

Tangible and Intangible Costs of White-Collar Crime

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I. Introduction

White-collar crime is an enduring and vexing problem that has impeded the growth of the economy and has accelerated at an increasing rate since the mid-nineteenth century (Higgins, 2015; Turner, 2014; Brickley, 2008). One reason for the acceleration is that some white-collar criminals are able to avoid prosecution because of applicable laws. Courts are quite effective in going after the minnows, while the whales continue to avoid punishment. White-collar crime affects all of society through its effects on the overall economy and the confidence of employers, employees, and other interest groups.

While a high percentage of white-collar executives and employees worldwide may never engage in fraudulent acts, business organizations or governmental units still are at risk for illegal acts involving financial malfeasance. Broadly, white-collar crime is defined as the misappropriation of assets through the lack of proper supervision or the manipulation of internal controls. This article reviews applicable laws and corporate and accounting efforts to thwart white-collar corporate malfeasance.

The remainder of the article reviews (1) the scope of and losses associated with corporate fraud by white-collar criminals in recent years, (2) the overall cost of fraud, (3) corporate and accounting methods employed to thwart white-collar crime through corporate fraud, and (4) statutes enacted to fight corporate fraud.

II. Cost of White-Collar Crime to Society

Approximately \$65 billion was levied on white-collar criminals between 1960 and 2009, as a result of financial fines by the courts for emotional distress and financial losses (Taylor 2018; Berghoff and Spiermann, 2018; Karstedt, 2004; Weisberg, Wheeler and Waring 1992;). For instance, since the early 2000s companies such as Colonial Bank, Bernie Madoff, Wells Fargo, Enron, Tyco, and HealthSouth, to name a few, have shaken the foundation of investor confidence in financial markets. Many blame ineffective internal control processes that have been put in place to stem the occurrences of financial fraud (Dearden, 2016). The breakdown in internal controls is due, in part, to high-profile executives and employees acting with little blowback because those in charge of screening for fraudulent acts often fear retaliation from perpetrating executives or employees.

Notably, criminologists turned what is known as the Donald Cressey embezzlement triangle into the fraud triangle in the 1950s with heavy publicity by the Association of Certified Fraud Examiners to highlight elements of unethical behavior that may be predictive of financial fraud. The fraud triangle consists of three areas: (1) opportunity, (2), financial pressure, and (3) rationalization. Opportunity is being in the position of influence to carry out illegal acts; financial pressure is the act of contributing to the financial shortfall of personal financial obligations; and rationalization is justifying stealing assets from a corporation due to, for example, a recorded-breaking profit for a corporation with no concomitant pay raises for employees during the period (Berghoff and Spiekermann, 2018).

The fraud triangle has received criticism for the lack of rigorous scientific testing and inability to recognize collusion, societal roots of crimes, and many other important issues (Mintchik and Riley, 2019). Huber (2016) suggests that the one-dimensional fraud triangle has been misused, abused, contorted, stretched out of shape, and pressed into use so often that it has outlived its usefulness. The ego and pride of white-collar criminals often play a role in the perpetration of fraudulent acts aided partly by privileges associated with management and executive-level positions. Employees who discover misconduct are often afraid to report illegal acts because of possible retaliation such as loss of a job, tarnished reputation, and blacklisting.

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Some Nonfinancial Costs

The National Association of Crime Victim Compensation Board estimated that about \$500 million annually is awarded to victims as part of the victims' compensation programs. However, full compensation for damages is not always awarded to the victims of property loss, medical payments, restitution, and mental health frauds. White-collar crimes involving financial, consumer, and stolen identity fraud can have long-lasting effects (Galvin, Loughran, Simpson, and Cohen, 2018). One reason is that attorney fees for the restoration of monetary loss and identity theft can pose costly challenges to unsuspecting fraud victims. Many rely on recovery from insurance policies for recovering thefts from loss of assets and/or stolen identity.

