



University of Kentucky
UKnowledge

MPA/MPP/MPFM Capstone Projects

James W. Martin School of Public Policy and
Administration

2021

Analysis: Internal Controls Impact on the Mitigation of Risk and Fraud in Public Finance

Brian Stephens

University of Kentucky, brian.stephens@uky.edu

Follow this and additional works at: https://uknowledge.uky.edu/mpampp_etds



Part of the [Public Affairs, Public Policy and Public Administration Commons](#)

[Right click to open a feedback form in a new tab to let us know how this document benefits you.](#)

Recommended Citation

Stephens, Brian, "Analysis: Internal Controls Impact on the Mitigation of Risk and Fraud in Public Finance" (2021). *MPA/MPP/MPFM Capstone Projects*. 377.
https://uknowledge.uky.edu/mpampp_etds/377

This Graduate Capstone Project is brought to you for free and open access by the James W. Martin School of Public Policy and Administration at UKnowledge. It has been accepted for inclusion in MPA/MPP/MPFM Capstone Projects by an authorized administrator of UKnowledge. For more information, please contact UKnowledge@lsv.uky.edu.

A vertical dark blue bar on the left side of the page, with a blue arrow pointing right from it containing the text.

University Of Kentucky –
Martin School of Public
Policy and Administration

Analysis:
Internal
Controls Impact
on the
Mitigation of
Risk & Fraud in
Public Finance
By: Brian
Stephens

A decorative graphic consisting of several thin, curved lines in shades of gray and black, extending from the bottom left towards the center of the page.

Table of Contents

I. Executive Summary	2
II. Introduction/Overview	2
III. Literature Review	10
IV. Research Study and Design	13
V. Case Study Review/Analysis	18
VI. Recommendations	36
VII. Limitations	37
VIII. Conclusion	38
IX. Works Cited	39
X. Appendix I – IRB Process	41
XI. Appendix II – Other Sources	44

I. Executive Summary

Internal controls involve every process that assess or mitigates risks within an organization. From an organizational level, internal control objectives relate to the reliability of financial reporting, measurements on the status of achieving operational or strategic goals, and compliance with laws and regulations. Over the years internal controls have gained the misconception of being merely an accounting or auditing function. However, poor or lapsed internal controls can have devastating effects on an organization. Conversely, an organization that places heavy emphasis on internal controls and leads with an ethical culture are more likely to be successful in meeting their organization’s mission and goals. Public organizations are not exempt from internal controls and can implement regardless of size or service level. This project addresses the importance and impact of internal controls on a public organization.

II. Introduction/Overview

“Internal controls are the mechanisms, rules, and procedures implemented by a company to ensure the integrity of financial and accounting information, promote accountability, and prevent fraud. Besides complying with laws and regulations and preventing employees from stealing assets or committing fraud, internal controls can help improve operational efficiency by improving the accuracy and timeliness of financial reporting” (Kenton, 2021). Every organization either public or private have goals and objectives they must achieve in order to be successful. From the private sector it is important to be profitable for the good of the company for the financial benefit of its shareholders. From a public organizational perspective, goals and objectives are more mission oriented in terms of public service and protection. In order to

achieve these goals for public betterment it is imperative to discuss the framework of internal control systems to understand its objectives, principles, and roles.

In 1992 the Committee of Sponsoring Organizations of the Treadway Commission (COSO) published the Internal Control – Integrated Framework (COSO, Integrated Framework – Executive Summary, 2013). The framework was established by a group of auditors, accountants, and other financial management teams to create a base on which organizations should approach their internal control needs. Internal controls should not be viewed solely as a process to follow, but as a systematic improvement strategy for management within an organization. For improvement to begin there must be understanding of objectives and goals. For public organization managers this framework provides:

- A means to apply internal control to any type of entity, regardless of industry or legal structure, at the levels of entity, operation unit, or function.
- A principles-based approach that provides flexibility and allows for judgement in designing, implementing, and conduction internal control – principles that can be applied at the entity, operation, and functional levels.
- Requirements for an effective system of internal control by considering how components and principles are present and function and how components operate together.
- A means to identify and analyze risks, and to develop and manage appropriate responses to risks within acceptable levels and with greater focus on anti-fraud measures.
- An opportunity to expand the application of internal control beyond financial reporting to other forms of reporting, operations, and compliance objectives.

- An opportunity to eliminate ineffective, redundant, or inefficient controls that provide minimal value in reducing risks to the achievement of the entity's objectives. (COSO, Integrated Framework – Executive Summary, 2013 Pgs. 1-2).

From a public management perspective, the previous section highlights key concepts for internal management. If these internal control management tools are successful, then the following list will be the outputs of the internal controls.

- Greater confidence in the board of directors' oversight of internal control systems
- Greater confidence regarding the achievement of entity objectives
- Greater confidence in the organization's ability to identify, analyze, and respond to risk and changes in the business operating environments.
- Greater understanding of the requirement of an effective system of internal control.
- Greater understanding that through the use of judgement, management may be able to eliminate ineffective, redundant, or inefficient controls. (COSO, Integrated Framework – Executive Summary, 2013 P. 2).

In summary, the framework of any internal control system should keep its two main stakeholders in mind. These stakeholders are internal such as management, personnel, and processes. External stakeholders would be public opinion, public transparency, and the public recognition of waste in processes.

Objectives:

Within the COSO framework there are three key objectives that help identify and define an organization's internal control system:

1. Operations objectives – These pertain to effectiveness and efficiency of organization's operations including financial performance goals and safeguarding assets against loss.

2. Reporting objectives – These pertain to internal and external financial and non-financial reporting, and many encompass reliability, timeliness, transparency, or other terms set forth by regulators, recognized standard setters, or the entity’s policies.
3. Compliance objectives – These pertain to adherence to laws and regulations to which the entity is subject to. (COSO, Integrated Framework – Executive Summary, 2013 P. 3)

From a public management perspective, oftentimes the objectives are heavily compliance and reporting focused and less focused on operational effectiveness. To match changing needs from its external stakeholders, it is imperative for public organizations to strive for performance measures instead of relying on the status quo. Risk mitigation is also a key objective in operational efficiency because it reduces the threat of fraud and potential financial losses.

Principles:

To meet these objectives of effective internal control systems COSO created five key principles of internal control. Each of these controls are designed to work together in conjunction with the objectives to lead from management/board perspective the behaviors needed to effectively create, implement, and demonstrate internal controls in any organization.

- Control Environment – This principle leads from the top in terms of cultural behavior within an organization through a demonstration of integrity and ethical values management established authority, organization structure and responsibility. With these actions management commits to competency among its employees while enforcing accountability to its policies and procedures.
- Risk Assessment – Organizations use risk management to identify its suitable objectives. The organization identifies risks to the achievement of its objectives across the entity and analyzes risks as a basis for determining how risks are

managed. The organization considers the potential for fraud in accessing the risks. The organization identifies and assesses changes that could significantly impact the system of internal control and its effect on operations.

- **Control Activities** – The organization through defined policies and procedures selects and develops control activities that contribute to the mitigation of risk to the achievement of objectives to acceptable levels. Control activities are placed over technology to support the protection of data and achievement of objectives.
- **Information and Communication** – The organization obtains or generates and uses relevant quality information to support the function of internal control. Utilizing communication to both internal and external stakeholders, the organization can monitor objectives and responsibilities for internal controls and report on the functioning of current methods for compliance.
- **Monitoring Activities** – The organization selects, develops, and performs ongoing and/or separate evaluations to ascertain whether the components of internal control are present and function. If any deficiencies should occur, they are communicated in a timely manner to those parties responsible for taking corrective action, including senior management and board of directors, as appropriate. (COSO, Integrated Framework – Executive Summary, 2013 Pgs. 4-7).

The principles created by COSO help shape and define what a good internal control environment looks like. However, these objectives and principles must have continual functionality, and all must work together to achieve continual improvement through the internal control environment.

Roles:

Identifying the position type a role will perform is key to achieving improved operational performance in any organization. In relation to internal controls, it provides a separation of duties to mitigate risks and detect fraud. For example, if an employee has signature authority for all check signings and is responsible for physically receiving funds in an organization then there is clear need for separation of duties and understanding roles of authority. COSO reviews this from a higher level perspective and reviews organizational level as well as functionality within its framework.

- Entity Level – As stated previously this is the organizational level that sets the tone in terms of ethical culture and fraud monitoring behavior.
- Division Level – Senior management level who reviews and ensures compliance by doing annual or random checks on internal controls.
- Operating Unit – Operating units are more day to day activities to ensure reports and other activities are being carried out correctly by using several people within team to complete work and compliance on documentation. This would be a second tier of accountability to the employee as this unit is a direct manager.
- Function – This is the employee or more correctly the role that has been assigned to complete a task for the organization and how this role completes tasks on a daily basis.

