NPS-CM-14-011


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## NPS Government Purchase Card Program: An Analysis of Internal Controls

18 March 2014

**Alana M. Tweed, DON**

Thesis Advisors: Dr. Juanita M. Rendon, Lecturer
Dr. Rene G. Rendon, Associate Professor

Graduate School of Business & Public Policy

**Naval Postgraduate School**



Prepared for the Naval Postgraduate School, Monterey, CA 93943.


ACQUISITION RESEARCH PROGRAM
GRADUATE SCHOOL OF BUSINESS & PUBLIC POLICY
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# Report Documentation Page

*Form Approved*
*OMB No. 0704-0188*



| 1. REPORT DATE | 2. REPORT TYPE | 3. DATES COVERED |
|---|---|---|
| **18 MAR 2014** | | **00-00-2014 to 00-00-2014** |

| 4. TITLE AND SUBTITLE | 5a. CONTRACT NUMBER |
|---|---|
| **NPS Government Purchase Card Program: An Analysis of Internal Controls** | 5b. GRANT NUMBER |
| | 5c. PROGRAM ELEMENT NUMBER |
| 6. AUTHOR(S) | 5d. PROJECT NUMBER |
| | 5e. TASK NUMBER |
| | 5f. WORK UNIT NUMBER |
| 7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Naval Postgraduate School,Graduate School of Business & Public Policy,Monterey,CA,93943** | 8. PERFORMING ORGANIZATION REPORT NUMBER |
| 9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) | 10. SPONSOR/MONITOR'S ACRONYM(S) |
| | 11. SPONSOR/MONITOR'S REPORT NUMBER(S) |

12. DISTRIBUTION/AVAILABILITY STATEMENT
**Approved for public release; distribution unlimited**

13. SUPPLEMENTARY NOTES

14. ABSTRACT

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15. SUBJECT TERMS

| 16. SECURITY CLASSIFICATION OF: | | | 17. LIMITATION OF ABSTRACT | 18. NUMBER OF PAGES | 19a. NAME OF RESPONSIBLE PERSON |
|---|---|---|---|---|---|
| a. REPORT | b. ABSTRACT | c. THIS PAGE | | | |
| **unclassified** | **unclassified** | **unclassified** | **Same as Report (SAR)** | **89** | |

The research presented in this report was supported by the Acquisition Research Program of the Graduate School of Business & Public Policy at the Naval Postgraduate School.

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# Abstract

The purpose of this research is to determine whether there are differences in perceptions between approving officials (AOs) and cardholders (CHs) regarding internal controls within the Government Purchase Card Program (GPCP) at the Naval Postgraduate School (NPS). A main component of the research is a voluntary and anonymous online survey deployed to the AOs and CHs at NPS. Results from the analysis of the survey data can be used to identify areas of improvement within the GPCP.

Based on the data analysis, there were eight significant differences in perceptions of internal controls between AOs and CHs. They were identified in three of the five internal control components: risk assessment, information and communication, and monitoring activities. The data analysis revealed that AOs generally responded more positively than CHs, implying that AOs may perceive the strength of the GPCP's internal controls to be stronger than the CHs perceive them. In addition, there were survey items to which both AOs and CHs responded strongly, which included such things as password protection, separation of duties, and adequate fraud education. Both strong and weak internal controls have implications on auditability. The analysis identified potential implications of internal controls, or lack thereof, on auditability within the GPCP at NPS.



**Keywords:** P-Card, purchase card, commercial card, government purchase card program, auditability, audit readiness, internal controls, COSO

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# Acknowledgments

First and foremost, I thank God for the people in my life who have supported me through this three-year journey; I couldn't have done this without you. My friends and family have continued to encourage, understand, and have faith in me. My boyfriend, Ryan, has given me unending love, support, and inspiration.

I want to extend my deepest gratitude and sincere appreciation to my advisors, Dr. Juanita M. Rendon and Dr. Rene G. Rendon, for their invaluable advice, support, and professional guidance in writing an academic thesis.