One nonfinancial cost resulting from white-collar crime is emotional stress after being victimized which can be made difficult because of the lack of support from federal, state, or local crime support agencies. Another nonfinancial cost is the social cost affecting employees of defrauded firms. For instance, Adam Rogas, CEO of NS8, raised over \$123 million from investors, per the Securities and Exchange Commission. Because of fraudulent acts from January 2019 through February 2020, the company laid off hundreds of staff members (Jeans, 2020). Likewise, HCA Healthcare received over \$1 billion in bailout funding from the federal government to offset costs to maintain its workforce, but it laid off 10 percent of its workforce, contrary to its promise to maintain its workforce. The John F. Kennedy Center furloughed 60 percent of its full-time staff after receiving \$25 million in federal stimulus money (Hansen, 2020)

Intangible Costs

A GAO (2017) study surveyed 17 experts with respect to the estimated costs of all U.S. crimes (not just white-collar crime) and found that the annual costs of crime ranged from \$690 billion, \$1.57 billion, and \$3.41 trillion (adjusted to 2016 dollars). Thus, this research suggests widely varying and inconsistent estimates on the total costs of eleven crime categories. Two of these categories (acts involving fraud, deception, or corruption and acts against property only) relate to white-collar crime.

The GAO (2019) study breaks costs of overall crime into tangible and intangible, with both classified as: (1) costs in anticipation of crime (deterrence), (2) costs as a direct consequence of crime, and (3) costs in response to crime. Intangible costs are difficult to quantify, but the 2018 PricewaterhouseCoopers (PwC) Global Economic Crime and Fraud Survey found these intangible damages from white-collar crime:

Employee morale	48%
Business relations	38%
Organization's reputation/brand	36%
Relations with regulators	30%
Share price	16%

Source: PwC's 2018 Global Economic Crime and Fraud Survey, U.S. Perspectives, footnote 22

Furthermore, little attempt has been made to incorporate the intangible cost of red-collar crime where victims are killed or property is destroyed as a result of the discovery of fraud.

Unlike the situation for tangible costs, intangible costs incurred from adverse effects associated with white-collar crime also are even more difficult to estimate. The challenge in most situations is the inability to catalog and estimate the intangible costs (GAO, 2017). Some of the costs of white-collar are difficult to identify and measure. Typical surveys meant to identify intangible costs of white-collar crime such as emotional stress emanating from past and current fraudulent acts pose intractable measurement problems. Examples of these costs include the lack of trust, feelings of humiliation, and psychological damage resulting from occurrences of identity theft. Therapy and litigation for trying to preserve a business's good name can have financial consequences.

IV. Tangible Costs



PwC's 2020 Global Economic Crime and Fraud survey provides a list of the various types of white-collar crimes.

Adopted from PwC. (2020). Global Economic and Fraud Survey, p. 4 https://www.pwc.com/gx/en/services/forensics/economic-crime-survey.html

In their 2020 survey, PwC indicates that their survey respondents incurred \$42 billion in total fraud losses, and 47 percent of the companies experienced fraud (2nd highest in 20 years) over the past 24 months (49 percent in 2018).

The Association of Certified Fraud Examiners (ACFE) has issued a fraud survey of their members every two years since 1996. Initially, their estimate of the cost of fraud in the U.S. was \$600 billion, and over those years, except one, they estimate that fraud averages 5 percent of revenue for most entities annually. Their U.S. annual estimate of fraud reached \$994 billion in 2008, and in 2010 they began to estimate the world's annual cost of fraud. In the ACFE 2020 survey, their worldwide estimate of fraud was \$4.5 trillion in 2019, which would make the U.S.'s annual fraud around \$1.08 trillion (GDP \$21.6158 trillion times 5 percent).

