has supporting documentation that includes the justification for the transaction. (Nigrini, 2020)

The fourth step is to further drill into the data by using time series tests, which will show a comparison of the numbers being investigated to those of previous and corresponding time periods, which can indicate deviations. Time series analysis can also use past performance to predict future performance (typically the current performance) and compare the prediction to the actual to gather an idea on a change in conditions, which can be easily and fairly explainable, but also could be an indicator of fraud. Any large changes from prediction must be investigated, so it is important for forensic accountants to have a baseline idea of what the activity generates to get an understanding of expected performance.

The final step is to report the findings of these tests in the most reasonable manner for the audience that needs the information. Just as auditors must report their findings in “plain English,” it is important for forensic accountants to know their audience, and thus, must use language and explanations that the general public could understand, because those people need to be able use the information to make the decisions and take action.

Why Forensic Accounting is an Important Part of the Accounting Practice

According to professionals in the field, forensic accounting is important because accountants are seen as trusted service providers/professionals, and when clients are in need, it is important that help is available to them. Forensic accounting is one service that a client doesn't know he or she needs until the situation arises and saying “I can't help you” isn't what he or she will want to hear. It is also important because forensic accountants can help businesses, whether small or large, strengthen their internal controls and recognize patterns in their business that can help them grow and better their craft. (Cassiello, 2022) (Unger, 2022)

How Different People/Entities can Benefit from the Services

Forensic accounting encompasses a lot of different services, all of which are relevant to either individuals, businesses, or the government. It is important for individuals to know about and utilize the services that forensic accountants have to offer because it can help an individual recover damages owed to him or her or ensure that a fair financial settlement is reached. These outcomes are possible because accountants have a professional duty to be independent, and therefore, unbiased. With these principles at heart, the professional hired by an individual would objectively investigate and/or provide expert witness about the situation at hand and give the most accurate conclusion he or she could determine with the evidence he or she uncovered. This type of work is often seen in divorce cases, in which the assets and liabilities of the former couple must be split between the two individuals, or the individual is involved in making an insurance claim or is suffering from personal economic damages, among other cases previously discussed.

The second group of users of forensic accounting is businesses. This area of the accounting practice is especially important because of the increasing rate of business and enterprise creation, in which forensic accounting is the only practical approach available to gain an extensive understanding of the inner workings of the business, or to use a metaphor, to see behind the curtain. Though many of the services described are conducted after-the-fact, forensic accounting can be used as a proactive measure to protect businesses from fraud, which can lead to negative connotations, mostly financial. Therefore, new businesses and enterprises should bring in a forensic accountant to help them set up systems that safeguard their business from unnecessary losses, reduce the chances of exploitation, optimize capacity, and set up a strong system of internal controls. (Inquesta, 2021) (Afa, n.d.)

The final identified group of users of forensic accounting is the government and all its regulatory and enforcement bodies/agencies. Forensic accounting is important to this group because it can uncover schemes that are hurting the government (such as tax fraud), schemes that are not within the best interests of the public (such as Ponzi schemes), and any other actions that are illegal at the state and federal level. The motive for many crimes is financial, so having a forensic accountant on the investigation and providing expert witness and litigation support can make the process of “locking-up” a criminal smoother, because the forensic accountant can present evidence that shows to the jury, beyond a reasonable doubt, that the plaintiff had a motive to commit the crime and did commit the crime.

Based on how important the services are to most people in society in one way, shape or form, offering forensic accounting services can be invaluable to a firm, as it can open a firm up to new clientele, bring in more revenue from existing clients that need such services, and overall make the firm more competitive. As technology grows at an exponential rate and as regulations change year to year, it will become increasingly valuable to many users to have a forensic accountant in their toolbox to help them with any financial issue. As the opportunity for fraud grows with technology and regulation changes, there is a lot for an accounting firm to consider before entering into the line of service, including looking into the competitive and regulatory environment, and then making the decision based on specific characteristics and goals of the firm.

The Competitive Environment

In discussing the competitive environment of forensic accounting, it is critical to understand what a competitive environment is. A competitive environment includes elements internal and external to a firm. Internal would include physical, financial, and human resources,

which works to show what the firm is good at and how it is organized. These factors will help a firm decide if there is a case for providing certain services. External would include everything else that is outside of the firm's control, including competitors' actions and economic downturns. (OpenStax, n.d.)