I also want to thank Maria Morales for her support of my research into the NPS Government Purchase Card Program. She provided invaluable support and access to information regarding NPS's purchase card program. Furthermore, I want to thank the Acquisition Research Program for sponsoring my research and providing valuable editing services.

Finally, I want to acknowledge my organization's supervisors who, over the past three years, have been so flexible and supportive of my decision to pursue my MBA part time.

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# About the Author

**Alana Tweed** graduated from California State University Monterey Bay in Seaside, CA, in 2010, where she earned a Bachelor of Science in Business Administration. Upon graduation, she joined the staff at the Naval Postgraduate School (NPS) as an administrative assistant in the Office of Institutional Advancement. She began part-time graduate studies at the Graduate School of Business and Public Policy, eventually earning her MBA. She later transitioned to NPS's Public Affairs Office where she serves as an executive assistant. Armed with her MBA, Alana intends to pursue further federal government opportunities and to hone her management skills.

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# List of Acronyms and Abbreviations

| | |
|---|---|
| AAA | American Accounting Association |
| AICPA | America's Institute of Certified Public Accountants |
| A/OPC | Agency/Organization Program Coordinator |
| AO | Approving Official |
| APC | Agency Program Coordinator |
| CCPMD | Consolidated Card Program Management Division |
| CH | Cardholder |
| COSO | Committee of Sponsoring Organization of the Treadway Commission |
| CNO | Chief of Naval Operations |
| DAU | Defense Acquisition University |
| DBO | Designated Billing Office |
| DFARS | Defense Federal Acquisition Regulation Supplement |
| DFIAR | Director of Financial Improvement and Audit Readiness |
| DoD | Department of Defense |
| DoN | Department of the Navy |
| DPAP | Defense Procurement and Acquisition Policy |
| FAR | Federal Acquisition Regulation |
| FASA | Federal Acquisition Streamlining Act |
| FASTDATA | Funds Administration and Standardized Document Automation |
| FEI | Financial Executives International |
| FIAR | Financial Improvement and Audit Readiness |
| FMFIA | Financial Managers' Financial Integrity Act |
| FMO | Office of Financial Management |
| FY | Fiscal Year |
| GAO | General Accounting Office (prior to July 7, 2004) |
| GAO | Government Accountability Office |
| GPCP | Government Purchase Card Program |
| GSA | General Services Administration |

| | |
|---|---|
| IIA | Institute of Internal Auditors |
| IMA | Institute of Management Accountants |
| KFS | Kuali Financial System |
| MICP | Managers' Internal Control Program |
| NAPCP | National Association of Purchasing Card Professionals |
| NAVSUP | Naval Supply Systems Command |
| NDAA | National Defense Authorization Act |
| NPS | Naval Postgraduate School |
| NYSICA | New York State Internal Control Association |
| OIG | Office of Inspector General |
| OMB | Office of Management and Budget |
| OUSD(C) | Office of the Under Secretary of Defense (Comptroller) |
| SEC | Securities and Exchange Commission |
| SOX | Sarbanes–Oxley Act of 2002 |
| STARS | Standard Accounting and Reporting System |
| USD(C) | Under Secretary of Defense (Comptroller) |

# I. INTRODUCTION

In this chapter, the background and purpose of this research are presented, and the research questions are addressed. The benefits and limitations, in addition to the importance of this research, are also discussed. Finally, the methodology is briefly outlined, and the scope and organization of the research are presented.

## A. BACKGROUND

The Department of Defense (DoD) and the Department of the Navy (DoN) purchase card programs process hundreds of thousands of transactions accounting for billions of dollars annually. In 2013, the federal government's 300,900 cardholders (CHs) spent $16.5 billion on 18.9 million transactions (General Services Administration [GSA], n.d.-c). The Government Purchase Card Program (GPCP) was developed as a tool to support streamlining initiatives and was intended to have cost savings applications in the federal government, the DoD, DoN, and the Naval Postgraduate School (NPS). The purchase card is used in many organizations to streamline the procurement process.