Crowe's (2019) survey by the United Kingdom's University of Portsmouth estimates worldwide annual fraud to be \$5.127 trillion or 7.15 percent of expenditures (compared to 4.06% in 2007). Their seventh survey suggests that if organizations were to correctly measure, manage and introduce procedures to reduce fraud, there would be potential savings up to \$2 trillion. This survey suggests that fraud losses have risen more than 56 percent over the past decade.

Since there is no 100 percent detection rate for fraud (e.g., ACFE approach), Crowe considered and analyzed 633 exercises that have been undertaken around the world during the past 20 years to accurately measure the financial cost resulting from fraud (Crowe, 2019, p. 6). Thus, the U.S. cost of fraud under Crowe's approach would be \$1.5455 trillion (GNI \$21.6158T times 7.15 percent). So, possibly the undetected fraud in the U.S. is around \$465.5 billion (\$1.5455T less \$1.08T) in 2019.

Furthermore, Gale and Krupkin (2019) suggest that one out of every six dollars owed in federal taxes is not paid. This evasion amount is three-quarters the size of the entire annual budget deficit. The IRS believes that the tax gap is about \$406 billion (for years 2008-2010), or about 16 percent of taxes were unpaid. If the gap stayed constant, the gap in 2018 would be \$560 - \$600 billion.

But the tax gap may even be worst today according to the IRS. On April 13, 2021, IRS Commissioner Charles Rettig indicated that the tax gap between 2011-2013 was \$441 billion annually. He asserted that this figure does not include taxes lost from the \$2 trillion cryptocurrency market, foreign source income, and abuse of pass-through provisions. While testifying for more funds for the IRS, he suggested the U.S. government is losing around one trillion dollars annually. So, a conclusion could be that these three non-included provisions result in another loss of \$559 billion (Rappeport 2021).

Yet the FBI continues to state that white-collar crime costs in the U.S. are only \$300 billion annually, which is repeated by other sources such as Legal Information Institute and Wikipedia (Legal Information Institute, ND). This figure is laughable when the Institute of Legal Reform indicates that U.S. commercial tort costs in 2018, were \$343 billion. Businesses making less than \$10 million in revenue paid 53 percent of the total of \$182 billion (Institute of Legal Reform, 2018).

Another approach using the latest receipts from various entities with a fraud percentage ranging from 4% to 6% of total receipts calculates the fraud in the U.S. to be between \$2.35 to \$3.527 trillion annually. This figure does not include tax fraud, farm income, and intangible fraud costs. Even at three percent, the annual fraud would be \$1.763 trillion, which is much larger than the ACFE and Crowe's costs of fraud.

	In Trillions	4%	5%	6%	
Corporations (2017)	\$32.96	\$1.318	\$1.648	\$1.977	
Partnerships (2017)	8.1	.324	.405	.486	
Sole Proprietors - Nonfarm only (2018)	1.58	1.58 .063 .079		.095	
S Corporations (2017)	8.1	.324	.405	.486	
Federal, State, Local (2018)	5.4	.216	.27	.324	
Nonprofits (2016) (Total Unknown)	2.64	.105	.132	.158	
Total	\$58.78	\$2.35	\$2.939	\$3.527	

A McKinsey and Company report (2018) estimates that more than half of U.S. government losses to fraud, waste, and abuse go undetected (Cunningham et al., 2018). This report estimates the federal government's potential fraud to be around \$150 billion in 2017. Note, in our above chart we show only \$324 billion for federal, state, and local fraud under the 6 percent column. The Centers for Medicare and Medicaid found the fiscal year 2018 improper payment rate was 9.79 percent for Medicaid, 8.57 percent for CHIP, and Medicare 8.12%. Blue Cross/Blue Shield estimates healthcare fraud costs range as high as 10 percent. The most rigorous assessment of fraud and abuse in healthcare spending is 30 percent (Institutes of Medicine, 2012). Ashcraft and Gerel's internet site indicated that 10 percent of the U.S. annual budget is paid to companies or people who are defrauding the government (Ashcraft and Gerel, nd).