When a framework on internal controls is determined to be effective then they are able to achieve:

- operational efficiency,
- mitigate external or internal risks,

- complete reports in compliance with laws and regulations,
- and ensure that procedures comply with all laws, rules, and regulations. (COSO, Integrated Framework – Executive Summary, 2013 Pgs.8-9)

As demonstrated with the COSO cube in Figure 2-1 all these concepts must work together to define an effective internal control system.



(Figure 2-1 – COSO Cube (2013 Edition))

Understanding the importance of how these concepts come together to create an efficient internal control system is imperative to the operation of any public organization. The implementation and practice of this system is where some organizations struggle and where gaps in daily operations can be found. Once a system is established and activities are ongoing an organization must understand the importance of maintaining and monitoring the system as business needs change.

Functions of Internal Controls:

Framework has been established for internal controls, but a definition of how these are applicable to employees must be created to maintain a good internal control system. There are three main functions that internal controls will perform in an organization.

1. Preventative – These functions and controls will deter problems before they arise.

Examples of preventative controls are: separations of duties, transaction pre-approvals, control methods (passwords, two-step authentication), and physical controls (pad locks or key locks on equipment). Preventative controls are the ideal situation in which processes and internal controls are reviewed and improved upon year to year.

2. Detective – This control measure discovers problems quickly before they become a larger issue. Examples of detective controls are: monthly account reconciliations, inventory control, log monitoring, or near-miss reviews. Detective controls can show others outside of a process that something is completed and reviewed. Also, this gives authority to leadership to make changes quickly before a problem occurs.

3. Corrective – Correcting problems that have been identified through an internal control audit to ensure they don't occur again. Examples of corrective controls are: disciplinary actions, audit review and new implementation plans, and modifications to current processes. This is the most costly of the internal control functions as it is usually in response to an exposure and the organization has suffered financial losses that could have been prevented if the other two functions were securely in place.

Corrective controls are most likely the result of some fraud or risk event that has cost the organization a financial loss and therefore internal controls must be reworked for the entire organization to ensure this does not occur again. Beyond the initial financial loss of an auditing finding or fraud event an organization can spend thousands more dollars on training as well as manpower disruptions resulting in lost value-added time for their employees. The cost and impact an occurrence can have on an organization is not only measured financially, but through its internal and external reputational losses.

Internal controls are not solely accounting and auditing functions, but have value for an organization in terms of goals and objectives. A systematic framework built on key objectives driven by principles by employees with clearly defined roles is imperative to the success of an organization regardless of size or mission. By creating a management culture of integrity and transparency any organization can benefit from redefining their internal controls. Ideally, internal controls are proactive in nature as they are designed to prevent and detect any fraudulent behavior. The impact of implementing corrective internal controls due to an audit finding or fraud event can not only be detrimental in financial losses, but will have lasting effects on internal employees as well as public perception. To grasp the full impact of how internal controls can affect management decisions it is important to review previous concepts and learn from examples where internal controls were ignored or lapsed.

III. Literature Review

Background:

When internal controls are not present or unmonitored by management it can prove to be disastrous for any organization. The most common outcome of poor internal controls is fraud leading to theft and a major loss in funds. According to their Report to the Nations released in 2020 the Association of Certified Fraud Examiners (ACFE) reported that 1/3 of all fraud are committed due to a lack of internal controls (ACFE – Report to the Nations, 2020 P. 5). In 2020 there have been 2,504 cases from 125 countries worldwide that has led to losses of more than \$3.6 billion (ACFE – Report to the Nations, 2020 P. 4). This statistic includes public and private organizations. “Nonprofit organizations can be more susceptible to fraud due to having fewer resources available to help prevent and recover from a fraud loss. This sector is particularly

vulnerable because of less oversight and lack of certain internal controls” (ACFE – Report to the Nations, 2020 P. 28). “National-level government entities experienced the greatest number of frauds (45%) and had the highest median loss of USD 200,000, which is more than twice as much as the median loss at state/provincial government entities (USD 91,000). While local governments reported the second-highest number of cases (32%), they suffered a relatively lower median loss of USD 75,000” (ACFE – Report to the Nations, 2020 P. 24). However, this is only a portion of the organizational issues that could be caused by poor internal controls.

“Internal controls are processes designed to help safeguard an organization and minimize risk to its objectives. Internal controls minimize risks and protect assets, ensure accuracy of records, promote operational efficiency, and encourage adherence to policies, rules, regulations, and laws. Many different types of internal controls exist. They can be preventive or detective, automated or manual, and all of these are impacted by people” (Internal Control Compliance – auditboard.com). In any organization either private or public, policies and procedures direct employees how to do their jobs. These operational functions can come in various forms, but the key takeaways are that these concepts are everyone’s responsibility in an organization and is maintained through accountability in adherence to internal controls. “Defining individual accountability for key control activities, especially in large, decentralized institutions, is increasingly important in today’s environment. Stakeholders are scrutinizing institutions more closely and raising the bar on expected control behavior. Institutions of all types and sizes should be prepared to provide greater assurance to regulators, lenders, donors, and other stakeholders about the effectiveness of internal controls” (Mattie, Hanely, Cassidy, 2005 P. 6).

Methodology:

Financial losses are the most detrimental rationale behind re-evaluating of internal controls. In some cases, those losses are recouped, but how does this impact organizational culture moving forward? Public organizations have mission and service driven objectives to better serve their customers through efficiency and transparency. Within the public sector, organizational objectives are not solely about bottom line performance. However, there are other aspects that drive the importance of internal controls to improve overall operational inefficiencies.

For an organization to function effectively and provide the best service possible to its end users it has to consider the following as taken from the COSO cube:

- **Control Environment** – Organizational culture is key to establish what values and qualities employees at all levels are expected to understand and demonstrate. Management demonstrates ethical behavior and integrity from all levels. Accountability is key to management and each employee.
- **Risk Assessments** – Defining risks and understanding risk tolerance is vital to accomplishing goals with the knowledge that risk is inherent in any field. Internal controls are designed to mitigate these risks and bring to the surface potential risks. When internal controls are a priority, this action is proactive vs. being reactive.
- **Control Activities** – Clearly defined roles protect the organization and employee from two things. Firstly, segregation of duties makes sure one person is not in charge of a financial function that can lead to fraud. Secondly, duplication of effort of these duties can lead to waste of employee's time and effort.

- Information and Communication – This involves the retention and maintaining of data and/or other information that should be stored. Without internal controls such as passwords and encryption this can be a huge risk to any organization. IT security and its protection protocols are becoming increasingly more susceptible to theft from internal and external sources.
- Monitoring – As performance reviews give feedback to individuals about performance and improvements, so should monitoring give feedback on internal control performance. Through monitoring the process for identifying deficiencies and gaps in operations can become visible on a yearly basis. Along with this action, a plan of improvement must be developed for continual development for any organization.

Internal controls may be considered an accounting function, but for an organization to continually improve and eliminate fraud while mitigating risk it must be everyone's responsibility. "By understanding how internal control systems have relevance to our daily lives, employees should be more apt to recognize the need for enhanced controls at the workplace" (Urbanik, Fall 2016). The five considerations listed within the research design section will be the performance metric used to establish, implement, and provide evaluation of internal controls for the purpose of this study.

IV. Research Study and Design

After a fraud finding or audit is completed within an organization or unit, morale and employee engagement could be at an all-time low due to poor findings or employee retaliation fears from management. Audits can take time, resources, and attention away from an

organization's objectives and goals. Public trust and reputation are affected by this outcome as well as external customers have begun to lose faith in their public financial entities.

Management's goal should be to involve all employees within the process as an exercise in continuous improvement to meet organizational objectives.

The purpose of this study is to identify how public organizations can improve their organizational culture to avoid future audit findings as well as mitigate risks by implementing preventive and detective internal controls. Utilizing standardized procedures and process mapping will allow the identification of missteps or gaps within a process or procedure. For the purpose of this study, gaps are defined as any variance in meeting standard procedures or ideal conditions. The goals, within this study are to identify the internal control that could have been improved, define best practices, and visualize process methods that will prevent fraudulent activity, mitigate risks, and to continually improve organizational operations. To achieve these goals, this project will review a variety of case studies and audit discoveries where fraud was detected and where internal controls could have been improved. The project will identify the missteps or gaps within internal controls that could prevent fraud or improvement in operational objectives. Through the process mapping technique this project will identify gaps or areas of improvement in processes identified within the case studies.