In looking into the competitive environment of forensic accounting, the internal factors are specific to a firm. The internal factors will help a firm answer pointed questions about the current state of their firm and business. A few important questions might include: do we have the technology to offer such services? do we have the human resources, equipped with licenses and expert knowledge, to offer such services? do we have the financial resources to expand into the sector, such as resources for additional hiring, office space, training, etc.? If the firm has all the necessary resources available to them, it will appear that from an internal analysis standpoint, that the firm can compete effectively. However, internal factors are only one piece of the pie, as the external factors play a big role in the success of a business.

When it comes to the external factors in the competitive environment, the big pieces are the competitors, regulations, and the economy. If the market is saturated in the geographic or demographic regions that a firm is currently in or looking to enter, chances are that the business is not doing as well as their internal factors suggest that they could. Regulations are another big component, because such can limit the ability to compete or can be daunting to deal with. It is important that a business is in line with all the laws and rules that the specific business must follow, because otherwise, the business is risking future litigation against them which could cause major reputational and financial damage. Regulations can also encompass regulatory bodies, who have oversight and policing powers to ensure that those that are meant to be following regulations are complying appropriately. Finally, the economy plays a huge role on the competitive nature of a

business. If there is not a demand for the service or product, or other economic circumstances arise, these issues could severely limit the revenue-earning potential of a business.

In looking at the competitive environment of the forensic accounting profession, it is clear that accounting firms that offer forensic accounting services typically have a strong standing in terms of their firm's organization, the qualifications of their employees, and the resources they have at their disposal. The external factors are much more limiting, as the regulatory environment, to be discussed next, is quite rigid. However, there are many successful firms that offer the forensic accounting service, and the top 20 are:

1. PricewaterhouseCoopers
2. Deloitte
3. Ernst & Young
4. KPMG
5. Grant Thornton
6. BDO USA LLP
7. RSM US LLP
8. Crowe LLP
9. Baker Tilly
10. CohnReznick LLP
11. Moss Adams LLP
12. EisnerAmper LLP
13. Marcum LLP
14. Plante Moran
15. CliftonLarsonAllen (CLA)

16. CBIZ
17. BKD, LLP
18. Mazars USA LLP
19. Dixon Hughes Goodman LLP
20. Citrin Cooperman & Company, LLP (FIRSTHAND, 2022)

The Regulatory Environment

A regulatory environment is influenced by the professional industry and where and how the professional is providing his or her services. For the accounting profession, professionals are regulated not only by federal, state, and local laws, but also by self-regulatory organizations that provide guidance on how accountants should work in their fields. For the forensic accounting profession, if operated within an accounting firm, it must comply with all laws in relation to business registration and licensure, tax codes, health and safety requirements, and all other regulations surrounding running a public business, including laws applicable to the establishment of an accounting practice. On top of the legal side of the business, an accounting firm, as well as a forensic accounting firm, must comply with regulations set forth by the many boards and organizations that have jurisdiction over the standards and policies of the profession. (Lutzker & Rovner, 2019)

Accountants in the United States are aware of the many boards and organizations that provide standards and policies that must be upheld in the work they do. The standards that are the most well-known and widespread in the accounting profession include the Generally Accepted Accounting Principles (GAAP) and the Generally Accepted Auditing Standards (GAAS), but professionals that work with government clients or have clients that do business internationally are familiar with the Generally Accepted Government Auditing Standards (GAGAS), International