Businesses typically incur significant expenditures after been compromised by white-collar crime. Implementing an effective security monitoring system due to shrinkage in revenue and hiring additional employees to maintain productivity and competitiveness with industry rivals can be quite expensive (GAO, 2017). The cost of developing a plan to stay in compliance with government regulations also must be considered. Such costs may be challenging, especially for businesses experiencing the theft of financial resources or the abuse of credit lines.

Crimes involving injuries can be costly due to litigation, investigation, and expert witnesses' fees. On the other hand, losses resulting from financial crimes involving properties such as property, jewelry, and inventory may be easier to estimate (Justice, Research, and Statistical Association, 2018).

Methods Not Normally Included in Surveys and Estimates

Other than the overall fraud rate, other costs are often overlooked by experts and fraud surveys. Some are tangible and others are intangible. A major cost is the expenditures for tools and personnel to deter and detect fraud (e.g., internal auditors, training, internal controls, management reviews, hotlines, continuous auditing, external auditors, etc.).

Other costs include the lost tax revenues to various governmental units. Because any fraud flows down to the bottom line, taxes of the entity are reduced. Mansour (2020) reports that approximately \$427 billion is lost each year due to international corporate tax abuse and private tax evasion. According to Mansour (2020), at least \$245 billion of that amount is attributable to corporate tax abuse by multinational corporations and \$182 billion to private tax evasion. Mansour (2020) indicates this amount is equivalent to nearly 34 million nurses' salaries each year, or a nurse's annual salary each second. The underground economy is estimated to about 11 to 12 percent of the GDP or approximately \$2.25 to \$2.5 trillion annually (Bloomental, 2020. At a tax rate of 25 percent, the lost Federal income revenue is about \$562.5 billion to \$625 billion annually. There also may be the loss of tax revenue to state and local governments.

A significant cost of white-collar crime occurs after the fraud is caught and the financial statements are corrected. Shmukler (2005) reports that after the HealthSouth scandal, Harvey R. Kelly led the investigation against CEO Richard Scrushy involving the \$2.7 billion of inflated earnings. Kelly was paid about \$700 an hour for his testimony regarding his investigation.

PwC sifted through millions of documents during their 23,000-hours fraud investigation, and they were paid about \$9 million to conduct the forensic audit in 2003

After Bernie Madoff's \$65 billion Ponzi scandal, Irving H. Picard of the Securities Investor Protection Act Trustee and his legal team for the liquidation of Madoff's company spent nearly a dozen years identifying, recovering, and distributing funds (Wlodek, 2020). There were no electronic records, only paper records, microfilm, and microfiche. After 10 years, Picard and his law firm had secured almost \$1 billion for their work (Flaherty, 2018). Keep in mind that KPMG, PwC, BDO Seidman, and McGladrey and Pullen provided clean opinions to the various feeder funds that invested with Madoff. In the Allen Stanford \$7.2 billion Ponzi scheme, defrauded investors collected less than a penny on the dollar. Yet after four-and-a-half years, Ralph Janvey (the receiver) had recovered \$234.9 million but spent more than \$124 million on personnel and other expenses (Kyger and Kodjak, 2013).

A significant cost of fraud is the fines and penalties incurred by entities committing fraud. For example, after the Tyco \$1-to-\$2 billion fraud, PwC had to pay a \$225 million payment and Tyco had to pay \$2.975 billion payment in their four-year class action lawsuit (Shareholder Foundation, 2007). The Foreign Corruption Practices Act (FCPA) resulted in significant penalties. Deloitte settled with the DOJ for its role in the TBW audit for \$149.5 million. Likewise, Crowne Horwath settled with the FDIC (receiver for Colonial Bank) for its role as the internal audit service advisor for \$60 million. PwC paid an undisclosed amount in 2006 to settle a claim by TBW. PwC settled its claim with the FDIC for \$335 million (Ariail and Crumbley, 2019).