When a problem occurs within an organization, it is imperative to do a root cause analysis to make sure the problem is fixed, and it does not return. "Root cause analysis is an approach for identifying the underlying causes of an incident so that the most effective solutions can be identified and implemented. It is typically used when something goes badly but can also be used when something goes well. Within an organization, problem solving, incident investigation, and root cause analysis are all fundamentally connected by three basic questions:

1. What is the problem – Identify the main issue. (Define the Problem)
 2. Why Did it Happen – This requires more analysis in understanding people, working conditions, etc. (Analyze the Problem)
 3. What will be done to prevent it from happening again? – What controls will be put in place to prevent the problem from re-occurring. (Solve the Problem)
- (Sources from What is Root Cause Analysis – www.thinkreliability.com)

There are many ways to identify a root cause within a process. For this study, the methodology of process mapping will be utilized. Process mapping will identify how steps within a single process can be visualized by a management team to adjust and improve internal controls that will prevent fraud and mitigate risks. Visualization of this process will define the current processes and make transparent the gaps within the process that should be rectified before another process is started. An example of this process is demonstrated below in Figure 3-1.



(Figure 3-1 Source: Stephens, updated November 2019)

Demonstrated in Figure 3-1 is a process where clients engage in a working relationship with an external organization. The outside clients are contracting with this entity for their service. The business development manager works with all parties to ensure the contract is fulfilled without any oversight or review from a business or supervisory position. After analyzing Figure 3-1 there are some areas for improvement. For example, there should be a separation of duties

between the BDM and with a potential financial or purchasing officer completing a review before work is permitted. Also, missing is a step where selection of contractors would occur. If there is no selection or criteria of contractors, then the work may not be guaranteed or up to standard for this organization. Through a review of the case studies in this project, process maps similar to Figure 3-1 will help identify gaps or missteps in each case study's business processes that lead to poor internal control management.

Mitigation of Risks – Design and Analysis:

“Operational risks are defined as the loss from inadequate or failed internal controls, processes, and systems associated with external or internal events” (The Risk Management Association (RMA) – Operational Risk Management Training & Resources). Not all operational risks are identified through an audit engagement. Operational risks should be monitored not only by management but also should be viewed as an organizational challenge by each employee. The research process used in this study will be compared against five key factors associated with successful risk management. The five factors are:

1. Identify the risks – Once deficiencies in the internal controls are identified, process mapping will be utilized to help identify risks.
2. Discuss the impact – The study will discuss the impact of the identified risks to the organization.
3. Evaluate the risks – The study will review the level of risk and determine its effect on the organization whether management does or does not take appropriate action.
4. Document – Documentation of risks are vital to limit the risk impact and its likelihood of the risk reoccurring.

5. Monitor and Repeat – Risks can reoccur at any time. It is important to be mindful of these risks. A process should be in place to repeat the risk assessment to mitigate the risks from returning. The process developed should always be repeatable.

Risks are inherent in any organization, however through proactive internal control systems, risks can be managed by any organization.

Operational Improvement – Design and Study:

Development of key metrics will help an organization understand what deficiencies may exist within their internal controls. These metrics ensure proper asset protection and employee accountability. Key identifiers in this research will be:

- Measurement of accountability – In order to continual improve, an organization must evaluate its employees on competencies and performance once a year and document any areas for improvement.
- Adequate training – Utilizing the performance evaluation process, organizations are able to identify areas where additional training may need to occur.
- Monitoring and self-evaluation of internal controls – Organizations should review internal controls on an annual basis.

The design of this project includes the analysis of case studies, identifies through process mapping where internal controls or processes can change the outcomes, and develops best practices based on lessons learned and COSO framework through the cases. The goal of the study is to identify the internal controls, their weaknesses, and recommend strategies to improve them to minimize risks and enhance operational procedures for the organizations analyzed.

V. Case Study Review and Analysis

The method used to demonstrate the impact of internal controls is derived from case studies of poor internal controls and the impact that they had on organizations. Before a problem can be identified a standard must be understood so that anyone can see a deviation from the ideal scenario or situation. This method will be demonstrated through the process mapping technique mentioned previously in Figure 3-1 and the identification of the gaps within the process as identified with a red arrow with the case breakdown. Through this analysis a discussion of root cause will be identified as well as which internal controls were ignored. Recommendations of improvements will be made based on the lessons learned throughout these cases.

The following case studies demonstrate issues within internal control that have allowed for fraud, high risk scenarios, and poor management.

- Horseplay in Dixon, IL – The Rita Crundwell Case – This case will examine how no separation of duties and lack of management oversight led to over \$53 million dollars in embezzled funds and the impact it had on the city of Dixon, IL (Apostolou, B, Apostolou, N, Thibodaux, 2015). Here will be a demonstration due to the lack of preventative controls such as signature authority and separation of duties. Also, detective controls were hidden or falsified through financial statements and reports for a number of years.
- Leonard Glenn Francis (“Fat Leonard” Case) with Navy procurement – This case demonstrates how culture from Navy leadership lead to over \$35 million in overbilling over the span of 23 years. It is a clear example of how external issues such as following correct internal procurement procedures could have prevented

this overbilling (LaGrone, January 2019). Within this case is a demonstration of how management culture can override internal controls to further their goals.

- Kentucky School District Fraud: Money laundering through a church – A former Kentucky school finance director Leslie Wade stole \$1.6 million by writing checks to herself through her church where she was also the treasurer. The example demonstrates single access to financial records and also being the custodian of these funds can allow for continual fraud to occur for a number of years (Estep, May 2020).
- The Roslyn School District Fraud – Charismatic school superintendent Frank Tassone and his co-conspirators created an invoicing system that would be disguised in their accounting system to pay fraudulent invoices to the amount of \$11 million dollars over the course of his tenure within the school district. This was hidden through over-performing school district and rationalized by the team of fraudulent actors that this was owed to them for their continued hard work. Here is a classic example of management over-riding internal controls for their personal benefit. Within this case was also a co-conspirator of a close acquaintance as the internal auditor and stresses the importance of audit rotation within internal controls (Elder, Yebba, November 2017)
- The Lucrative Library Fund – Accounting associate Randall Whited stole \$1.3 million in printer toner as a public library employee in the city of Austin, TX. Whited would use purchasing authority to purchase an over-abundance of printer toner and resale the toner for his own personal gain. He was able to do so because of his trustworthiness and his control over the entire process without reviewers.

Here is an example of developing procedures that include separation of duties as well as a final review (Yamma & Molloy March 2nd, 2021).

The goal of these studies is to provide examples of the impact poor internal controls can have on an organization. These impacts come in the form of asset loss, poor organizational culture, higher risks, information/data leaks, and poor performance monitoring. All these eventually lead to operational inefficiencies if internal controls are ignored. The goal of this project is to demonstrate how internal controls are everyone's responsibility and that proper internal controls will prevent fraudulent activities, mitigate risk, and promote continuous improvement within an organization.

Case Study #1 – Horseplay in Dixon – The Rita Crundwell Case

Overview:

Credited as one of the largest municipal frauds of all time former comptroller and treasurer Rita Crundwell for the City of Dixon, IL embezzled \$53.7 million dollars over the span of around 21 years. Due to the city of Dixon having a very small staff, Rita Crundwell took on most of the administrative and financial duties by herself as she had taken on these additional responsibilities since 1983. Rita Crundwell had also created an arrangement with a local auditor and CPA to sign off on audits without completing the work. "Rita Crundwell had no supervisor and had earned the complete trust of the Mayor, Council members, and colleagues. The auditors noted the absence of segregation of duties and the risk of management override regularly since 1993 but made no attempt to address these material weaknesses with enhanced audit procedures. Furthermore, no audit report on Internal Controls over Financial Reporting (ICFR) reported these material weaknesses, noting instead that ICFR was effective" (Apostolou, B, Apostolou, N,

Thibodaux, 2015, P.283). The money was stolen by creating fake invoices. Then the funds were deposited into a local account where Rita Crundwell was the only one that could access the account. Even though these were discovered by audit findings, nothing further was done about it as no further inquiries were made. The finding was only uncovered by mistaken discovery with the bank statements while Rita Crundwell was out of town. There were red flags that were present of fraud as Rita Crundwell was spending money on horses and lavish vacations far beyond what her salary would normally afford. The city of Dixon did recoup \$40 million of the funds that were lost. Internal control changes were made as paper checks were no longer allowed, duties were segregated, and cash responsibilities required signatures from a City Administrator. Organization changes were made as the comptroller position was replaced by a Finance Director role. Also, financial reporting was changed to a panel that would include a CPA, banker, and attorney to ensure all records are in alignment. “As a direct result of the Rita Crundwell fraud, the State of Illinois passed into law a requirement that the annual audited financial statements be presented to each member of the city council or county board in a public meeting; the municipality also must post the audited information on its website” (Apostolou, B, Apostolou, N, Thibodaux, 2015, P.287)