Financial Reporting Standards (IFRS), and International Standards in Auditing (ISA). Some of the boards and organizations that provide laws, regulations, and standards include the Securities and Exchange Commission (SEC), the Public Company Accounting Oversight Board (PCAOB), the American Institute of Certified Public Accountants (AICPA), the Financial Accounting Standards Board (FASB), the Committee on Sponsoring Organizations of the Treadway Commission (COSO), the National Association of the State Boards of Accountancy (NASBA), and the State Boards of Accountancy. (Johnson & Wiley, 2019) In addition to the FASB, there is also the Federal Accounting Standards Advisory Board (FASAB), the Financial Accounting Foundation (FAF), the Government Accounting Standards Board (GASB), the Sustainability Accounting Standards Board (SASB), the Global Sustainability Standards Board (GSSB), the International Accounting Education Standards Board (IAESB), the International Accounting Standards Board (IASB), the International Auditing and Assurance Standards Board (IAASB), and the International Ethics Standards Board for Accountants (IESBA). (Gnanarajah, 2017) Forensic accounting professionals must also follow the standards and policies of these boards and organizations but can also find guidance from the American Academy of Forensic Service (AAFS), the American Accounting Association: Forensic Accounting Section (FAS), the American Board of Forensic Accounting (ABFA), the Association of Certified Fraud Examiners (ACFE), the Institute of Certified Forensic Accountants (ICFA), and the National Association of Forensic Accountants (NAFA). (Accounting: Forensic/Fraud, 2021) However, as a note, not all these boards and organizations are recognized by higher authorities, such as the SEC and PCAOB, however, information that is shared through these boards and organizations can give professionals a starting point in determining how to execute their work properly. Given that, no matter what line of service an accounting professional is working in, there are a lot of different groups that he or she generally must comply

with in order to be in good standing in his or her profession. This much regulation is not only the result of many fraud scandals, but the need for such professionals to act in the best interest of the public and be competent and knowledgeable in the field.

Outside of accounting boards and organizations, accountants, including forensic accountants, must be conscious of specific laws. Some of the laws all accountants must follow include the Securities Act of 1933, the Securities Exchange Act of 1934, the Private Securities Litigation Reform Act of 1995, the Sarbanes-Oxley Act of 2002, and the Dodd-Frank Act of 2010. (Gnanarajah, 2017) (Miller, 2018) The securities acts of 1933 and 1934 are notable in that they hold accountants to high levels of accountability. The 1933 Act scrutinized the issuance of initial public offerings by companies going public or an already public company offering a new type of security on the market. To do so requires the company to register with the SEC and included in the necessary documentation is a set of financial statements. If an auditor's report is included with the financial statements, the auditor, under this act, can be held liable for any material misstatements or omissions, and the professional holds the burden of proving that he or she undertook a reasonable investigation and had reason to believe that the opinion he or she gave was true to his or her knowledge. The 1934 Act applies in any case in which securities are being sold and bought after the initial offering, and it has some notable sections, including Sec. 10(b) and corresponding Rule 10b-5. This section and corresponding rule hold accountants liable for any material misstatements or omissions in financial statements that they audited and hold them accountable for engagement in any activity that could be perceived as fraud, including allowing fraud or deceit to continue despite discovering it during the audit process. (Augenbraun, 1994) The Private Securities Litigation Reform Act placed a high level of obligation on accountants to perform audits to a degree that would detect any illegal acts that the company being audited might

have tried to cover up, but at the same time, made it so that accountants couldn't be held totally liable, but only proportionately liable for the damage he or she caused through his or her actions. (Miller, 2018) As stated earlier, many believe that the Enron scandal was one of the catalysts to the Sarbanes-Oxley Act, and the most important sections have already been discussed. The Dodd-Frank Act isn't one that involves policies that accountants or forensic accountants necessarily have to worry about in order to perform their jobs properly and within the bounds of the law and regulated standards, but it greatly benefits forensic accountants because the Act protects whistleblowers, and such individuals actually expose more fraud than professional auditors, with 43% of cases being reported by whistleblowers and 19% being uncovered by the professionals. (Whistleblowers Still the Best at Detecting Fraud, n.d.) Clearly, the law and self-regulated organizations have a large impact on the business and all accounting professionals, and it makes the education and the continual pursuit of ethical behavior major aspects of being an accountant in any line of service.

Other Opportunities for Employment in Forensic Accounting

Though forensic accounting is a service that is primarily performed out of a specific division within an accounting firm, other companies, institutions, and agencies also employ forensic accountants, and such entities include large corporations, governmental and law enforcement agencies, law offices, insurance companies, and financial institutions. (Infographics & MAcc, n.d.)