Another example of penalties is those paid for FCPA disputes. During 2019, 14 companies paid \$2.9 billion to resolve FCPA cases. In 2020, 12 companies had to pay \$6.4 billion in FCPA penalties (Cassin, 2020). As for the SEC, in the fiscal year 2019, U.S. companies were ordered to pay \$3.248 billion in disgorgement of ill-gotten gains and \$1.101 billion in penalties. In the fiscal year 2020, \$3.589 in disgorgement and \$1.091 in penalties were ordered.

Then there is the area of nonfinancial fraud such as illegal business cheating. VW's emission-cheating scandal will cost at least \$136.5 billion. In May 2017, UPS was fined \$237 million for illegally shipping untaxed cigarettes from Indian reservations. Mitsubishi Motors Corporation manipulated fuel-economy tests on 625,000 cars, wiping out \$1.2 billion of market shares. Takata had to pay a \$1 billion penalty and recall more than 70 million airbags (19 different automakers). There were around 42 million vehicles in the U.S. (Crumbley and Ariail, 2020).

Methods Used to Discourage White-Collar Crime

During the process of investigating white-collar crime, prosecutors often rely on expert witnesses (e.g., forensic accountants or forensic psychologists) to provide an in-depth investigation to make their case(s) credible to the courts. One popular tool used by forensic accountants is Benford's Law, which identifies suspicious transactions (fictitious invoices, sales slips, etc.) by determining numbers used frequently in purported transactions (Singh and Best, 2020). Criminals committing fraudulent acts often try to manipulate documents for self-gain by either under- or over-reporting expenses or sales.

The Audit Common Language Software (ACL) is another tool that can be used to support an audit during the planning and investigative phase. Data files used to help formulize interview questions during an investigation provide quality assurance from an existing audit performed for a company or for appearance in court as an expert witness.

In addition to providing a better understanding of the overall corporate financial operation process flows, internal and external auditors can help to deter potential fraudulent acts during the audit reviews, budgetary meetings, and implementation of business strategies (Weirich, Tschakert, and Kozlowski, 2017). Interactive Data Extraction and Analysis (IDEA) is another effective resource used by accountants for organizational, risk assessment, and investigative purposes in addition to cross-referencing data and tracking source documents for accountability measures.

Data-Tracking White-Collar Crime

Generally speaking, although white-collar crime is increasing, arraignments have declined since 2015 as shown by the State and Federal Judicial local courts in Figure 1. Prosecutions and convictions also declined markedly during the post-2015 period. Figure 1 shows that during the 2015–2019 period, arraignments recorded by Federal Circuit Courts declined by approximately 13.7 percent.

Generally, white-collar crime prosecutions have a declining trend since 2015, as reported by the Federal Judicial regions. A closer look at the data from 2015 through 2019 shows that in the Southeast region (Panel A), prosecutions filed trended down by about 13.48 percent, and in the Southwest region (Panel C), by about 21.2 percent. Panel E shows that prosecutions filed in the West region trended up slightly, by about 0.081 percent, while prosecutions filed in the Midwest trended down by about 33 percent. Panel I shows that prosecutions filed in the East region trended down slightly, by 0.082 percent (Transactional Records Access Clearinghouse, 2020).

Convicted after Prosecution

In the Southeast region (Panel B), convictions after prosecutions trended down by about 11.55 percent, and in the Southwest region (Panel D), convictions after prosecutions declined by about 43.66 percent. In the West region (Panel F), convictions after prosecutions trended down by about 27.66 percent, and in the Midwest region (Panel H), convictions after prosecutions declined by about 28.33 percent. In the East region (Panel J), convictions after prosecutions decreased by 22.19 percent (Hurtado, 2018). In the *Sourcebook of Federal Sentencing Statistics* (2019), only 8.3 percent of the total 76,538 offenders were for fraud/theft/embezzlement and 1.5 percent money laundering.