Following Executive Order 12,931 (1982) to reduce costs as well as the successful pilot phase for a purchase card program in 1986, the federal government began the use of a government-wide purchase card program in 1989. Although the program was somewhat successful, because of the weak internal controls and misuse over time, additional legislative actions were put in place, and the program evolved over the years. In 1998, the GSA SmartPay Program was established "to serve as the premiere charge card program for the United States federal government, serving more than 350 federal agencies and organizations" (GSA, 2012). In 2008, the federal government spent $30.6 billion on the commercial card, which includes the travel, fleet, and purchase cards, and 65% of that was spent on the purchase card alone (Palmer, Gupta, & Dawson, 2010).

The GPCP directives provide very specific rules, regulations, and responsibilities for all key personnel, including approving officials (AOs) and CHs, in order to maintain proper training, follow capable processes, and implement effective internal controls (Rendon & Rendon, 2014). The DoD is tasked with being auditable by 2017; therefore, the program's specific requirements are crucial in the current fiscal environment. Recent requirements for strong internal controls and the Managers' Internal Control Program (MICP) need to be implemented to ensure organizations are in compliance with internal control directives and policies.

The GPCP at NPS provides a "fast and convenient method to pay for all requirements under the micro purchase-threshold" (Naval Postgraduate School

[NPS], 2012, p. 1) of $3,000 for civilian and military personnel. In fiscal year (FY) 2012, the NPS GPCP processed approximately 21,000 transactions that accounted for approximately $24 million (M. Morales, personal communication, July 24, 2013). Although the GPCP may be convenient and realize costs savings, an analysis of the perceived internal controls and implications to auditability is warranted to ensure compliance with established internal control policies and procedures.

## B. PURPOSE OF RESEARCH

The purpose of this research is to determine whether there are differences in perceptions between AOs and CHs regarding internal controls within the GPCP at NPS. A main component of the research is a voluntary and anonymous online survey deployed to the AOs and CHs at NPS. Results from the analysis of the survey data can be used to identify areas of improvement within the GPCP. This research also potentially identifies any implications of the perceived differences of internal controls on the auditability of the GPCP at NPS.

## C. RESEARCH QUESTIONS

The research questions for this research are as follows:

- What are the differences in perceptions of internal controls between the approving officials and cardholders in the Government Purchase Card Program at the Naval Postgraduate School?
- What are the implications to auditability from the differences in perceptions of internal control between approving officials and cardholders within the Government Purchase Card Program at the Naval Postgraduate School?

## D. BENEFITS AND LIMITATIONS

This research benefits the DoN, and more specifically, NPS, by analyzing the AOs' and CHs' perceptions of the internal controls within the GPCP at NPS. The results of the analysis are used to identify recommendations to strengthen the internal controls within the GPCP at NPS. In addition, this research potentially identifies the impact that those differences in perceptions of internal controls have on the auditability of the GPCP at NPS.

The limitations of this research include the limited number of participants who complete the voluntary anonymous online survey. Although NPS allowed access to all of its AOs and CHs, the survey was voluntary, so not all potential participants chose to participate. Another possible limitation is the survey instrument itself. It was a combination of surveys used by other researchers, but it may have been limited in the type of questions it asked with regard to the GPCP.

## E. IMPORTANCE OF RESEARCH

The importance of this research is that the GPCP is a government-wide program responsible for processing hundreds of thousands of transactions and accounting for billions of dollars a year. To ensure the program is managed in accordance with policy and regulations, it is imperative to understand the internal controls within the GPCP. This research assesses the perceptions of internal controls by both AOs and CHs and makes recommendations to the GPCP at NPS.