Financial Losses:

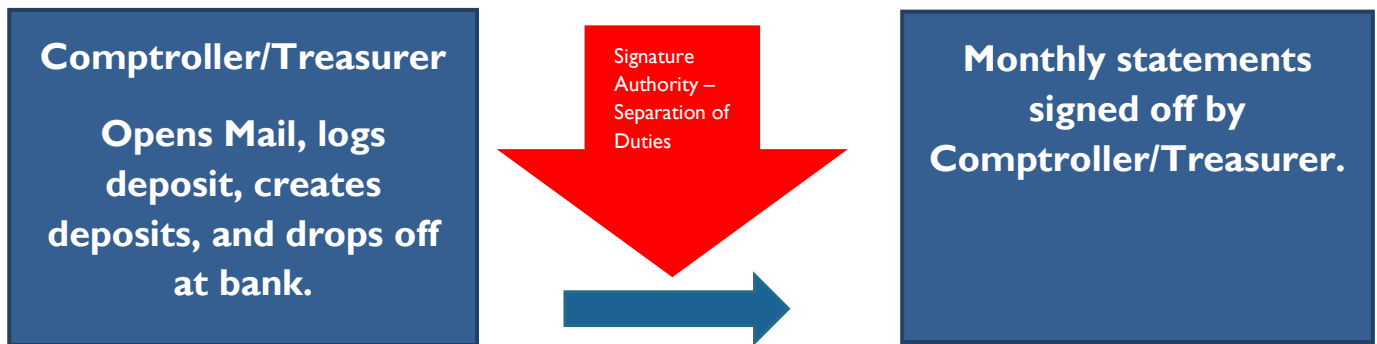
- Total of \$53.7 million, minus recouped funds of \$40 million – Net financial loss - \$13.7 million

Operational Deficiencies:

- No separation of duties – no clear line of management

- Monthly reconciliations could have prevented this if handled by different role,
- Inadequate training for staff

Key Process Example:



Areas for Improvement:

- Control Environment: - Staff changes could change tone from top, however for this to make an impact the mayor and city council must take more active role so that something like this does not reoccur. Culture begins with management level.
- Risk Assessment – Due to the changing nature of the organization, what other risks are there? The money that was embezzled took away opportunities for improvement within the city. Dixon should complete a risk assessment in order to monitor the impact of the \$13.7 million in lost funds.
- Control Activities: With the organizational changes in Dixon, IL, and new roles, how will the organization determine duties with a small office? This will need to be reviewed to avoid duplication of effort creating waste.

- Information and Communication – Should IT and other data protections play a role in mitigating future risks? Password and two-factor authentication on computers that access financial information would be beneficial.
- Monitoring – The city of Dixon should take this opportunity to make sure they are checking their internal controls on a yearly basis. Also, ensure staff is adequately trained through the performance review process.

Internal Control Analysis:

Case Study #1 - Horseplay In Dixon - The Rita Crundwell Case					
Internal Control - Weakness/Failure	Define the Problem	Analyze The Problem	Solve the Problem	GAO Recommendation	Element of COSO
Segregation of Duties	Same individual doing transactions without oversight.	Lack of Staff or Training - Multiple Duties by the same person.	If possible create new positions - with limited resources require signature oversight from other officers.	Segregation of duties helps prevent fraud, waste, and abuse in the entity by considering the need to separate authority, custody, and accounting in the organizational structure (GAO - Green Book P. 29).	Control Activities
Access Controls	Position of Treasurer and Comptroller too much access over process.	Oversight of process should be controlled by higher authority without process responsibility.	For a transaction involving multiple departments or roles create individual access levels to reduce to much access to information.	Management limits access to resources and records to authorized individuals, and assigns and maintains accountability for their custody and use. (GAO Green Book P. 48).	Control Activities
Periodic Reconciliations	Monthly audit of accounts were completed by Rita Crundwell without someone else approving them.	Monthly account reconciliations by another person could have resolved the issue.	Monthly account reconciliations need to be completed by someone who does not have authority or daily operations in the account.	Management performs ongoing monitoring of the design and operating effectiveness of the internal control system as part of the normal course of operations. Ongoing monitoring includes regular management and supervisory activities, comparisons, reconciliations, and other routine actions. (GAO Green Book P. 65).	Monitoring
Approval Authority	Since there was no supervisor for Rita Crundwell, she approved all transactions as well as completed them.	Given the smaller office - Roles of authority were not clearly defined.	Approval must be given from a supervisor at a higher level and delegation of authority should be established.	Management should establish an organizational structure, assign responsibility, and delegate authority to achieve entity's objectives. (GAO-Green Book P. 27).	Control Environment

Case Study #2 – “Fat Leonard” and Navy Procurement

Overview:

Leonard Francis, owner of Glenn Defense Marine Asia (GDMA) was a contractor to the U.S. Navy to provide ship husbandry in ports along the coast of Asia. He was contracted by ship

officers and not by Navy procurement methods to take care of things for the decorated senior officers and their men. These tactics were highly questionable in terms of the ethics of the U.S. Navy. The concept of taking care of things were unethical practices in terms of illegal activities such as drugs, prostitution, and bribery. However, senior leadership turned a blind eye to some of Francis' tactics to take care of the ships and their sailors. Francis was often quoted that “nothing was too good for the fleet” as he would continue his work at the same time overbilling the Navy \$35 million without a formal review of GDMA's invoices. GDMA would receive information from the Navy procurement officers and other officials in order to submit false bids from fake competitors to ensure that GDMA would be the recommended vendor source. This practice would begin in the late 1990's until his 2013 arrest. The overbilling signaled a red flag to Navy procurement, but as the activities continued so would the unethical behavior of Navy senior officers who would oftentimes look past rules and regulations to make sure the GDMA was meeting the “needs” of their sailors. This investigation is still ongoing because not only was this unethical and fraud like behavior exhibited by a handful of senior officers, but junior officers as well. Careers and reputations have been damaged because of these violations and as of 2018, 450 persons were brought in for questioning with the potential of 170 more (LaGrone, January 2019).

Financial Losses:

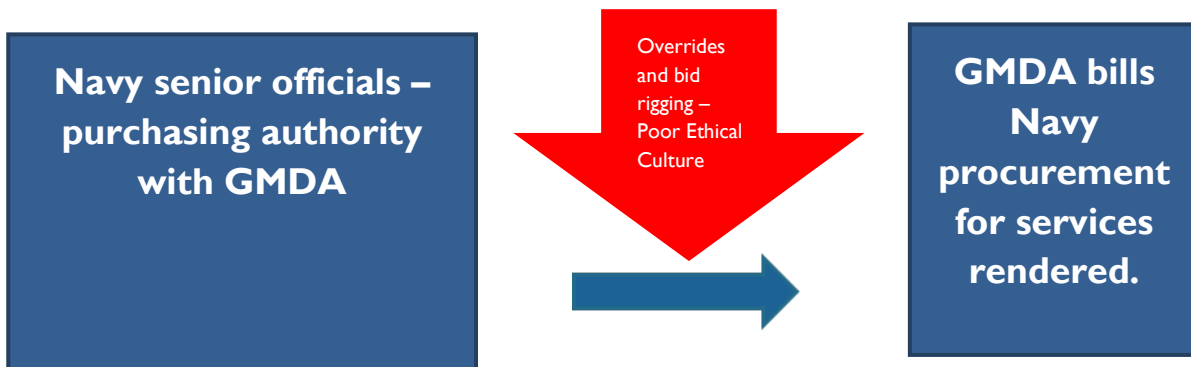
- Total of \$35 million to date. This number is not finalized as the investigation is still ongoing.

Operational Deficiencies:

- Void of formal contract or agreement with vendor due to Navy laws and regulations,

- Senior officers unethical behavior and violation of Navy procedures,
- Senior and Junior level officers have been dismissed or promotions delayed due to investigations,
- Bid-rigging from both Navy procurement and GDMA.

Key Process Example:



Areas for Improvement:

- Control Environment: - Ethics and integrity should begin at the highest level of senior leadership.
- Risk Assessment – With unethical behavior and informal reviews of contracts, this opens the Navy up to a lot of risks as assessment must be completed to ensure this can be mitigated.
- Control Activities: As these bills were potentially paid to GMDA, there needs to be an assessment of potential losses with other vendors to ensure that purchasing and accounts payables are reviewing and signing off on these invoices.
- Information and Communication – Communication through ethics training would be beneficial as a lesson learned within this case.

