

SARBANES OXLEY: DOES THE FINANCIAL STATEMENT CERTIFICATION
REQUIREMENT DETER MANAGEMENT FRAUD AND CREATE MORE ACCURATE
FINANCIAL STATEMENTS?

by

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Submitted in partial fulfillment of the
requirements for Departmental Honors in
the Department of the Neeley School of Business
Texas Christian University
Fort Worth, Texas

May 3, 2013

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INTRODUCTION

Approximately a decade ago on July 30, 2002, former United States President George W. Bush signed the “Sarbanes-Oxley Act of 2002” into law. The bill (more commonly known as SOX) included what he said was, “the most far reaching reforms of American business practices since the time of Franklin D. Roosevelt” (Bumiller, 2002). Not only was the legislation a political victory for the President early during his first term, it was also a strong sweep of regulation aimed at corporate America and the accounting industry. The act came as a response to the numerous accounting scandals that had shaken the faith of the financial system and taken down well-known companies such as Enron (O'Connell B, 2002). The law re-shaped the relationships between auditors and companies in dramatic fashion and placed more legal responsibility for fraud on the shoulders of the CEO and CFO of public companies. Through harsh penalties and regulation the law forced auditors to become more independent in nature, and forced management teams to be more accountable to the financial operations of their respective companies (Bumiller, 2002, Lee, 2013, O'Connell B, 2002).

In its entirety SOX contains 11 titles that cover multiple topics including additional management responsibility, criminal liability, and creation of the Public Company Accounting Oversight Board (PCAOB), auditor independence, and internal controls. (Sarbanes & Oxley, 2002) One of the extra duties the law places on management is the requirement for both the CEO and CFO of public companies to certify, or sign off on the content and fair representation of the financial statements. The certification component of the law also adds criminal liability to the process. If a CEO or CFO certifies financial statements that are not in accordance with the law, the individual could be found liable for up to 20 years in prison and a \$5,000,000 fine (Sarbanes & Oxley, 2002). The severity of this clause has caused much debate among corporate

officers, politicians, investors, auditors, and academics regarding the fairness, relevance, and significance of the certification clause.

Many professionals in business and government question the fairness of placing the burden and responsibility of an entire corporation on the legal record on two single individuals, the CEO and CFO. Additionally, many question the relevance and significance of the certification process; does the certification actually enhance the value or add to the fair representation of the financial statements (Louwers, 2011, Hermalin, 2012, Hirtle, 2006)? Over the past decade some research has been completed in this area, and this paper will further explore and add to the academic study of the significance of a signature by analyzing the certification process within the context of established theories and models.

Perhaps, in the end, the most important question to attempt to answer is does the financial statement certification clause quell cheating and fraud among public companies, and create more accurate financial statements that would ultimately benefit society as a whole from a more transparent public market (Lee, 2013, Hirtle, 2006). This is the most significant point of research because this is the true goal of the regulation and it is through this avenue that stakeholders benefit from truer representation in the financial statements. In fact, some research has indicated that the certification process has led to more accurate statements and drove positive stock market returns, though the research was limited to only the study of bank holding companies (Hirtle, 2006). Unfortunately, this question is rather difficult to first research and second answer due to the fact that it crosses many different areas of expertise, industry, and academia such as accounting, ethics, finance, law, psychology, and government. To ask if a law is able to make people, who are often tempted to act out of greed and self-interest, more honest is

a question that delves into the very nature of the human mind and what drives decision-making (Ariely, 2012).

However, through some of the most recent research in the variety of disciplines stated above, this paper will outline and measure the value of the Sarbanes-Oxley certification clause in the context of the Simple Model of Rational Crime (SMORC), logical decision-making, agency theory, corporate governance, and the fraud triangle. The SMORC will begin to shed light on the process of decision-making and explain in some depth why some people may choose to act dishonestly. This argument leads directly into the logical decision making process which will explain some of the limitations of the SMORC within the context of the certification process. Then the certification process will be analyzed within agency theory and corporate governance to analyze if the added liability of the signature is enough to keep the corporate officers acting in congruence with the objectives of the firm, and without conflicts of interests and motives of fraud. Lastly, the certification process will be analyzed within the confines of the fraud triangle where some critical limitations of the process will be found, and later addressed in the propositions and recommendations section. This paper will synthesize insightful conclusions on these subjects that have been previously researched and attempt to add an answer of how human behavior, business, and legal regulation clash to provide a certification clause that adequately deters management fraud, but could be improved.