## F. METHODOLOGY

This research includes a literature review, the development and distribution of the online survey, and an analysis of the responses to the survey. The literature review includes a review of scholarly peer-reviewed articles, which are related to internal controls and purchase cards, Government Accountability Office (GAO) reports, government policies, and DoD and DoN instructions.

The online survey was developed using a previously validated internal control survey as well as other sources. The survey consisted of demographic survey items and Likert-based survey items regarding internal controls. The survey was deployed to AOs and CHs at NPS using the web-based survey software, LimeSurvey. Once the survey was deployed, it was available for three weeks.

After the survey period was over, the data collected from the survey responses was reviewed and analyzed as it related to the five internal control components. Descriptive statistics was used in the data analysis using SPSS.

## G. SCOPE AND ORGANIZATION

This research paper contains six chapters, including the introduction. Chapter II includes a literature review covering the industry purchasing card and the GPCP and its application to the federal government, the DoD, and the DoN. The chapter also discusses internal controls and auditability, including supporting legislation. Chapter III discusses NPS's use of the GPCP, including the mission, the Contracting and Logistics Management organization, and the GPCP organizational structure. Chapter IV presents the methodology used to conduct the research and to develop and deploy the online survey. Chapter V analyzes the survey results, discusses the findings and the implications of the findings, and offers recommendations based on the findings. Chapter VI summarizes the research and provides conclusions and areas for further research. The following section provides a summary of this chapter.

## H. SUMMARY

This chapter presented the background and purpose of this research and addressed the research questions. The benefits and limitations, in addition to the

importance of this research, were also discussed. Finally, the methodology was briefly outlined, and the scope and organization of the research were presented. The next chapter provides a literature review of the purchase card program and internal controls.

# II. LITERATURE REVIEW

## A. INTRODUCTION

This chapter presents the evolving role of the purchasing function and the industry purchase card program. The Government Purchase Card Program (GPCP) and its application in the federal government, the Department of Defense (DoD), and the Department of the Navy (DoN) are then discussed. The Naval Postgraduate School (NPS) GPCP is discussed in Chapter III. In addition, corporate governance is addressed, which includes auditability, the Sarbanes-Oxley Act of 2002 (SOX), and Committee of Sponsoring Organizations of the Treadway Commission (COSO). Furthermore, the integrated internal control components are discussed as well as internal controls in the federal government. The next section discusses the evolving role of the purchasing function.

## B. THE EVOLVING ROLE OF THE PURCHASING FUNCTION

In most organizations, purchasing is a basic function used to acquire goods and services to accomplish the goals of the organization. Purchasing also contributes to the success of the organization and, in some cases, has more impact on the bottom line than other business functions (Burt, Dobler, & Starling, 2003). Throughout the history of purchasing, many changes have significantly shifted supply managers' perspectives of the purchasing department and its importance to the organization.

Purchasing has long been considered a subordinate function to research and development, finance, marketing, and operations; however, it has developed into a strategic management function, with high value placed upon cost savings and increased efficiency and effectiveness (Burt et al., 2003). In the 1960s and 1970s, inventory was managed with a manual system, and the focus at the time was on purchase price and preventing production line shutdowns. In the late 1970s, computers began to help with inventory management at the same time that automation in the production process was increasing, which drove unit production costs down. In the 1980s, managers began to manage their inventories more carefully and started to utilize computer-generated materials requirement plans, which in turn reduced inventory levels, decreased costs, and increased efficiency. Finally, in the late 1980s, managers included supply management in their organizations' strategic business plans and increased the focus on purchasing departments (Burt et al., 2003). The historical focus was purchase price as well as supply continuity; however, today the focus is on value-adding benefits such as quality, cost, time, technology, and supply continuity.