Due to the fairly recent scandals in relation to public accounting, as discussed previously, large corporations now have to follow many different laws in relation to their accounting standards, bookkeeping, internal controls, and many other small details. Therefore, it may be very useful to a corporation to have forensic accounting professionals on payroll because they can help ensure

that the company is in compliance with all regulations surrounding their business, and they will have people on hand if any fraud or misconduct is suspected and needs to be investigated. (Ramaswamy, 2005) (Half, 2021)

When it comes to governmental and law enforcement agencies, the most common employers include the State Police, the Central Intelligence Agency (CIA), the Federal Bureau of Investigation (FBI), the U.S. Federal Reserve, and the Internal Revenue Service (IRS). (Schools, n.d.) It is important for these agencies to retain forensic accountants because some of them deal directly with financial transactions, such as the IRS with tax payments and refunds and the Federal Reserve with regulating the financial markets, and others may have cases they are investigating in which monetary gain is the prime motive. No matter the case, it is important to retain a forensic accountant because of the professional's ability to "understand the overall 'big' picture of the case; create and communicate the financial picture both internally and externally; identify suspicious transactions/entities/activities; [and] uncover potential new leads." (FBI, n.d.)

Much like many large and public accounting firms retain lawyers and attorneys, due to the regulations surrounding the accounting field and the work professionals do, law offices also employ forensic accountants, because as discussed under the umbrella of "litigation support," forensic accountants can provide a lot of relevant information to a lawyer/attorney that he or she can use in a client's case. By gaining an understanding of the financial side of a case, legal professionals can "persuasively and effectively communicate results," which is the purpose behind taking on clients and going to court with those issues. (Foodman, Working together, Attorneys and Forensic Accountants Can Bring About Optimal Solutions, 2020)

As discussed above, there are many damages claims that can be filed with an insurance company. If an individual or entity is filing that claim, they typically will hire their own forensic

accountant to examine the facts and circumstances, apply specific accounting and financial knowledge and concepts, and then place a value on the damages. On the flip side, it makes logical sense for the receiving end of the claim, the insurance company, to have their own forensic accountant, to ensure that the claim has validity and is not a form of fraud, and if it is valid, to determine their assessment on the value of damages. For both parties, they want to ensure that a fair value is exchanged at the end of the process, however, there is a conflict of interest: the policyholder wants as much as possible while the insurance company wants to pay the smallest amount possible, and thus, having two separate forensic accountants would provide a relatively accurate estimate of the damage.

Banking institutions are tasked with monitoring most of the financial transactions that individuals and entities make, which makes it very important that such institutions are able to detect fraud. The level of risk in the banking industry has climbed dramatically due to the increasing use of digital banking, which has created new opportunities for criminals to commit fraud by hacking those cyber connections. Therefore, forensic accountants play a valuable role in ensuring that millions (maybe billions) of dollars are not lost in a big fraud scheme by assisting such institutions in preventing and mitigating crimes. These professionals do this by conducting detailed investigations, performing review audits of financial records, and complying detailed records to trace funds and analyze financial data to entrap criminals effectively. Forensic accountants can also perform risk assessments on borrowers and businesses, to ensure that they are in a position in which they can pay back the money, which will prevent loss for the bank. (The Role Of Forensic Accountants In Banking Sector, 2020)

Should More Firms Offer Forensic Accounting Services?

According to professionals in the field, it is agreed that more accounting firms should offer this line of service, because it can be beneficial for their current clientele, as financial crimes are on the rise. However, it is cautioned that not every firm and person should work in the forensic accounting profession because there are more emotions involved, as people are very invested in their case and are usually not happy if the investigation does not turn out to be in their favor. (Cassiello, 2022) (Unger, 2022) Throughout the business curriculum, especially in the introductory management class, it has been taught, whether explicitly or implicitly, that there is a method to making good decisions. There are eight steps which can be used to determine the best course of action, whether that be for a decision that must be made by an individual or one that is made by any size business. In listing these eight steps, it will help any size firm decide if expanding their service offerings into forensic accounting would be beneficial for their firm, as it addresses the financial implications and risk analysis of such a decision. (Robbins, Coulter, & De Cenzo, 2016)