I argue that a better understanding of human behavior can lead to simple adjustments to the regulation as to the timing of the certification, or increasing accountability of the company officers could add to the value of the regulation. Lastly, though, it is important to note that the research and theory behind this paper suggests that these adjustments can only attain reasonable assurance that financial statements are accurate and fraud is prevented. Ultimately, no law or

legal standard can absolutely stop fraud, dishonesty is too intertwined in the human psyche, and all regulation will at some point fall short of the goal to prevent fraud.

RESEARCH QUESTION

As summarized in the introduction, this paper will specifically answer if the certification clause will deter management fraud and help create more accurate financial statements. The relevance of this question is not only wide in scope and range, but also beneficial to multiple groups of stakeholders. The question is largely driven by unprecedented financial scandal and fraud as in the Enron debacle that signaled a deterioration of trust between investors and public companies that even lead to the downfall of the once reputable audit firm Arthur Andersen. (Arnold & De Lange, 2004, O'Connell B, 2002, Healy, 1985) Furthermore, the recent 2008 financial crisis has again brought financial regulation to the forefront of American politics and society because many in the public believed a major force behind the crisis was the un-regulated and at times fraudulent trading in the derivatives market.

Many important groups of stakeholders will benefit from a better understanding of the certification regulation and how it may or may not add value to the financial statements. Investors are always more interested in more accurate financial statements as these professionals put trust in the validity of these statements to make proper and responsible decisions that affect everyone's financial success or demise. Company owners and directors use the statements to evaluate management and company performance. Large sums of money are at stake in the forms of salary, bonus, and benefits when it comes to the figures represented by the statements (Healy, 1985, Hermalin, 2012). Employees of companies are also directly affected by the fair representation of financial statements, whether it is in a more minor aspect of a stock price swing adding volatility to a pension or in a major way as in the

case of Enron where thousands of employees lost significant portions of their personal savings and wealth (Hirtle, 2006, Arnold & De Lange, 2004). Lastly, the general public is a major stakeholder that would benefit from a more efficient and fair economy that would be driven by more transparent financial reporting (Hirtle, 2006, Berggren, 2007).

In many ways the most interesting aspect to learn from this research question is almost a psychological and philosophical lesson. This paper will delve deep into understanding of human behavior, and the decision making process of the brain. Through review of agency theory and the fraud triangle this paper will address dishonesty and the factors that might make a person act dishonest. Furthermore, the paper also addresses how a person processes and rationalizes this behavior and how it might be affected by such tools of accountability as a signature certification, and what a signature might mean for the character, integrity, and perception of a person. (Ariely, 2012)

Therefore, in a macroeconomic sense the answer to the question will attempt to serve as a guide, solution, and lesson to stakeholders as to how to deter fraud and create more accurate financial statements. Hopefully, the answer will even help to enhance the efficiency of public markets. By providing propositions to improve the certification clause and action plan this paper creates a real way to further deter fraud and create more accurate statements. Any increase in the accuracy and validity of the financial statements, even marginal increases, will lead to stakeholders and investors making better financial decisions regarding capital allocations. This greater efficiency will not only add value to the marketplace as a whole by allocating capital more properly, but also increase confidence in the markets and financial institutions due to the greater transparency towards the public (Bumiller, 2002).

In conclusion, through the analysis the research will give an answer as to the effectiveness of the Sarbanes Oxley certification requirement, as well as three propositions and an action plan that will provide ideas for effective improvement of the certification process. Through this paper the audience will understand and learn how the impact of this research can and will benefit multiple stakeholders.

REVIEW OF LITERATURE

The SMORC and Logical Honesty in Defense of the Certification Process:

One of the most simple and logical ways to try and tell if the Sarbanes-Oxley Certification clause is successful in stopping fraud and improving financial statement accuracy is to research if the process actually makes the signers, the CEO and CFO, more honest, responsible, and accountable. It might appear that honesty would be a hard subject to research, but there have been theories for decades on the logical rationale behind honest decision making. Furthermore, these logical arguments can be made in defense and opposition of the certification requirement. These logical arguments will help further aid in the understanding of the experimental research.