Major developments in the purchasing function involve the area of supply management, which includes cross-functional teams, supply chains and networks, supply alliances, strategic sourcing, and e-procurement. Cross-functional teams combine members of different functional areas to find solutions to problems, demonstrating team behavior and developing leadership skills (Burt et al., 2003). Cross-functional team participation in the development of supply chains and networks identifies desirable suppliers by identifying which value-added activities are most important to the organization's strategic supply plan (Burt et al., 2003). Once the supply chains and networks are identified, supply alliances are fostered through mutually beneficial relationships (Burt et al., 2003). Furthermore, supply management personnel must decide the appropriate relationship with each supplier in order to accomplish organizational goals and objectives.

Management has also shifted its thinking about using sources strategically. Strategic sourcing is an organized approach that utilizes the supply base to achieve the organization's objectives. Strategic sourcing also integrates suppliers into long-term plans and improves the organization's value. Lastly, Burt et al. (2003) stated that "e-procurement is one of the most exciting developments in supply management" (p. 33). Technologies that enhance business operations have emerged. Buyers are no longer required to process paperwork since they can now place orders over the Internet directly to suppliers. This is a major development for the purchasing department, and the use of technology supports streamlining and strategic sourcing initiatives.

Leenders and Fearon (1997) discussed the advantages of both a centralized and decentralized purchasing department. The advantages of centralization include a standardized purchasing process and decreased administrative duplication. Therefore, that results in an increase in the number of contracts for large quantities of items for the organization. However, decentralizing the purchasing authority allows independent department managers to handle their own purchasing since they are more familiar with the department's specific requirements (Leenders & Fearon, 1997). Decentralized authority also gives the purchaser more flexibility, which necessitates an additional emphasis on internal controls to help ensure that purchasers are in compliance with established purchasing policies and procedures. While these developments are helping streamline purchasing initiatives, there appears to be a small-order problem, which is discussed in the next section.

### 1. Small-Order Problem

Leenders and Fearon (1997) and Burt, Petcavage, and Pinkerton (2010) discovered that small orders are a problem in most organizations. Burt et al. (2010) gave an example of a typical company in which a large percentage (sometimes as high as 80%) of its purchases involved a purchase of less than $250. However,

these purchases represented a small percentage (close to 10%) of the organization's total annual spending. With the current purchasing department organization, the transaction cost to purchase a small-value item is likely more than the item cost itself (Monczka, Hanfield, Giunipero, & Patterson, 2011). Thus, the organization is spending more time and money on small purchase transactions. Leenders and Fearon (1997) offered approaches to simplify or automate the purchasing process, reduce cycle time, lower costs, and increase the buyers' time spent on high-value orders. One solution to the small-order problem was the use of purchase cards distributed to internal customers to order directly from suppliers, which was one of the new streamline initiatives supported by e-procurement. The process of moving the small-value purchasing activity to the department's cardholder reduces cycle time and transaction costs (Burt et al., 2003). In addition, the transition of small-value purchasing allows the purchasing agents to concentrate their time on higher value purchases (Leenders & Fearon, 1997). Therefore, a tool most organizations considered central to improving the purchasing process was the purchase card (Monczka et al., 2011).

The use of purchase cards and the implementation of the purchase card program is a solution to the small-order problem. The purchase card is used to pay for items of small value, including maintenance, repair, and operating (MRO) items. MRO items do not become part of an organization's product, but they are essential for operating the business. This includes "spare machine parts, office and computer supplies, and cleaning supplies" (Monczka et al., 2011, p. 74). Some organizations set a purchase threshold limit that cardholders cannot exceed when purchasing MRO items. The National Association of Purchasing Card Professionals (NAPCP; 2013a) website states that "P-Cards were introduced as, and continue to be, corporate (organization) liability/central pay payment vehicles for which payment in full must be made by the end user organization to the card issuer at least monthly" (para. 3). This attribute of a P-Card remains the primary distinction from consumer and small business credit cards.

Other commercial card products include the travel card, corporate card, fleet card, one card, prepaid card, declining balance card, and business card (NAPCP, 2013d). They are all intended to address different types of purchases; however, this research focuses on the P-Card, as it is most similar to the purchase card used in the GPCP.