1. Identify the Problem – There must be a clearly stated problem that has caused the firm to begin thinking about service offer expansion. The problem could be financial, in that the firm needs to bring in more cash flow, so expanding services may pull in new customers and new revenues. Or the problem could be a change in customer demand or a notable loss in competitive advantage. No matter the problem, if the firm is experiencing these issues, there is a difference between their actual state versus their ideal state, and therefore, they need to find a solution. For the case of putting this model to work, let's say we have a two accounting firms, one small and one large, in which the small one is looking to bring in more revenue and the large one has noticed a change in customer demand.
2. Identify the Decision Criteria – In making any sort of decision, each individual firm must know what the most important factors are for them in making such a decision. When it

comes to service expansion, it will likely include: is there a demand for this service [customer demand]?, is this line of service highly regulated [regulation]?, does my firm have pre-existing capabilities (physical, technological, and human) that will aid in this service line [pre-existing capabilities]?, what expenses are involved in creating this line of service and can the firm afford those expenses [expenses]?, and will my investment in this expansion turn around profits [return on investment]?

3. Allocate Weight to Each Criteria – In listing all the decision criteria, it is imperative to recognize that not every criterion is equally important. Depending on the identified problem, certain criterion might be more important, so it is a firm-by-firm process to figure out how to weigh the criterion. In our example, our small firm believes that the predicted return on the investment is the most important, because they might not have the resources to bounce back if an investment in the new service line fails, while our big firm believes that the regulations are the most important, because compliance with regulations is important for upkeeping their reputation, which helps them retain and bring in clients for their other lines of service. From there, each firm must apply weights to their identified criteria. Let's say that the firms (small vs large) apply a weighting scale of 1 to 10, with 1 being the least important to 10 being the most important.

Decision Criteria	Small Firm Weight	Large Firm Weight
Customer Demand	7	7
Regulation	8	9
Pre-existing Capabilities	7	5
Expenses	8	6
Return on Investment (ROI)	9	7

4. Develop Alternatives – The alternatives in service line expansions are either to expand or to not expand. However, for an accounting firm, there are multiple different lines of service that can be expanded into. For example, any accounting firm can take on a consulting service line, or maybe even a bookkeeping service. However, for this case, the hypothetical alternatives are to expand into forensic accounting or to not expand into forensic accounting.
5. Analyze Alternatives – Continuing the hypothetical, next the firms would analyze their options by applying their criterion. To do so, individuals or a team from each firm will do some market research to gain insight on each of the criterion, all of which help the firm figure out the risk related to the expansion investment. After conducting this research, each firm would assign a rank, from 1 to 10, about each of the decision criterion as they apply to either taking on the forensic accounting service or not taking on the service. The numbers are arbitrarily assigned, based on the decision-makers assessments of the research conducted on each of the decision criterion. For this hypothetical, let's suppose that the research resulted in these calculations:

Decision Criteria	Small Firm Weights	Expansion Ranks	TOTAL = Weight*Expansion Ranks	No Expansion Ranks	TOTAL = Weight*No Expansion Ranks
Customer Demand	7	4	28	8	56
Regulation	8	9	72	9	72

Pre-Existing Capabilities	7	3	21	9	63
Expenses	8	2	16	10	80
ROI	9	5	45	0	0
TOTAL			182		271

Decision Criteria	Large Firm Weights	Expansion Ranks	TOTAL = Weight*Expansion Ranks	No Expansion Ranks	TOTAL = Weight*No Expansion Ranks
Customer Demand	7	7	49	9	72
Regulation	8	9	72	9	72
Pre-Existing Capabilities	7	8	56	9	63
Expenses	8	5	40	7	56
ROI	9	8	72	0	0
TOTAL			289		263

Let's delve into a comparison and explanation of how the ranks were assigned by the small and large firm for each of the criteria, both for and against expansion. When it came to customer demand, the small firm determined that based on their relatively local

clientele and knowing more intimately the needs of those in the geographic region, customer demand for forensic accounting services should be assessed at a 4, while demand for their existing services is an 8. Going off the same criterion, the large firm determined, after looking at the competitive environment, which included researching their competitors and what they have to offer and conducting market research into the people that their many offices serve, that customer demand for forensic accounting is a 7, while demand for their existing services is a 9.