Although the white-collar crime convictions have trended down slightly in the post-2015 period, businesses and government regulators continue to closely monitor for the possibility of white-collar crime. Employees and potential informants often experience retaliation for exposing unlawful acts. The financial settlements in recent years include Bank of America for \$16.65 billion, JP Morgan Chase for \$13 billion, and Citi Group for \$7 billion paid to the victims during the Obama administration. In January 2014, Alcoa pleaded guilty to financial fraud and paid \$223 million in fines and penalties. The aforementioned fines are meant to punish illicit financial behavior as a basis for discouraging such behavior over the long run.

On account of the Sarbanes-Oxley Act (SOX), Bank Secrecy Act, and Financial Crime Enforcement Network (FinCEN), both administration and the customer representatives were monitored from 1983 to 1992. White-collar crime typically occurs on all levels and requires monitoring at all levels of management. Often internal controls that are employed to address white-collar crimes prove to be inadequate to forestall financial malfeasance. In this regard, the Federal Bureau of Investigation has expanded its effort to flag financial wrongdoing by 650 agents since 1989 (Touby, 1994).

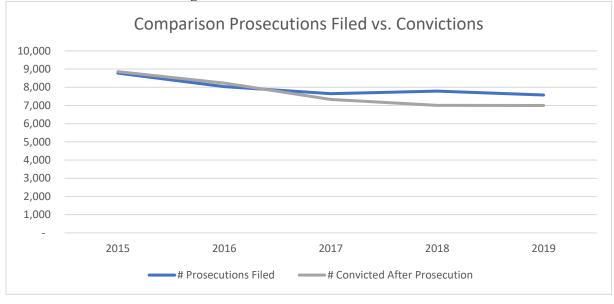


Figure 1: U.S. Federal Court Prosecutions

Note: Data totals are based on 100 million per population in the United States.

Adopted from Transactional Records Access Clearinghouse, Syracuse University (2020). Criminal Enforcement Data. Retrieved September 8, 2020 from https://tracfed.syr.edu/

V. Laws Implemented to Discourage White-Collar Crime

There are several laws in place to deter white-collar crime. The effort starts from the top down, meaning that leaders from the government and corporate levels emphasize honesty and transparency. In this regard, red flags are addressed without delay, with swift action without favoritism. Many organizations have closed their doors due to fraudulent activities because of deviation from the internal control processes in place (Healy and Serafeim, 2019). Various laws have been enacted to safeguard assets and instill integrity on all levels from the government to ordinary citizens.

Racketeer Influenced and Corrupt Organization Act (RICO)

Enacted in 1970, the Racketeer Influenced and Corrupt Organization Act (RICO) was intended to battle coordinated wrongdoing in the U.S. RICO calls for indictment and prosecutions for racketeering actions of a progressing criminal venture. Targeted actions involve incorporating unlawful betting, payoffs, seizing, murder, illegal tax avoidance, duplicating, money laundering, and a large group of other illicit behaviors (JM 9-110.812)

Penalties in the Criminal Court

In criminal indictments, the jury must be persuaded beyond reasonable doubt of the defendant's guilt. This requirement is the most noteworthy weight of verification that exists in the American judiciary. Infringements of applicable laws result in twenty years of incarceration. Sentences can be lengthened to life in jail when warranted by the extent of wrongdoing. Wrongdoers, likewise, face a fine of either \$250,000 or twofold the measure of the returns acquired from the crime.

As a device for discouraging criminal undertakings, following a conviction, the defendants lose all their cash and property that can be traced to the criminal act. Furthermore, the prosecutor need not stand by until after a blameworthy conviction. When the property that is subject to relinquishment is difficult to find, the accused properties can be frozen before the case even goes to trial (Legal Resource, 2020)

Discouraging white-collar crime is a continuous effort that requires accountability and strict enforcement. Prosecuting white-collar offenses must be separated from bureaucratic persuasion and the undermining of policies, including procedures in place that are designed to deter criminal activity. The 18 U.S. Code § 1963, calls for twenty years of imprisonment for racketeering, including forfeiture of assets according to RICO for prosecutions(18 U.S. Code § 1963. The Justice Department has been criticized for not prosecuting white-collar cases aggressively because perpetrators often either pay a fine or get a reduced sentence (Ivancevich, Duening, Gilbert, and Konopaske, 2003).