This section discussed the evolving role of the purchasing function and the small-order problem. In addition, it showed how the purchase card is a solution to that problem. The next section includes a discussion of the use of the P-Card in industry.

## C. INDUSTRY P-CARD PROGRAM

The industry purchase card, also known as a P-Card, is a credit card that allows end-user organizations to utilize the existing credit card infrastructure to make business-to-business payments for a variety of business expenses, such as goods and services (NAPCP, 2013c, para. 1). After the purchase card was developed and introduced to the U.S. federal government for the General Services Administration (GSA), the P-Card was introduced to industry in the 1980s. The P-Card is most commonly used in the corporate, education, and government sectors. The P-Card is similar to a consumer credit card; however, the end-user organization using a P-Card must pay the card-issuing bank the full balance on a monthly basis, instead of monthly minimum payments until the credit card bill is paid off. For low-value purchases, which are considered less than $2,500, respondents of a 2010 survey reported that purchase cards now handle 44% of all transactions (Palmer & Gupta, 2010). In 2009, large market industry organizations had 449 P-Cards and made approximately 8.6 monthly transactions per card, and spent a monthly average of $1.03 billion (Palmer & Gupta, 2010). Large market statistics include companies with annual sales of $500 million to $2 billion (Palmer & Gupta, 2010).

The P-Card program in industry was developed to streamline payment and reduce costs for purchasing small-value items, which helps solve the small-order problem that was previously discussed. The P-Card program is a valuable asset to most organizations. The P-Card program involves the use of a credit card that allows an organization's employees, also known as a cardholder, to make small-value purchases in a timely and efficient manner. The P-Card program also expedites supplier payments and reduces or eliminates the paperwork associated with a paper transaction (Gupta & Palmer, 2008). P-Cards have proven their value in improving efficiencies, decreasing processing costs, and decreasing cycle time (Palmer & Gupta, 2010). Transaction costs have decreased by 76%, and cycle time was reduced by 72% (Palmer & Gupta, 2010). The future goals of the P-Card include such things as increasing convenience and reducing transaction processing (Palmer & Gupta, 2010).

The industry P-Card program also has the option to implement internal controls, including single-purchase spending limits, monthly limits, and other restrictions (NAPCP, 2013b). Internal controls are discussed later in this chapter, and other sections discuss the application of a purchase card program in multiple settings, to include the federal government, the DoD, and the DoN. The next section provides an overview of the roles and responsibilities within an industry P-Card program.

### 1. Roles and Responsibilities Within an Industry P-Card Program

This section provides an overview of the roles and responsibilities of the entities involved in a P-Card program. Those roles include cardholders, end-user organizations, issuers, merchant acquirers, networks, and processors.

Cardholders are responsible for making purchases and payments on behalf of the end-user organization. Cardholders are expected to follow the end-user organization's specific policies and are responsible for reviewing and approving transactions at least monthly (NAPCP, 2013b). End-user organizations receive the invoices from cardholders' P-Card transactions and are responsible for paying the balance in full monthly. The end-user organization assumes liability for payment (NAPCP, 2013b). Issuers work directly with the end-user organizations to issue P-Cards and invoice P-Card transactions. According to NAPCP (2013b), issuers are often financial institutions, and they work with networks and processors to issue cards, authorize transactions, and provide data.

According to the NAPCP (2013b), merchant acquirers "enroll suppliers in the card acceptance process and implement required solutions related to this purpose. In addition, they facilitate payment flow, including payment to suppliers," (para. 3). Networks facilitate the movement of transactional data between the issuer and merchant acquirer and set the rules pertaining to P-Card acceptance by suppliers (NAPCP, 2013b, para. 4). Examples of networks include Visa, MasterCard, and American Express. Processors "provide various services to card issuers and merchant acquirers, which may include card production, statement printing, authorization, and data delivery" (NAPCP, 2013b, para. 5).