When it comes to regulations, no matter the line of service either accounting firm takes on, it recognizes that the profession is highly regulated across the board. Therefore, no matter whether either firm takes on the expansion or not, regulation is a 9.

When it comes to pre-existing capabilities, this involves an internal investigation into what resources [office space, humans, technology, etc.] the firm already has and determining if those resources can be configured or trained to be utilized by the forensic accounting line of service. The small firm determines that it does not have the office space or specially trained employees that are necessary to the expansion, so it gets ranked a 3, while not expanding is a 9, because the firm has been successful as it has been currently running, though some inefficiencies, such as glitches in software, are still present. The large firm, on the other hand, determines that it already employs specially trained employees, has the office space available or can make it available through purchasing or renting, and existing software can be utilized to offer forensic accounting services. Therefore, the large firm gives the rank of 8 to expansion and 9 to not expanding, only because no expansion rules out the need to figure out spacing issues.

When it comes to the questions related to expenses, the small firm determines that the cost of taking on such a service would be higher than they can afford at the present time, and as such, give expansion the rank of a 2 and not expanding a rank of a 10, because not expanding would leave operational costs at relatively the same level, which the firm can afford. On the other hand, the large firm determines that the costs associated with expanding are well within their budget, and even recognize that such expansion is not the largest expense they have ever had, and as such, give expansion the rank of a 5. And in contrast to the small firm, the large firm puts a rank of a 7 on not expanding because they recognize that they are not utilizing all their resources to full potential, which is an opportunity cost [not a real expense on the income statement, but income could go up by offering more services using resources, that they already have expense accounts for, to their fullest potential at the current level of cost].

Finally, when it comes to the return on investment, the small firm felt that they could only give a rank of a 5 on expansion, because there was no evidence that it would do outstandingly well. The large firm ranked return on investment of expansion to be an 8, because of their belief that there is customer demand and the fact that the expenses involved will be at a level that is manageable due to the number of pre-existing capabilities the firm possesses. For both firms, the rank would be a 0 for not expanding, because there will be no return on an investment that wasn't taken.

6. Select an Alternative – From the example, the choice that the small firm makes is different from the one the large firm makes. Even though each firm's decision rested on the same criteria, the differences in the nature and scope of the two have a tremendous impact on decisions. Therefore, the small firm will elect to not expand, because that total is higher,

while the large firm will elect to take on the new line of service. However, it is important to take into consideration that the above numbers are arbitrary and made up, are not based on true market research, and the decision would ultimately be different for each firm, though this walkthrough indicates that offering such services will likely be done by larger firms, or even strong medium sized firms.

7. Implement the Alternative – For the small firm, there is no implementation needed, as nothing will change operationally for them. However, for the large firm, they will need to ensure that it has all the resources, including software and knowledge and capable employees, in line to offer such a service, which could involve bringing in IT to make adjustments to software or installing new software, providing opportunities for training for employees, and hiring more employees if necessary to expand to the size that is needed to meet expected customer demand. Then, the firm would begin marketing its service to their clientele, as well as working to promote to new clients.
8. Evaluate the Decision – Once the decision is made and implemented, it should not just be left to handle itself. It must be monitored to ensure that it is producing the desired benefits, and if it is not, another run-through of the eight steps must be done to create a plan to figure out solutions for any problems with the alternative selected or how it was implemented.

Has Forensic Accounting Prevented Inappropriate Business Practices?

When fraud stories are covered in the news, it is always after the crime was committed and discovered, and therefore, it was hard for professionals to think of a notable case in which forensic accounting prevented inappropriate business practices. However, Gary Cassiello and Rob Unger's firm does do proactive forensic accounting work, by working with clients to investigate their