- **Monitoring** – To monitor this incident and prevent it from coming back, organizational changes will need to be made along with proper lines of authority. Preventative controls will ensure the invoices are being signed off correctly for Navy procurement and accounts payable or other department to ensure invoice validity.

Internal Controls Analysis:

Case Study #2 - "Fat Leonard" and Navy Procurement					
Internal Control - Weakness/Failure	Define the Problem	Analyze The Problem	Solve the Problem	GAO Recommendation	Element of COSO
Tone at the Top	Unethical behaviors and decisions from senior officials lead to poor decisions due to personal gains by senior officers.	Ethics should be set up as key guiding principle in internal controls, corruption trickles down.	Eliminate officers that display this behavior and restructure as to reduce authority or limit based on policy and not personal decision making.	The oversight body and management demonstrate the importance of integrity and ethical values through their directives, attitudes, and behavior - GAO - Green Book P. 22.	Control Environment
Access Controls	Individuals from purchasing, who benefited from kickbacks from the GDMA were giving information to the vendor and proceeding with allowing their bids to win.	The bid process should have been open and competitive.	Make bid process open and competitive and limit control from purchasing and allow the process to determine the winning vendor.	Management limits access to resources and records to authorized individuals, and assigns and maintains accountability for their custody and use. (GAO Green Book P. 48).	Control Activities
Assess Fraud Risk	There were no separation of duties when it comes to payment authority or invoice verification.	With the absence of no controls management and procurement staff could override any controls or policies.	Minimize the opportunities to override policies or control functions as this creates high risk of fraud and other activities.	Management considers fraud risk factors. Fraud risk factors do not necessarily indicate that fraud exists but are often present when fraud occurs. Fraud risk factors include the following: Incentive/pressure, opportunity, and attitude/rationalization - (GAO - Green Book P. 41).	Risk Assessment
Approval Authority	Approvals came from those that would benefit if GDMA were awarded the contract.	The "unethical incentive" factor was rationalized by staff and officers.	Senior leadership should reinforce accountability standards and provide ethics training as a part of the on-boarding or training processes.	Management should establish an organizational structure, assign responsibility, and delegate authority to achieve entity's objectives. (GAO-Green Book P. 27).	Control Environment

Case Study #3 – Kentucky School District Fraud

Overview:

From 2011 until 2019, Lesley Wade former Franklin County school district finance director stole over \$1.6 million by writing checks to herself and laundering the money of her school district through her church where she was in the role of treasurer. Within both of these roles Lesley Wade had unlimited power of authority to write checks as her access to both record keeping

systems gave her control over both entities financial management systems. Within this case there was no identification of internal controls for prevention as well as no oversight from anyone else due to her power of authority (Estep, May 28th, 2020).

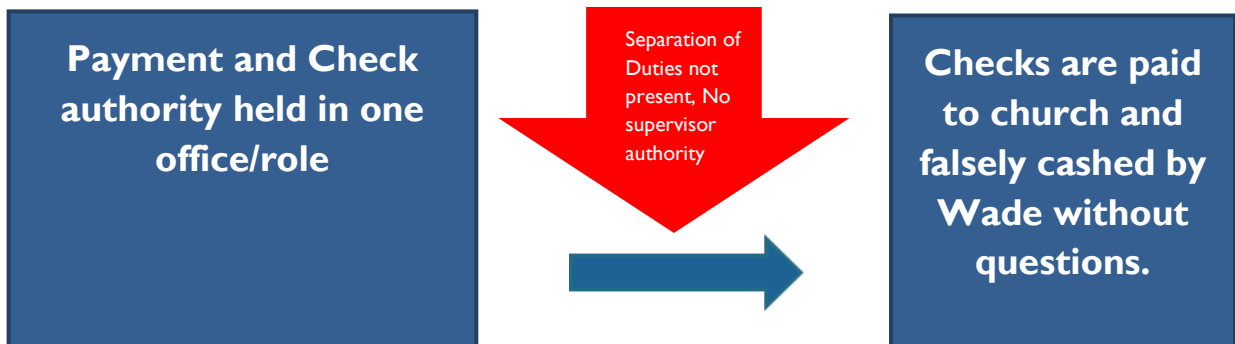
Financial Losses:

- Total of \$1,624,593 over a 19 year period.

Operational Deficiencies:

- No signature oversight,
- No separation of duties,
- No check on documents to the validity of the checks – falsified documents, falsified rationale.

Key Process Example:



Areas for Improvement:

- Control Environment - Senior leadership/school board should review all checks have a valid reason and for the correct purpose.
- Risk Assessment – Making sure the checks are accurate and reconciliation of accounts on a monthly basis would mitigate risks.

- **Control Activities:** As monthly reconciliations are completed have them verified by internal audit or other person not having direction correlation to these funds.
- **Information and Communication –** Create stronger protected passwords and authority delegation on all payment systems.
- **Monitoring –** Organization changes need to be made in order to reduce the authority levels of the financial director position and have more accountability within the school board.

Internal Controls Analysis:

Case Study #3 - Kentucky School District Fraud					
Internal Control - Weakness/Failure	Define the Problem	Analyze The Problem	Solve the Problem	GAO Recommendation	Element of COSO
Segregation of Duties	Same individual doing transactions without oversight.	Lack of Staff or Training - Multiple Duties by the same person, this example too much authority over systems.	If possible create new positions - with limited resources require signature oversight from other officers.	Segregation of duties helps prevent fraud, waste, and abuse in the entity by considering the need to separate authority, custody, and accounting in the organizational structure (GAO - Green Book P. 29).	Control Activities
Access Controls	Position of Financial Director had too much authority with payment and check writing.	Oversight of process should be controlled by higher authority without process responsibility.	For a transaction involving multiple departments or roles create individual access levels to reduce to much access to information. This being a school district issue the school board should have some more authority with payment systems.	Management limits access to resources and records to authorized individuals, and assigns and maintains accountability for their custody and use. (GAO Green Book P. 48).	Control Activities
Periodic Reconciliations	Monthly audit of accounts need to be reviewed and audited by other leadership or school board.	Monthly account reconciliations by another person could have resolved the issue.	Monthly account reconciliations need to be completed by someone who does not have authority or daily operations in the account.	Management performs ongoing monitoring of the design and operating effectiveness of the internal control system as part of the normal course of operations. Ongoing monitoring includes regular management and supervisory activities, comparisons, reconciliations, and other routine actions. (GAO Green Book P. 65).	Monitoring
Approval Authority	As authority was in the finance directors hands there was no upper level authority to verify payments.	Given this high level of authority other procedures should have been put in place to prevent these actions.	Approval must be given from a supervisor at a higher level and delegation of authority should be established.	Management should establish an organizational structure, assign responsibility, and delegate authority to achieve entity's objectives. (GAO-Green Book P. 27).	Control Environment
Assess Fraud Risk	There were no separation of duties when it comes to payment authority or invoice verification.	With the absence of no controls leadership positions can override controls and protections.	Minimize the opportunities to override policies or control functions as this creates high risk of fraud and other activities.	Management considers fraud risk factors. Fraud risk factors to not necessarily indicate that fraud exists but are often present when fraud occurs. Fraud risk factors include the following: Incentive/pressure, opportunity, and attitude/rationalization - GAO - Green Book P. 41.	Risk Assessment

Case Study #4 – The Roslyn School District Fraud

Overview:

The Roslyn School District in the city of Long Island, NY was victim to a multi-year and multi-departmental fraud conspiracy committed by over 30 co-conspirators lead by the school district's superintendent Frank Tassone. The \$11 million embezzlement occurred from 1992 until 2002 and was only found out from numerous anonymous tips that lead to its discovery. Throughout this time Tassone would hand pick his administrative staff including Pamela Glucklin as his business assistant, and also a close personal friend as the role of internal auditor. With similar minded individuals in place Tassone was able to take advantage of the school board lapse in oversight as the district was doing quite well with national test scores and producing quality students. The office of the New York State Comptroller was found to be implicated in this, by default as they had not performed routine inspections at the school districts since the late 1970's. In charge of daily administrative activities, Tassone would work with Glucklin to create "Finance Manager" that would allow this administration to create fraudulent invoices as alternate vendors within the system. Working within the function of internal audit there was no need for auditor rotation from an outside source. This further hid the findings of fraud. With these roles in place within the district Tassone and his team were able to take advantage of the lack of school board oversight due to there being no formal policies on cash, payroll, custody of signature plates, and other money transferring functions. As long as the district itself was overperforming the board believed the results were trustworthy enough to stand behind. Within the same context of school district overperformance, Tassone and his team also felt justified in their actions, because they were taking what they felt was owed to them (Elder, Yebba, November 2017).