Much of our understanding on what makes a person honest (or dishonest) comes from how we understand the motivations (incentives) and consequences (disincentives) in the world around us and a person's self-interest (Ehrlich, 1973, Piliavin, 1986). One logical model known as the Simple Model of Rational Crime (SMORC) is that a person will act honestly if it is in his/her best self-interests, or dishonestly if that be the case. (Ehrlich, 1973) This is a model that has guided the judicial system for a long time, since it is evident that with the help of our legal system society has built systems, laws, and norms that influence or act to change the self-interests of a person. For example, with laws against perjury it might actually be in the self-interest of a person to admit to a crime, however, without the law the person would be more

likely to lie (Ehrlich, 1973, Piliavin, 1986). Thus, the threat of time behind bars not only is able to influence better behavior, but also benefits society by helping to keep people honest in the judicial system. One key to this model is, then, that systems and processes where cheating may occur need to be regulated with rules and consequences in order to force integrity. In fact, this is exactly why Sarbanes-Oxley was originally drafted. Congress viewed the U.S. market as too loose and un-regulated; the cases of Enron, WorldCom, and others proved that the lack of laws created an atmosphere in which it was easier for companies to commit fraud.

The certification requirement was created to hold the CEO and CFO of public companies personally and criminally accountable to the financial statements of their respective businesses. Thus, the signature is not just a symbolic link to personal honesty and accountability; it comes with some strict consequences. If a CEO or CFO is caught cheating the financial statements he or she can be made personally liable for the damages against the shareholders, charged with criminal cases, and even be sent to prison. Perhaps, this is the strongest logical argument for the success of the certification clause. It is rather obvious that prison and criminal charges are enough to influence the behaviors of society to obey law because we witness it every day. For example, a person does not choose to drive the speed limit because he or she wants to, but because he or she does not want to pay a fine. Therefore, the criminal attributes of the certification requirement do help to positively influence behavior and are a good start at deterring management fraud.

Another important argument that proponents of the certification requirement assert is that there is a strong psychological link between a persons' ego, self-perception, and a person's signature that rationally would decrease a persons' propensity to lie from the threat that lying and being held accountable with the signature would damage the persons' perception of self. (Ariely,

2012) Basically, some professionals argue that the mere act of a signature will substantially decrease the risk of cheating and fraud because of the psychological impact and destruction of reputation that would occur from the cheating.

There may actually be some valid in truth in this argument. For example, almost anyone would agree that cheating is much more likely to occur in situations where there is no link to personal accountability, like that of a signature (Piliavin, 1986, Ariely, 2012). A person is much more likely to lie in a situation where they do not have to sign to the truthfulness of their statement than in situations where they are required to do so. (Ariely, 2012) Therefore, it is logical to infer that it was easier for executives to cheat on the financial statements pre-certification requirement of Sarbanes-Oxley, and thus the certification and SOX as a whole contributes to decreasing the chances of fraud.

However, there are some key gaps in this argument that must be noted, and reconciled. Though there does seem to be a psychological aspect that connects personal accountability to a signature and self-perception, this link is somewhat unquantifiable and would seem to differ across individuals because it would be virtually impossible for a researcher to mathematically verify the psychological impact honesty bears on the self-ego of a person. Furthermore, it can be argued that the psychological link can be decreased and weakened over time through processes of rationalization. An example might be an instance in which an executive has already rationalized a decision and the psychological link that should influence decision making has already been negated through rationalization. The limitations, however, can be reconciled because a qualitative link has been proven to work in several cases of testing insurance fraud (Ariely, 2012) and qualitative measures are just as important as quantitative ones. In Ariely's example he showed that the simple act of adding honor code signature certifications on insurance

claims, in which participants had to sign their name promising to be honest before they filled out the claim, it was found that those participants were notably more honest than those who did not have to sign the honor code. Furthermore, the argument that the psychological link can be rationalized is true, but at the same time all other decisions can be rationalized, as well. Therefore, one cannot dismiss the effect of the psychological link between the signature and self-perception just on the basis of rationalization.