Victims of white-collar crimes often have to cease business operations because of a lack of resources to continue as going concerns. White-collar criminals typically wire funds through third parties (i.e., international banks, relatives with different names, forged signatures, etc.) to avoid being traced. As such, criminals can later try to access stolen funds in addition to avoiding taxation issues with taxing authorities (RICO, 2011).

Sarbanes-Oxley Act (SOX)

According to Yu (2007), since the SOX Act in 2002 was implemented after the post-Enron and WorldCom scandals, the new laws require top management to ascertain the validity of financial statements filed annually with the Securities and Exchange Commission (SEC). Senior management is required to communicate with its employees on the importance of proper reporting of all adjustments to avoid the appearance of covering up issues, senior management can no longer place blame on junior-level management and employees. The downward trend in white-collar crime since 2015 may be due in part to the SOX legislation. The overall objective of this Act is to gain public trust within the financial reporting sector in addition to enhancing adherence to IRS and SEC rules and statutes.

Because of the *Welch v. Cardinal Bankshares Corp.* decision, David Welch, then the CFO of Cardinal Bankshares, declined to approve the organization's fiscal summaries because of insider trading. He made both the chief executive officer and the examiner aware of the potential for scrutiny by the SEC. The Supreme Court adjudicated the *Yates v. U.S.* case on November 5, 2014, and Yates was convicted for shredding sensitive financial documents in a small town in Florida. The SOX Act was used to convict Mr. John Yates the fisherman per the "anti-shredding provision." The SOX Act was enacted partly due to financial fraud that took place at Enron, WorldCom, and Tyco in the early 2000s. Yates was determined to be not guilty of cooking the company books. However, he was found guilty of throwing a tangible item (box of fish) into the offshore in the Gulf of Mexico, according to an informant, and the FBI linked this event to financial fraud evidence found in the investigation of Mr. Yates (Haugh, 2015).

Bank Secrecy Act

The Bank Secrecy Act was enacted partly to protect businesses from white-collar fraudulent activities. Businesses are required to file suspicious activity reports (SARs), including Title 31 for taxation purposes (e.g., currency reported to entities in excess of \$10,000 is recorded on a currency transaction report and reported to the Internal Revenue Service daily), especially in the casino and banking industries. The U.S. Congress enacted the bipartisan bill H.R. 2514 Coordinating oversight, upgrading and innovating technology, and Examiner Reform Act of 2019, in 2019 in being proactive in delivering enhanced financial technology and artificial intelligence tools that will have the ability to identify white-collar crime offenders (Duilum, 2019).

International Effort to Fight White-Collar Crime

Many nations also are developing ways to fight white-collar crime to help protect their economies and businesses. In the case of Toshiba's \$1.2 billion accounting scandal, senior-level managers resigned and were punished. In 2011 the Olympus British CEO became a whistleblower and in return was terminated. Similarly, Yang Weidong, president of Alibaba's Youku, a music-streaming business, was arrested in China for accepting illegal payments. Here are two executives who overstepped their positions within the industry by defrauding for self-gain that impacted the overall global market sector:

- Oliver Schmidt, general manager of Volkswagen, violated the "Clean Air Act" for emissions and was found guilty of falsifying records.
- Meng Wanzhou, the chief financial officer of Huawei, violated U.S. sanctions on Iran that created a trade issue in addition to various bank fraud and was arrested and waiting to be extradited to the U.S. December 1, 2018, from Vancouver, Canada to be tried for her unethical deeds (Lashinsky, 2019).