It is important to know the roles and responsibilities previously described to understand the interrelationships between cardholders, end-user organization, issuers, merchant acquirers, networks, and processors. Each participant plays a significant role in the success of a P-Card program. The P-Card process and the relationship between all of the entities involved are illustrated in Appendix A. This section discussed the use of the P-Card in an industry P-Card program and provided an overview of the roles and responsibilities within an industry P-Card program. Just like in industry, the federal government also has a purchase card program. The next section reviews the GPCP.

## D. GOVERNMENT PURCHASE CARD PROGRAM

The government's interest in purchase cards began in 1982 as a procurement initiative reform (Gupta & Palmer, 2008). After the successful pilot phase in 1986, the government began utilizing the purchase card program in 1989 when the first government-wide purchase card contract was awarded by the GSA to the Rocky Mountain BankCard System. In 1993, the United States' Vice President's National

Performance Review further streamlined the purchase card process and reduced the red tape to make a purchase under the micro-threshold of $2,500. In October 1994, the Federal Acquisition Streamlining Act (FASA) of 1994 and Executive Order 12,931 (1994) were established to further promote the use of the purchase card. In 2002, when the purchase card program was at risk because of the General Accounting Office (GAO, 2003) and Inspectors General report findings of misuse, agencies were told to review their internal controls associated with minimizing risk in the purchase card program (Gupta & Palmer, 2008). In 2006, the micro-purchase threshold was increased from the previous $2,500 to the current threshold of $3,000. The government is continuously striving to improve the various aspects of the GPCP, including internal controls.

Prior to the use of purchase cards, the government used the traditional paper-based procurement process, such as purchase orders, to place orders; however, that method offered little flexibility and no accountability or oversight, nor did it solve the small order problem. Thus, one of the major benefits of using purchase cards is that it helped solve the small-order problem. Another benefit of using the purchase card is the "ability to streamline transaction processing, increase accountability, and provide agencies with a more efficient and effective means of monitoring large numbers of transactions, and identifying fraud, waste, and abuse in the program" (GSA, n.d.-a). The Office of Inspector General (OIG; 2014) defines fraud, waste and abuse on its website. Fraud is "a type of illegal act involving the obtaining of something of value through willful misrepresentation. Waste relates primarily to mismanagement, inappropriate actions, and inadequate oversight. Abuse involves behavior that is deficient or improper as well as misuse of authority or position for financial interests," (OIG, 2014, paras. 2, 5, 6). The various government actions enabling the government-wide purchase card program over the years are shown in Table 1.

**Table 1. Government Actions Related to the Purchase Card Program**
(Adapted from Gupta & Palmer, 2008, p. 177)

| Government Actions | Year |
|---|---|
| Executive Order 12352 | 1982 |
| Pilot Phase of a Government Commercial Credit Card | 1986 |
| Introduction of Government-Wide Purchase Card System | 1989 |
| National Performance Review (NPR) Recommendations | 1993 |
| Federal Acquisition Regulation (FAR) Interim Rule | 1994 |
| Federal Acquisition Streamlining Act (FASA) | 1994 |
| Executive Order 12931 | 1994 |
| Introduction of SmartPay | 1998 |
| Office of Management and Budget Memo | 2002 |
| Proposed Legislation | 2005 |
| Revised OMB Circular A-123 | 2006 |
| OMB Circular A-123, Revised Appendix B | 2009 |

The GPCP implements streamlining initiatives and offers a solution to the small-order problem, which is discussed later. The federal government application of the GPCP is discussed next.

### 1. Federal Government Application of the Government Purchase Card Program

The GPCP, now known as the GSA SmartPay Program, partnered with national banks to provide purchase cards to over 52 federal agencies/departments and non–independently reported agencies throughout the government to support streamlined acquisition initiatives. The GPCP is intended to "streamline the small purchase and the payment process, minimize paperwork, eliminate imprest fund transactions, and generally simplify the administrative effort associated with procuring goods and services under the micro-purchase threshold" ("Government Purchase Card [GPC] Program," 2013, para. 1). According to the Federal Acquisition Regulation (FAR) 2.101 (2014), a micro-purchase is an acquisition of supplies or services using simplified acquisition procedures, where the total amount of the purchase does not exceed the micro-purchase threshold, which is currently set at $3,000.