The Certification Process and its Defense within Agency Theory and Corporate

Governance:

One of the most important ways to try and evaluate the effectiveness of the certification requirement would be to measure it within the context of agency theory. Agency theory states that there is a relationship between the owners (shareholders) and agents (executives) of public companies, but that information between the two parties is never the same. This information gap is known as information asymmetry, and will often lead to a conflict of interest between the principals and the agents. Agents usually have a significant amount of more information than principals and with the extra information can become induced into acting in their own self-interest, rather than in the best interests of the principals (Mitnick, 2012, Jensen M. , 1994). For example, this is one of the main causes of the fraud at Enron can be explained by agency theory (Arnold & De Lange, 2004). Enron was a Houston based Energy Company that provided electricity and natural gas, however key members of the management team including the CFO, Andrew Fastow, and CEO, Kenneth Lay, began to widen the operations of the firm into trading complex energy derivatives and without being transparent about this decision to company shareholders. Management then became obsessed with fudging the financial statements to attain short term gains at the cost of long-term success (Arnold & De Lange, 2004, Bumiller, 2002).

The information asymmetry between the shareholders and management team led to such a conflict of interests that continued for so long it led to the total collapse of the firm due to financial bankruptcy (Arnold & De Lange, 2004). Thus, if the certification process is found to be successful in decreasing the threat of agency problems and deterring fraud within the context of agency theory the argument for the certification process will surely be strengthened (Jensen & Meckling, 1976, Jensen M. , 1994, Hermalin, 2012).

Many believe the goal of enterprise is wealth maximization for shareholder value, but agency theory suggests that agents can also act in ways of self-maximization even toward the detriment of the firm's principals, or to the point of fraud (Hermalin, 2012). Research has pointed to a possible solution of agency theory is increased corporate governance and disclosure from the firm's management (Arnold & De Lange, 2004, O'Connell B, 2002). Recent research found that if owners increase oversight of the company and demand more accurate and timely information the possibility of agent abuse and fraud decreases (Hermalin, 2012, Berggren, 2007). Moreover, increases in corporate governance in the context of rules and disclosure drive firm performance which should increase management's motivation to participate and improve the certification requirement (Vintilă, 2012, Hirtle, 2006). This is important because the goal of SOX was to both increase corporate governance and disclosure. Corporate governance can be defined in many ways and is a broad term that can refer to management oversight, rules and regulations, an honor code or code of ethics, legal counsel, or even a more independent board of directors. It usually is any means of trying to keep the interests of principals and agents aligned (OECD, 2004). In this context the certification requirement serves as an increase to management oversight and accountability because the requirement holds the CEO and CFO personally responsible as to the accuracy of the financial statements, and increases the level of

responsibility by adding the threat of criminal punishment previously discussed. The certification requirement is also required by federal law before a company can release their financial statements so the certification process is an increase in rules and regulations within corporate governance. Also, the signature in of itself is a marginal increase in disclosure. It is one more written assertion that the management of the company worked in the best interests of shareholders, and further did not participate in any illegal or fraudulent accounting practices.

Thus, according to agency theory the certification requirement is successful in reducing the possibility of management fraud and producing more accurate financial statements. This is especially important because agency theory has become an important pillar of modern business theory and has guided issues of corporate governance and even public policy for a long time (Mitnick, 2012). The magnitude of agency theory and the fact that research suggests the certification requirement is successful in aligning the interests of principals and agents is one of the strongest and most compelling arguments in defense of the certification process.