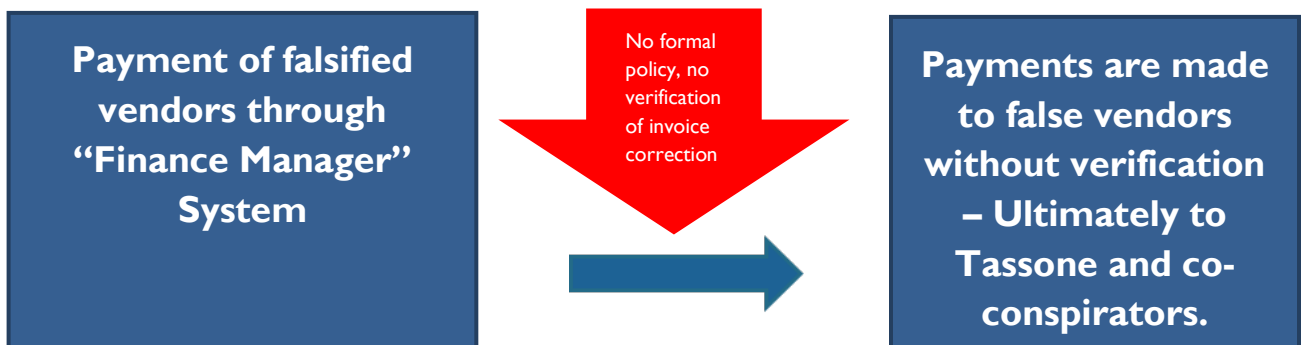
Financial Losses:

- Total of \$11 million in a ten year span (1992-2002).

Operational Deficiencies:

- Board oversight – Leadership at the top, believed in performance,
- No formal policies of cash handling and other needed policies,
- Office of the New York State Comptroller had not reviewed districts since the 1970’s,
- No auditor rotation, to verify financial statements and records.

Key Process Example:



Areas for Improvement:

- Control Environment - Senior leadership/school board should review policies to ensure written and valid for current operations and do financial training to verify procedures.
- Risk Assessment – Eliminate the role of internal auditor or change to include assessment of risks or internal controls.
- Control Activities: External auditor rotation to be performed every three years to ensure auditor independence.

- Information and Communication – Utilize other systems besides “Finance Manager” with access controls on passwords based on level of authority.
- Monitoring – Training with management other leadership to monitor financial oversight, accountability, and fiduciary responsibility.

Internal Controls Analysis:

Case Study #4 - The Roslyn School District Fraud					
Internal Control - Weakness/Failure	Define the Problem	Analyze The Problem	Solve the Problem	GAO Recommendation	Element of COSO
Documentation of Responsibilities Through Polices	No Formal Policies for Cash, Payroll or Delegation of Authority.	Without formal policies then policies are not documented and no one will have a paper trail or accountability.	Creation of formal polices - adopted by administration , approved by board, and reviewed periodically to ensure accuracy.	Management documents in policies the internal control responsibilities of the organization - (GAO - Green Book P. 56).	Control Activities
Access Controls	Position of Financial Manager had too much authority with payment and check writing.	Oversight of process should be controlled by higher authority without process responsibility.	For a transaction involving multiple departments or roles create individual access levels to reduce to much access to information. This being a school district issue the school board should have some more authority with payment systems.	Management limits access to resources and records to authorized individuals, and assigns and maintains accountability for their custody and use. (GAO Green Book P. 48).	Control Activities
Periodic Reconciliations	Monthly audit of accounts need to be reviewed and audited by other leadership or school board.	Monthly account reconciliations by another person could have resolved the issue.	Monthly account reconciliations need to be completed by someone who does not have authority or daily operations in the account.	Management performs ongoing monitoring of the design and operating effectiveness of the internal control system as part of the normal course of operations. Ongoing monitoring includes regular management and supervisory activities, comparisons, reconciliations, and other routine actions. (GAO Green Book P. 65).	Monitoring
Tone at the Top	School board should be educated on fiscal responsivity and accountability. Too heavily reliant on performance vs. truth.	Training should be held to make sure fiscal understanding is had in all leadership positions.	Annual training to understand judiciary responsibility of board members.	The oversight body and management demonstrate the importance of integrity and ethical values through their directives, attitudes, and behavior - (GAO - Green Book P. 22).	Control Environment
Assess Fraud Risk	Review hiring policies - to ensure that individuals are hired on merit not on their affiliation with leadership.	Familiarity of personnel can create unethical situations to please the person that got someone the job.	When hiring for higher level positions - Review with leadership and board to ensure the right candidate is chosen.	Management considers fraud risk factors. Fraud risk factors to not necessarily indicate that fraud exists but are often present when fraud occurs. Fraud risk factors include the following: Incentive/pressure, opportunity, and attitude/rationalization - (GAO - Green Book P. 41).	Risk Assessment
Internal Vs. External Auditor Role	Roles of auditors must include risk assessment and control design as well as auditor independence.	Internal auditor role should have been more independent instead of complicit.	External auditor and review is vital and must be rotated at least every 3 years, Internal role should be focused on risk assessment and internal control improvement.	These audits and other evaluations may be mandated by law and performed by internal auditors, external auditors, the inspectors general and other external reviewers. Separate evaluations provide greater objectivity when performed by reviewers who do no have responsibility for the activities being evaluated. - (GAO - Green Book P. 66).	Monitoring

Case Study #5 – The Lucrative Library Fund

Overview:

A “trusted” Austin, TX public library employee has been accused of allegedly stealing at least \$1.3 million in printer toner while he served as the accounting clerk from 2007 to 2019. Randall Whited considered by many to be a trusted and valued employee would purchase toner for the public library printers and sell the remaining amounts through his own personal channels.

Whited was able to purchase larger amounts of toner due to his control over the purchasing tracking system. He was able to order, receive, and approve his own purchases. Additionally, those individuals on the final approval side did not know if these purchases were valid and since Whited was considered a trustworthy, the approving employee would simply place a rubber stamp on the approval process. IT played a crucial role in this discovery as they were able to determine how much toner was actually needed for these printers which was roughly only 15% of the total purchased by Whited. Whited would also take his purchase authority to a new level as he purchased at least \$18,000 of personal goods and have them shipped to Amazon lockers while labeling these purchases as basic supplies that were not tracked within inventory (Yamma & Molloy March 2nd, 2021).

Financial Losses:

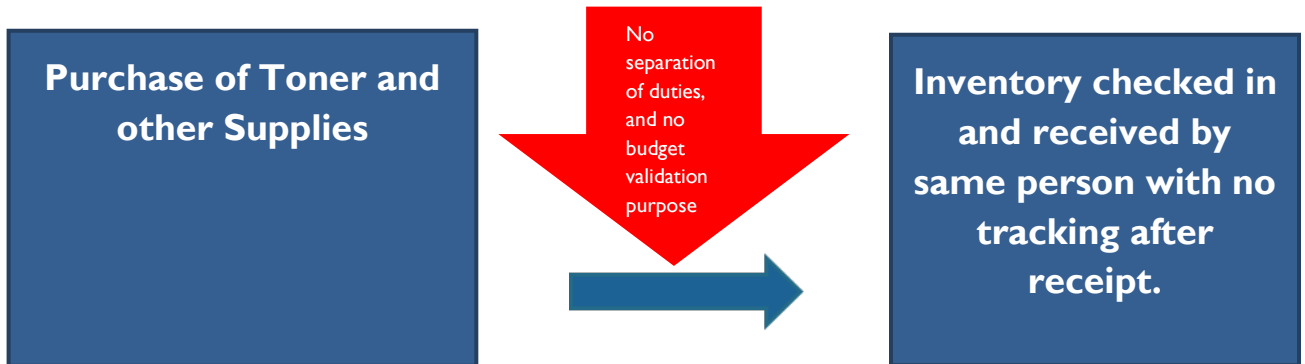
- Total of \$1.3 million in toner purchases from 2007 until 2019.

Operational Deficiencies:

- Control over entire process purchase, to receiving, to approval,
- “Trust” instead of process or approval,

- Budget questions only came about when they were under or over allocations as long as everything was in alignment no questions were asked.