internal controls and tighten up areas that have heightened risk for material misstatements and fraud, which could prevent some of their clients from needing a full fraud investigation. (Cassiello, 2022) (Unger, 2022) There are quite a few notable cases, outside of Al Capone's, that has its sole focus on the work of forensic accountants, and in some cases, more proactive work could have been done to prevent the inappropriate business practices. Rob Unger recalled the Bernie Madoff case, in which he used his and his firm's reputation to attract clients, and he proceeded to set up an elaborate Ponzi scheme, through which he collected tens of billions of dollars from thousands of investors. The scheme was relatively simple: he would deposit the funds he received from clients into a bank account and would pay clients who wanted to cash out by attracting new clients and using that money to pay back previous investors. In this case, this scheme could have been prevented, or even caught earlier than it was, had Madoff's account manager, who claims to have known that the fraud was occurring, spoke to authorities about it sooner, so that the SEC investigation would have been more intense and preventive. (Hayes & Khartit, Bernie Madoff, 2021) (Unger, 2022) ZZZZ Best was a fraud mentioned by Gary Cassiello, and this business was also a cover up for a Ponzi scheme. ZZZZ was marketed as a carpet cleaning and restoration company, but Barry Minkow was just committing various financial crimes, such as check kiting, theft, and insurance scams in order to keep the business afloat. This scheme could have been easily prevented, had the auditors of the business properly followed Generally Accepted Auditing Standards, and not have relied so heavily on Minkow's assertions and documentation. This goes to show that even when professionals are involved in some capacity, fraudsters can still slip under the radar, which makes the role of the forensic accountant even more important, because they have the investigative techniques that allow them to dive deeper than an audit might go to uncover the truth. (Hayes, ZZZZ Best, 2022) (Cassiello, 2022)

The Future

How the Work Environment is Changing/The Impact of the Fast-Paced World

By taking a quick glance at what has changed so quickly over the past year, there has been an obvious shift in dependence on technology, due to the coronavirus pandemic, a development in investing in cryptocurrency, and the legalization of cannabis. Though change is happening every day, these big three easily observed changes will have a huge impact on the business world, the accounting practice, and thus, forensic accounting as well. In addition, professionals in the field say that advancing software and artificial intelligence (AI) are going to have a major impact on the work environment. (Cassiello, 2022) (Unger, 2022)

When it comes to the shift in dependence on technology, this provides more opportunities to commit fraud, because there is more information available on people's computers, as they have had to make new accounts that require input of personal information, all of which are valuable to hackers that can sell that information, such as social security numbers and banking information. Therefore, it will change the cyber security measures that all businesses need to put in place, and it will bring in more cases for forensic accountants, because they will need to follow the technological trail of money to prove that a person or business was damaged by performing an investigation and likely providing litigation support in court in order for the plaintiff to win their case. This shift might also make investigations more streamlined for forensic accountants because software can be developed and used to search through online documents and websites to find the relevant information to the case the professional is investigating.

When it comes to investments in cryptocurrency, experts in accounting and finance acknowledge that this type of investment isn't as easy to value as other "standard" investments, because there isn't a clear method on how to record and report its value, as there are not currently any specific accounting standards that provide the necessary guidance. And when there is an issue in determining value, forensic accountants can offer their specialties as valuation experts, and thus, this investment will cause a spike in demand for forensic accounting services.

The legalization of cannabis will continue to cause change because it is an "asset" that does not have regulations and specific accounting procedures surrounding it yet. Therefore, it will be important for forensic accountants to perform investigations into the trail of money that follows the sale of cannabis, to determine how much is charged and if that number is being fairly reported to the agencies that require it (such as the IRS, as it is taxable income).

Continual improvements in software will bring about more efficient testing opportunities and will help forensic accountants to better refine and concentrate on specific areas of the data they are investigating, and AI technology will work alongside that software to provide the human professionals a lot of detailed information that they can use to better support the conclusions that they share with their clients and as expert witnesses. (Cassiello, 2022) (Unger, 2022)

Why the Field is Still Growing

According to professionals in the field, the profession is growing. These statements were made in part due to the volume of calls that the professionals have received, but also their observation that the forensic accounting profession is seemingly very interesting to the younger generation, and therefore, more accountants will be moving into the specific service line. In accordance, the professionals feel as though the 10-year outlook of the profession is one of

significant growth and lots of new developments, because as the criminals get smarter, we must evolve our skills (both with technology and with human power), and also due to the fact that new financial transactions are being used, such as cryptocurrency, which will increase the need for the service. (Cassiello, 2022) (Unger, 2022)

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