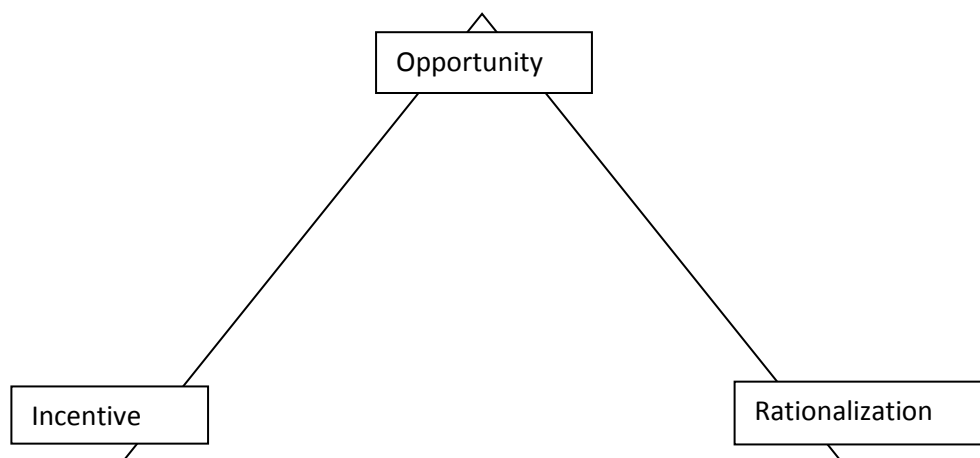
So far the majority of the paper has found the certification clause at least adequately successful. Through the SMORC it was suggested that the criminal liability aspect of the certification clause is successful deterring dishonest behavior, fraud, and more honest behavior should add accuracy to the financial statements. Logically and psychologically, the signature was proven to link the self-perception of a CEO and CFO to be more honest and accurate when compiling financial information, and through principal-agent theory and increased corporate governance the certification process was also proven helpful.

However, the certification process does have limitations when addressed and critically evaluated through the fraud triangle, and it is important to review these limitations because it is through the criticisms of the certification process that improvements can be made.

The Fraud Triangle and Criticisms of the Certification Process:

Another way to measure the effectiveness of the certification requirement would be to evaluate its implications within the context of the fraud triangle. The fraud triangle is a well-known tool that auditors and professionals use to assess the risk of fraud inside a company, and is especially important because the model can help to explain *why* people or corporations engage in fraudulent activity (Louwers, 2011). It is built on the three pillars of incentives, opportunity, and rationalization. Higher degrees of pressure, rationalization, or opportunity to commit fraud in an organization lead to increased chance of fraud (Louwers, 2011, Buchholz, 2012).

Diagram A: Fraud Triangle



Within this framework effectiveness of the requirement can be assessed by determining if the certification requirement lowers either the opportunity to cheat, the pressure to cheat, or the rationalization to cheat, or all three at one time (Louwers, 2011, Buchholz, 2012). For example, in a corporation a CEO or CFO might have pressure to cheat or create fraudulent financial statements because they want to keep up with Wall Street estimates. In another case, a company

officer might have the opportunity to cheat because of weak corporate governance and a cozy relationship with auditors, which is again similar to what happened in the fraud at Enron (Arnold & De Lange, 2004). Furthermore, the chance of fraud is also increased by a person's aptitude to rationalize decisions; many times rationalization at the corporate level is achieved by the drive to insure short-term success (Jensen M. , 1994, Arnold & De Lange, 2004). Lastly, the highest increased chance of fraud is found in companies where all three factors exist at once (Louwers, 2011).

It can be argued that the certification requirement does lower the incentive to cheat by forcing accountability on upper level management, and might lower the degree to which management might be willing to rationalize because of the threat of potential criminal liability. However, there is no clear linkage between the certification requirement and the fraud triangle, meaning that the introduction of accountability only influences the stages of rationalization to cheat but does not clearly negate any specific opportunities or penalties; as well as just because legal liability *might* reduce rationalization it does not clearly keep management from rationalizing in decision making (Louwers, 2011, Buchholz, 2012).

Unfortunately, when evaluating the certification clause in the framework of the fraud triangle much evidence points to the conclusion that the requirement is insufficient in reducing the risk of fraud in financial reporting because it fails to clearly alleviate any of the three factors of rationalization, incentive, and opportunity. Just because management has to certify the financial statements does not mean they still may not be confronted with an opportunity to commit fraud. Furthermore, signing the certification statement at the end of the period cannot undo any decision that the executive may have rationalized earlier. Therefore, it would seem

there is much room for improvement of the Sarbanes-Oxley certification process in the context of the fraud triangle (Buchholz, 2012, Louwers, 2011).