Key Process Example:



Areas for Improvement:

- Control Environment – Leadership should utilize more formal policies and separate duties instead of relying solely on trust.
- Risk Assessment – Separate roles to eliminate duplication or overproduction of effort – Example toner above inventory needs.
- Control Activities: Budget allocation approval forms could be utilized to guarantee items are spent within a certain budget allocation.
- Information and Communication – Continue to use IT as a source for understanding inventory management in terms of printer toner.
- Monitoring – Continual monitoring of inventory levels to ensure supplies are not purchases out of sequence or inventory need.

Internal Controls Analysis:

Case Study #5 - The Lucrative Library Fund					
Internal Control - Weakness/Failure	Define the Problem	Analyze The Problem	Solve the Problem	GAO Recommendation	Element of COSO
Segregation of Duties	Same individual doing transactions multiple transactions within a process.	Too many roles for one individual without a check and balance.	Limit access and create duties for other individuals to work in the process without authority over the other.	Segregation of duties helps prevent fraud, waste, and abuse in the entity by considering the need to separate authority, custody, and accounting in the organizational structure (GAO - Green Book P. 29).	Control Activities
Access Controls	The ability to purchase and receive should be separated and given proper authority.	Individuals should not have multiple roles in the same process - similar to separation of duties.	For a transaction involving multiple departments or roles create individual access levels to reduce to much access to information.	Management limits access to resources and records to authorized individuals, and assigns and maintains accountability for their custody and use. (GAO Green Book P. 48).	Control Activities
Approval Authority	In the absence of other staff then other authority should be created to make sure budget allocations are followed.	Budget allocations only reviewed when overall budget is in question.	Budget allocations should be reviewed by management to ensure their validity and need.	Management should establish an organizational structure, assign responsibility, and delegate authority to achieve entity's objectives. (GAO-Green Book P. 27).	Control Environment
Safeguarding of Assets	Purchased inventory vs. inventory that was utilized only at 15%.	Periodic inventory checks with the help of IT could have prevented this theft from continuing.	Safeguard physical assets including equipment, supplies and other vulnerable to theft materials.	Management establishes physical control to secure and safeguard vulnerable assets. Examples include security for and limited access to assets such as cash, securities, inventories, and equipment that might be vulnerable to risk of loss or unauthorized use. Management periodically counts and compares such assets to control records. (GAO - Green Book P. 47).	Control Activities

Comparative Analysis:

Operational Metrics	Case Studies				
	Case Study #1 - Rita Crundwell - Dixon, IL	Case Study #2 - "Fat Leonard" - Navy procurement	Case Study #3 - Kentucky School District Fraud	Case Study #4 - The Roslyn School District Fraud	Case Study #5 - The Lucrative Library Fund
Financial Losses	Total - \$53.7 million, \$40 million recouped - potential loss - \$13.7 million	Total - \$35 million - Investigation ongoing	Total of \$1.6 million over 19 years	Total of \$11 million from 1992-2002 with co-conspirators	\$1.3 million in printer toner
Operational Deficiencies	<ol style="list-style-type: none"> Preventative - No separation of duties per function Detective - monthly reconciliations completed by same person Corrective - Training for staff 	<ol style="list-style-type: none"> Preventative - no vendor review process or contract review Detective - Purchasing and Accounts payable verifying amounts and statements Corrective - Hearing are being held to resolve fraud with officers at all levels 	<ol style="list-style-type: none"> Preventative - No separation of duties and control over entire process Detective - Review of invoices to ensure validity of payment source Corrective - Create access controls to give signature authority to different levels or two different levels of signatures 	<ol style="list-style-type: none"> Preventative - Formal policies of cash and money handling and separation of duties/control Detective - Review of financials and administration policies from board on a periodic basis Corrective - Board training along with organizational re-alignment and auditor rotation with more periodic reviews 	<ol style="list-style-type: none"> Preventative - One person had control over entire process from start to finish - No separation of duties Detective - Final approvers verifying the inventory amount of toner before purchase Corrective - Separate the process to include approvers before final purchase and inventory is received
Organizational	Comptroller position replaced by Finance Director	Senior and Junior officers - currently demoted or re-assigned.	School board to be evaluated and position was changed.	Board education plan along with management re-organization that included separation of duties.	Library accounting clerk will have different duties assigned to prevent this. More hires may need to be considered to manage other duties.
Areas for Improvement	<ol style="list-style-type: none"> Culture change from Mayor and City Council Risk assessment to monitor money and public trust lost New organization and position IT takes larger role in financial protection Continually monitor internal controls as well as auditor rotations 	<ol style="list-style-type: none"> Ethical training for leadership to lead by example Risks to be reduced if following procedures and working within policy Documentation review with purchasing and accounts payable Contract bidding process should be reviewed to ensure ethics and procedures are followed 	<ol style="list-style-type: none"> School board to review money and funding for validity and correct purpose Ensure checks are accurate and reconcile on monthly basis to mitigate risks Create different access levels and work with IT to create stronger password protection per role and individual Fiduciary and fiscal responsibility training for the board and new position/role 	<ol style="list-style-type: none"> School board to complete fiscal and fiduciary responsibility training to better serve the school district Internal audit role to focus on risk assessment and internal controls More periodic financial reviews from external audit in conjunction with new board policies Access control with system integration with "Finance Manager" to limit authority of one over the process 	<ol style="list-style-type: none"> Trust is important, but also formal written policies will prevent this in the future Budget allocation forms and other budget allocation revisions will need to be more scrutinized to test the validity of need Continue to utilize IT and IT tools to manage current inventory to maximize toner need and level on hand Inventory monitoring or management will need to be re-evaluated to maximize supply need and demand
Potential Risks	Potential other losses such as public trust, infrastructure demand ignored and audit rotation.	Financial losses still unaccounted for - Also loss in leadership due to poor judgement reflects poorly on the Navy.	Loss in school district funding due to poor fiscal management. Loss in public trust.	Loss in school district funding due to poor fiscal management. Loss in public trust.	Reduction in budget allocations due to poor fiscal management.

Common Themes:

These case studies have revealed some key points that occur within most internal controls that lead to fraud opportunities and open the public organization to many other operational risks.

- **Segregation of Duties:** In the absence of formal segregation of duties due to a lack of written policy or lack of manpower this became a gateway for many within these cases to rationalize their opportunities to commit fraud. In the report to the nations ACFE would report that 15% of all fraud perpetrators exhibit control issues and unwillingness to share duties (ACFE – Report to the Nations, 2020 P. 50)
- **Access of Controls:** Over 55% of all occupation fraud come from the manager or owner/executive level (ACFE – Report to the Nations, 2020 P.38). As demonstrated with almost all of these cases the fraud came from someone at a higher level with authority to make the changes they needed to, so they could override any existing internal controls.
- **Periodic Reconciliation:** The cases reviewed for this project had reconciliations as a common theme of a detection device that should have been used more frequently, but in some cases, these were lapse, or others just passed them on with a rubber stamp. Only 4% of fraud cases throughout the world were discovered by this method (ACFE – Report to the Nations, 2020 P. 19). This internal detective devise is somewhat underutilized in fraud detection.

These common themes are important to note as they do not apply to all cases, but in most of the cases reviewed within this project they give those individuals who see an opportunity to fraud their employers an opportunity to commit the crime.

VI. Recommendations

The cases that have been reviewed have demonstrated some common trends in internal control management. There are ethical questions from the control environment and leadership which could lead to fraud. There are procedural missteps among various departments that could create silos, allowing funds to slip through the cracks without proper documentation or approval. Listed below are some key recommendations that can improve internal controls in any public organization.

- Start with the onboarding process – The purpose with internal controls should be mainly preventative and detective. The inclusion of internal controls within new hire training can help any employee start off with clear and ethical direction.
- Separation of duties with cross training – This recommendation is more designed for improvement of employee development as well as keeping duties separated without overstepping or completing someone else’s work without full signature authority from leadership.
- Oversight management – Making sure that processes are complete with checklists and reviews with management before a process is finalized.
- Breakdown Silos – As most transactions will involve multiple departments, there will need to be a bridge between each to ensure that process is followed while keeping lines of communication open to follow formal procedures.
- Have reports and statements reviewed by a third party or a supervisor without financial responsibility – This would eliminate the ability to hide or falsify records. Any third party should be alternated to ensure there is no collusion.

- Encourage employee participation – With any new process if employees are not involved it will be harder for them to buy-in to the improvements.
- Ethics & Integrity training – For management, so they may lead in culture improvement initiatives. Employees must understand their role in fraud detection and risk mitigation.

These key recommendations are designed to encourage ethics and integrity from senior leadership as well as encouraging employees to get involved in their processes. With fostering an ethical culture, while encouraging employee empowerment through effective communication channels internal controls can be improved within any organization.