To effectively deter white-collar crime, there must be a collaborative effort without the fear of retaliation. Companies going out of business due to fraudulent acts may decrease the employment opportunities for generations to come. In the case of the executives prosecuted above, they circumvented internal controls in place due to lax controls.

The U.S. and other major industrialized nations encountered the "Nigerian 419" Internet scheme. This scam was a modern web plot that included over \$100 million stolen from spontaneous email conspiracies. Fraudsters were able to get members to move financial accounts of expired African pioneers without being noticed by government authorities.

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Individuals participated by moving money by way of cash transfer to the U.S. and other nations to cover the upfront costs to complete the transactions. This scheme cost the U.S. millions of dollars in lost tax revenue along with individual loss of assets the victims who typically fell for these schemes were more often college-educated, retired citizens. Preventive measures that can help individuals and corporations protect their online activities and safeguard their assets include the following:

- Use up-to-date firewall software designed to prevent malicious programs from entering the computer system.
- Use up-to-date virus protection designed to protect software from malware and other illegal activities.
- Use trustworthy online payment methods and log in from official websites to avoid phishing websites.
- Have the computer checked by a reliable IT service company periodically to ensure the integrity of the computer operating system.

Society must be vigilant in protecting ourselves, families, and loved ones (Loguercio, 2011). Due to the current COVID-19 pandemic which started in February 2020 or even earlier, the increase in online technology activity (i.e., school, shopping, paying bills, etc.) is an added risk that must be closely monitored so that people can avoid becoming victimized. Many business owners develop internal controls to safeguard their assets with the assistance of auditors, governments, and regulators. The federal government, with the assistance of local agencies and citizens, has been proactive in thwarting COVID-19-related financial crimes. Forensic accountants typically provide technology research, interviews, and expert witness services to assist government, attorneys, and businesses in accumulating evidence to be used in prosecuting white-collar criminals.

VI. Conclusions

This article discusses tangible and intangible costs of white-collar crimes, reviews federal prosecutions and convictions of white-collar crimes for judicial regions of the U.S., and argues that both prosecutions and convictions have declined markedly since 2015. One possible explanation is the influence of SOX and other legislation enacted in reaction to the Enron and other accounting scandals. White-collar crime prosecutions have declined, as shown by comparing each geographic region of the U.S., for prosecutions filed and convicted after prosecutions, at the same time white-collar crime has increased. Finally, no matter what the cost of white-collar crime might be, to be successful the FBI and other government law enforcement agencies must employ collaborative efforts to create techniques to thwart these financial crimes to reduce these costs to society.

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Appendix 1



Source: Data totals are based on 100 million per population in the United States.

Adapted from Transactional Records Access Clearinghouse, Syracuse University (2020). Criminal Enforcement Data. Retrieved September 8, 2020 from https://tracfed.syr.edu/

Appendix 2

	# Prosecutions Filed				# Convicted After Prosecution					
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Southeast Region	4,230	4,076	3,873	3,733	3,660	4,137	4,074	3,770	3,694	3,659
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	# Prosecutions Filed				# Convicted After Prosecution					
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Southwest Region	793	592	647	646	625	891	735	548	639	502
	# Prosecutions Filed				# Convicted After Prosecution					
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
West Region	869	748	670	767	939	1023	901	690	611	740
	# Prosecutions Filed				# Convicted After Prosecution					
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Midwest Region	1,203	989	938	1,002	806	1,246	1,143	998	859	893
	# Prosecutions Filed				# Convicted After Prosecution					
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
East Region	1,685	1,629	1,522	1,643	1,547	1,564	1,378	1,330	1,204	1,207

Source: Data totals are based on 100 million per population in the United States.

Adapted from Transactional Records Access Clearinghouse, Syracuse University(2020). Criminal Enforcement Data. Retrieved September 8, 2020 from https://tracfed.syr.edu/