In conclusion, although the certification requirement does little in context of the fraud triangle; the majority of the research finds that the certification is adequately successful in deterring fraud and creating more accurate financial statements (Hermalin, 2012, Ehrlich, 1973, Berggren, 2007, Ariely, 2012, Hirtle, 2006). However, there are areas in which the certification clause can be improved (Buchholz, 2012, Lee, 2013, Louwers, 2011). Three propositions will be laid forth that if instituted will help improve the quality of the certification clause. The propositions are:

- Recording forward-looking certifications
- Instituting a personal statement along with certification
- Broadening the responsibility to the COO, CIO, and any other company officers

These propositions will improve the certification process by reducing rationalization, (which in turn will make the certification requirement more effective within the fraud triangle) increasing accountability, and broadening accountability. The propositions are independent of each other, however, if all three were to be instituted together the quality of the certification requirement would increase exponentially because multiple areas of weakness would be addressed and improved if all propositions are used in conjunction with one another.

The first proposition of recording forward-looking certifications would mean that management would sign a certification statement at the beginning of each year asserting that they would do everything in their power to insure that the external financial statements will be prepared within the appropriate framework (usually GAAP) and with reasonable assurance that the statements are accurate without material misstatement or fraudulent presentation.

Research has shown that the timing of signature certifications can be the difference between a person acting honestly or not. For example, when people were forced to sign an insurance claim before they filled out the claim they were found less likely to cheat by a dramatic percentage as opposed to the control group (Ariely, 2012). The experiment found that if a person asserts their obligation to be honest before they have the chance to rationalize any decision they are much less likely to rationalize in the future. Ariely then replicated this same experiment with people filing their income taxes and found the same results. Since the same conclusion was drawn from two distinct experiments it can be argued that the timing of signature certifications is important and the results should translate larger contexts as in the case of management certification of financial statements. However, the status quo allows managers to rationalize before they certify the financial statements (Ariely, 2012, Louwers, 2011). By removing the opportunity to rationalize by requiring a forward-looking certification the process would be vastly improved. This is not to say that management would not also re-certify at the end of each quarter as already required by SOX, but would add one, annual pre-certification signature requirement at the beginning of each fiscal year. This proposition not only incorporates and reflects some of the newest research in the fields of ethics, management, and psychology, but by connecting the certification to solve problems of rationalization it addresses a key weakness and improves the quality of the certification requirement within the framework of the fraud triangle (Louwers, 2011, Buchholz, 2012); which would solve one of the main criticisms of the certification process.

The second proposition of instituting a personal statement along with the certification would require the CEO to provide a brief personal attestation to management integrity and the accuracy of the financial statements annually at year end with the final signature certification.

This timing was chosen because it would force the CEO to reflect upon the past year's accounting practices and tie extra accountability and critical thinking to his or her signature. Further, if it was used in conjunction with proposition one it would tie a forward looking certification to an end year summary and review.

The value of this proposition is found in the fact that it would increase the degree of corporate disclosure thereby reinforcing the certification's strength in the context of agency theory, and would also add another important psychological link to the process that will help keep management acting honest and in the best interests of stakeholders (Vintilă, 2012, Hermalin, 2012, Ariely, 2012, Jensen M. , 1994).

However, there is one notable drawback to this proposition; personal statements would be subjective in nature because they would be written by the CEO and each one would be different in language, voice, and interpretation. This drawback should be reconciled by investors and shareholders evaluating each personal statement with a degree of healthy skepticism. Furthermore, another anticipated criticism of this proposition is that a personal statement would add extra unnecessary costs to companies and take valuable time away from the CEO who should be using that time to guide the company. However, it should be stressed that personal statements should be brief; a few sentences or a single paragraph would be sufficient.

All in all, the personal statement would be a minute cost and its benefit would greatly enhance the value of the certification clause because the psychological impacts and increased disclosure have been proven to deter dishonesty and lead to more accurate statements.