VII. Limitations

The task of implementing effective internal controls and maintain these controls are difficult. In the public sector it is even more difficult as leadership can sometimes bend the way of political changes. Internal controls can be pushed aside to fit a newly elected officials direction or misunderstand the need of internal controls due to varying experience levels of new managers. Listed below are some limitations that could impact a new or improving internal control system.

- Business conditions could change that could put strain on current system or training,
- Human judgement in decision making can be subject to fallacy and bias,
- Issues with policy and procedures could be simple human error and not systematic issues,
- Management’s ability to change direction and alter current control methods,
- Other external actors outside the organization,

- Inadequate qualifications for employees in their given positions – Employees inability to manage their duties in their current position.

These limitations are more individualistic and not system dependent. When creating or improving a system of internal controls, management and elected officials must be wary of the personnel limitations.

VIII. Conclusion

The research in this project has demonstrated that internal controls are much more than an accounting or auditing function. Without internal controls organizations put themselves at risk for fraudulent and unethical activities from internal and external actors. Internal controls allow organizations to track errors and make corrections proactively as a daily process. Corrections to be made after an audit finding can be very costly to any organization. There will always be a human error side to internal controls, but with problem solving through process mapping and documentation then solutions can be resolved. Management must create a culture of employee improvement that is ethical and make decisions based on sound data driven information in order to effectively manage and improve their organizations. Internal controls not only measure process but can manage behavior and aid in employee improvement as well as policy development.

IX. Works Cited

1. Kenton, W. (2021, July 1st) *Internal Controls* Investopedia.com
<https://www.investopedia.com/terms/i/internalcontrols.asp>
2. Committee of Sponsoring Organization of the Treadway Commission (COSO) (2013 May). *Internal Control – Integrated Framework: Executive Summary*
<https://www.coso.org/Documents/990025P-Executive-Summary-final-may20.pdf>
3. Association of Certified Fraud Examiners – *Report to the Nations 2020 Global Study on Occupational Fraud and Abuse*
<https://acfepublic.s3-us-west-2.amazonaws.com/2020-Report-to-the-Nations.pdf>
4. Mattie, J A., Hanely, P F., Cassidy, D L., - *Internal Controls: The Key to Accountability* PricewaterhouseCoopers, 2005
file:///C:/Users/Brian/Downloads/Internal_Controls_KeytoAccountability.pdf
5. *Internal Control Compliance: 7 Reasons to Maintain Your Program*, auditboard.com
<https://www.auditboard.com/blog/7-reasons-to-maintain-your-internal-controls-compliance-program/>
6. Urbanik, V. (2016 Fall) *Making Internal Control a Priority in Local Government*, Journal of Government Financial Management
7. *What is Root Cause Analysis?* - thinkreliability.com
<https://www.thinkreliability.com/cause-mapping/what-is-root-cause-analysis/>
8. Stephens, B, (update 2019 November) *Lean Systems Program – Lean Client Billing Process* – University of Kentucky Lean Systems Program – Department 8H750
9. The Risk Management Association (RMA) – *Operational Risk Management Training & Resources*, rmahq.org
<https://www.rmahq.org/operational-risk/>
10. Apostolou, B., Apostolou, N., Thibodaux, G. (2015 January-June) *Horseplay in Dixon: Lessons Learned from the Rita Crundwell Fraud*, Journal of Forensic & Investigative Accounting Volume 7, Issue 1
11. LaGrone, S. (2019 January 24) *Paying the Price: The Hidden Cost of the “Fat Leonard” Investigation*” usni.org.
<https://news.usni.org/2019/01/24/paying-price-hidden-cost-fat-leonard-investigation>

12. Estep, B (2020 May 28) *KY school official admits stealing \$1.6 million laundering money through a church*, Lexington Herald Leader, www.kentucky.com
13. Elder, R J., Yebba A A. (2017, November) *The Roslyn School District Fraud: Improving School District Internal Control and Financial Oversight*, The American Accounting American Accounting Association, Issues in Accounting Education Vol. 32, No. 4
14. Yamma, M., Molloy, B. (2021 March 2nd). *The Lucrative Library Fraud: Auditors uncover a city employee's 12-year scam to buy, steal, and resell printer toner for profit*, Internal Auditor.
15. Foster, D. P. (2020 September 16th). *Schoolhouse Fraud: Administrators turn their district's budget into personal play money*, Internal Auditor.
16. United States Government Accountability Office (GAO) (2014 September 10) *Standards for Internal Control in The Federal Government Green Book* GAO.gov
<https://www.gao.gov/products/gao-14-704g>

X. Appendix I – IRB Process

Purpose of the IRB:

The Internal Review Board (IRB) at the University of Kentucky reviews potential research studies and research protocols. The IRB is federally mandated to ensure that proper safeguards are in place to protect human subjects enrolled in research studies (1). The IRB is federally mandated from the Food and Drug Administration (FDA) to review and monitor biomedical research involving human subjects. In accordance with FDA regulations, the IRB has the authority to approve, require modifications in (to secure approval), or disapprove research (2). The goal of the IRB at the University of Kentucky is to provide independent guidance to ensure the protection of individuals within studies involving human subjects. However, their purpose is not only limited to human subject research as it is their role to determine whether or not other research activities will involve human subjects. The IRB is housed within the Office of Research Integrity (ORI). The ORI provides guidance during IRB reviews to make sure certain activities are classified correctly as human subject related or other research. All research projects must be reviewed with this examination before the IRB can make an informed decision to move forward with a project.

Significance of IRB Review:

The importance of IRB review is for the protection of human rights and welfare when engaging in a research study with a sponsor. It is the duty of the sponsor to make sure they are following IRB protocols to ensure the human subject information is protected as well as other factors including outcomes of their participation in a study. Human subjects within a study can be subject to emotional/physical stress, loss of social status, and a loss of privacy should the

information they provide be leaked if the research protocols are not followed. The independence of the IRB allows the board to view federal regulations and manage the risk that these human subjects could take if research protocols are violated or managed outside the direction of the original intent. Before any project is given IRB approval it must be determined whether or not living human subjects are at risk during the study or project. The management of risks do not only apply to human subjects, but also from an organizational standpoint. If any violation or protocol deviation is found, then the sponsoring organization can be damaged through financial loss and reputational losses that would affect future research opportunities.

Capstone Project Applicable to IRB Process:

The information presented in my capstone will only involve business cases and defined process improvement initiatives at an organizational level. Human subjects are not a part of my capstone research as case studies will drive the information needed in this research discovery. According to the ORI and IRB this type of research does not need IRB approval because it is research on organizations. “Information gathering about organizations, including information about operations, budgets, etc. from organizational spokespersons or data sources. Does not include identifiable private information about individual members, employees, or staff of the organization” (3) P. 6. The information provided in my case studies will be from public sources and public entities which are subject to public records and do not contain group or individual personal information.

Conclusion:

The role of the IRB in any institution is to protect human rights and welfare from any risks that could harm them physically, socially, or financially. This methodology can also be applied to

their institutions as managing these risks assist in the mission of public institutions like the University of Kentucky. The IRB plays a key role in the protection and validity of research on all levels.

Works Cited:

1. University of Kentucky- Research *Office of Research Integrity, Institutional Review Board (IRB) FAQs*
<https://www.research.uky.edu/office-research-integrity/institutional-review-board-irb-faqs>
2. U.S. Food and Drug Administration (FDA) *Institutional Review Board (IRBs) and Protection of Human Subjects in Clinical Trials* fda.org.
<https://www.fda.gov/about-fda/center-drug-evaluation-and-research-cder/institutional-review-boards-irbs-and-protection-human-subjects-clinical-trials>
3. University of Kentucky- Research *Office of Research Integrity – When Do Activities need Institutional Review Board (IRB) review and approval? D1.0000*
<https://www.research.uky.edu/uploads/ori-d10000-when-do-activities-need-irb-review-and-approval-pdf>

XI. Appendix II – Other Sources

Raaum, R., Morgan, S., Waring, C. (2016 Copyright) *Performance Auditing – Measuring inputs, outputs, and outcomes*, 3rd Edition Internal Audit Foundation, Lake Mary Florida

United State Government Accountability Office (GAO) (2014 September10) *Standards for Internal Control in The Federal Government* Green Book GAO.gov

<https://www.gao.gov/products/gao-14-704g>

Reck, J., Lowensohn, S., Neely, D. (2019 Copyright) *Accounting for Governmental & Nonprofit Entities*, 18th Edition Published by McGraw Hill Education, New York, NY