The third proposition is to broaden the responsibility of the certification requirements to the COO, CIO, and all other officers of public companies. This proposition is important because broadening of accountability to the entire C-suite would increase the degree of care, influence,

and discretion all company officers use when managing their respective units. (Berggren, 2007, Hirtle, 2006) Furthermore, the proposition would help make sure that the goals of all officers are aligned in congruence with shareholder wealth which again strengthens the certification requirement in the aspect of agency theory (Hermalin, 2012, Olvera, 2013). It would also help insure that chances of fraud and rationalization do not figuratively fall through the cracks. For example, a COO could be committing fraud in operational reports to gain a greater bonus and would be less likely to be caught or held accountable for this action if only the CEO and CFO are required to give their signature.

The third proposition is also valuable because it is pragmatic and simple. All it requires is a few extra signatures, and yet even in its simplicity it adds value to the certification because it increases accountability all across the board of public firms (Hermalin, 2012).

By now it should be evident how these propositions could greatly enhance the effectiveness of the certification process, but without a plan of action to actually institute the propositions they are nothing more than theory. However, since much of the research in this area is still in relative infancy the action plan provided in this paper is more general in nature, and serves as more of a guide for future research and a grassroots movement for public companies to begin instituting these propositions from their own decision, and not necessarily from federal legislation.

The beginning phase of the plan is increasing awareness of the research and propositions among professionals and public companies. Management teams of public companies should know and understand the importance of the certification process so that they might take the process more seriously, and improve upon it. However, this cannot solely be done through the argument of deterring fraud and creating more accurate financial statements, but through the

theory that if company management does decide to enhance the certification process the decision could positively impact firm performance. Research has suggested that companies with more corporate governance will benefit from increased performance and can even lead to positive bottom line effects (Berggren, 2007). Furthermore, more specific research has shown that the certification process itself can result in higher than normal market returns for stock performance (Hirtle, 2006). With these drivers in mind, professionals should begin influencing company boards and management to begin to implement the propositions and other means of improving the certification. Along with the argument that improving the certification requirement could drive performance proponents can also argue that instituting the propositions could lead to a stronger reputation as a responsible and transparent business (Hermalin, 2012). Logically, investors would interpret the company's actions to improve the certification, especially if the actions are unforced, as a positive signal which could result in an increase in company value and stock performance.

As more and more companies begin adopting the propositions more pressure will mount on the firms that do not adopt them. The goal would be for firms to adopt these propositions on their own without the need for more federal legislation. However, as time goes on and more research surfaces as to the importance of the certification requirement the movement should capitalize on the power of lobbying and add pressure to lawmakers to include these propositions and possibly other improvements in an added piece of legislation to SOX.

In summary, the certification requirement was scrutinized through multiple theories and proven research synthesized from multiple fields of study, and the review of studies suggests that the certification requirement is adequately helpful in deterring management fraud and creating more accurate financial statements. The research, however, did find some areas of weakness in

the certification process that could be improved. With the aid of the current literature and the added analysis of this paper three propositions are brought forth to form a new theory and model that will serve to improve the certification element of SOX, and ultimately further lessen the risk of management fraud and create more accurate financial statements. The three propositions and action plan laid forth in this paper adds a pragmatic channel and guide to improve the certification process, and lays a path for future study of this subject.

IMPLICATIONS

The implications and findings of this paper are broad, important, and relevant to many groups of stakeholders, and cross a wide variety of disciplines. For example, this paper has implications in psychology as more studies on the psychological link between honesty and a person's signature begin to surface. The findings should also have implications in the study of law and public policy, and help shape future political debate surrounding SOX and business regulation. Furthermore, the results will impact many other business disciplines other than accounting; the results will affect management and ethics courses as well.

For academia the findings answer some important questions as it comes to the value of the certification clause and offers future areas of study. Important paths for future study are in the validity and value of the three propositions previously set forth. If the propositions are found valuable, academia will have to play an important role in the action plan of implementing the propositions.

For non-academics the findings are relevant for many different groups such as investors, creditors, lawmakers, auditors, and other stakeholders. Investors can take confidence that the certification process is somewhat successful in deterring fraud and creating statements that they can actually rely on. Similarly, creditors can be more confident in the integrity of

management and help them make better decisions on credit ratings. Lawmakers can use this information to guide new policies when it comes to regulation of business enterprise.

Auditors can use this information to better evaluate management and management's integrity in regard to how seriously management takes issues of fraud, accounting controls, and the certification process in general. Furthermore, non-academics alike should be encouraged to evaluate and scrutinize the three propositions, and after consideration should take meaningful action to help influence and institutionalize the propositions in the certification process among public companies. Lastly, it will be non-academics that will hold the most influence when it comes to how businesses and management teams behave in the context of the general business environment. If non-academics begin demanding greater care and diligence throughout the accounting processes and certification requirement then businesses will be much more moved to meet the demands of the general public.

One of the most valuable implications of the results of this paper is the ability to offer pragmatic advice to any company or board of directors that may want to take advantage of the findings. From a consulting perspective the conclusions of the research would advise company management to take seriously the certification aspect of SOX, and further to have extreme diligence throughout the company especially when it comes to the compilation of the financial statements. The findings confirm the research that increased corporate governance and disclosure create more accurate financial statements (Hermalin, 2012), and this confirmation combined with an institution of any or all three of the propositions within a firm will improve the certification process, compel honesty, deter fraud, and create more accurate statements. Therefore, companies should be advised to take steps to incorporate this research into their rules of corporate governance. This will not only benefit shareholders, but

in the long run will benefit the company as it has been found that greater transparency and disclosure drives successful company performance (Hermalin, 2012, Vintilă, 2012, DeBoskey, 2013, Berggren, 2007, Hirtle, 2006). Furthermore, the opportunity of increasing company performance should be relevant enough motivation for management teams to take seriously the certification requirement and begin to make willful steps to improve the certification process (DeBoskey, 2013, Hirtle, 2006). Lastly, the research should have an effect on auditors as they approach their engagements and how they view management integrity and the certification process as a whole (Olvera, 2013).

To conclude the implications of this research are far reaching and significant. The research touches across multiple areas of research and study, and is significant because it provides a definitive answer to the question posed. Through the findings the certification requirement is adequately successful in deterring fraud and creating more accurate financial statements, but the quality of the certification process could be improved.

CONCLUSION

In July 2002 when SOX was first signed into law many people probably did not realize just how significant the law would become both inside and outside of the business world. The question of this paper set forth to find specifically if the certification requirement of SOX was successful in its supposed goal of deterring management fraud and helping to create more accurate financial statements.

Through careful consideration and skeptical, objective scrutiny of the certification requirement within the context of established theories such as the simple model of rational crime (SMORC), recent groundbreaking psychological studies, agency theory, corporate governance, and the fraud triangle the compilation and synthesis of this research finds that, yes, the

certification requirement is an adequate tool and process for deterring management fraud and helping to create an environment conducive to preparing more accurate financial statements.

The research, however, did not stop there and this paper successfully added significant findings and conclusions to the original studies. This paper provided a definitive answer to the question posed, but also found some areas for improvement within the certification process, and outlined three independent propositions that if instituted would enhance the quality of the certification requirement:

- Recording forward-looking certifications
- Instituting a personal statement along with certification
- Broadening the responsibility to the COO, CIO, and any other company officers

Furthermore, the paper also addressed future areas of needed study and scrutiny within the research and upon the propositions, and outlined a pragmatic action plan for the necessary next steps.

In conclusion, the findings have far reaching implications for a variety of academic disciplines, professional industries, and differing stakeholders. Lastly, this paper serves not only as an answer to an important business question, but is a helpful addition to the relevant literature because of the theory and propositions built from the synthesized arguments.

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ABSTRACT

This paper provides an in depth analysis of the certification requirement of Sarbanes-Oxley 2002. The paper poses the question if the certification requirement is successful in deterring management fraud and creating more accurate financial statements. It provides a definitive answer by carefully considering the certification requirement through the context of multiple established theories and models such as the simple model of rational crime (SMORC), agency theory, corporate governance, and the fraud triangle. The research also uses an expert interview and incorporates new research in psychology that links signatures to a person's capacity for dishonesty. The paper finds the certification requirement adequately successful, but then addresses areas of improvement through three independent propositions. This paper synthesizes previous research to build a new theory and action plan to pragmatically improve the quality and effectiveness of the certification process.