The following sections discuss the small-order problem and the use of the purchase card in the federal government. In addition, an overview of the roles and responsibilities and the training requirements are discussed regarding the federal government GPCP.

### *a. Small-Order Problem as Related to the Federal Government Purchase Card Program*

The implementation of the purchase card program is beneficial to the government because it increases savings and decreases costs and transaction times associated with small orders. Once the purchase card is in the hands of customers, they can streamline purchasing and eliminate the use of purchasing agents, which helps lower the transaction costs of items. Involving a purchasing agent in a lower value purchase would likely outweigh the cost of the item, thereby emphasizing the value of the purchase card (Monczka et al., 2011). Palmer et al. (2010) determined from their research that, "The best estimate of government cost savings from driving a paper-based approval and payment process to a purchase card is $69 per transaction" (p. 324). The government will realize more cost savings as more transactions are being paid for by the purchase card (Palmer et al., 2010). Gupta and Palmer (2008) found that purchases under the micro-purchase threshold accounted for only 2% of total federal government spending, but 85% of all procurement transactions. That is a significant majority of the purchasing requirements. This finding reinforced the fact that the small-order problem is prevalent in the federal GPCP and illustrated the importance of the purchase card. The next section discusses the use of the purchase card in the federal government and metrics in the current fiscal environment.

### *b. Purchase Card Use in the Federal Government*

The federal government has recognized the benefit of the purchase card since the initial legislation that introduced it in 1982 (Palmer et al., 2010). Since the inception of the program, the pressure to utilize the purchase card increased, enabling the program to grow, until recently. Since 2000, the government purchase card has "accounted for 65 to 70 percent of commercial card spending" (Palmer et al., 2010, p. 317). The federal government uses the term commercial card to refer to the travel, fleet, and purchase cards. For example, in 2008, the government spent $30.6 billion on the commercial card, $19.8 billion of which was spent on the purchase card (Palmer et al., 2010). However, researchers agreed that the program's growth has slowed because of maturation and is now on a slow decline (Gupta & Palmer, 2008; Palmer et al., 2010). That is not surprising because of the current fiscal environment.

In their study on purchase card use, Palmer et al. (2010) compared the number of cards, transactions, and total spending over six fiscal years, from 2008 to 2013. The number of cardholders was close to 357,000 in 2008 (Palmer et al., 2010), compared to 300,900 in 2013 (GSA, n.d.-c). This decrease in cardholders is in keeping with several government reports that encourage lowering the number of cardholders to gain more control over the program and reduce fraud, waste, and

abuse (GAO, 2008). The number of transactions has been in a steady decline, from 25.5 million in 2008 (Palmer et al., 2010) to 18.9 million in 2013 (GSA, n.d.-c). It appears as though the government may not be utilizing the program to its full potential, and therefore may not be realizing the total benefits. In addition, the total purchase card spending was at a high of $19.8 billion in 2008 (Palmer et al., 2010) and was at a low of $16.5 billion in 2013 (GSA, n.d.-c). This decrease may be due to the major budget cuts in the federal government. The purchase card program has been very beneficial to the government by moving the purchasing authority to the customer, reducing transaction time, and increasing cost savings. The next section includes a discussion of the roles and responsibilities within the federal GPCP.

#### *c. Roles and Responsibilities Within the Federal Government Purchase Card Program*

The participants of the federal GPCP include the agency/organization program coordinator (A/OPC), approving official (AO), cardholder (CH), designated billing office (DBO), merchant, and card-issuing bank. The purchase card may only be issued to civilian or military personnel, so contractors cannot participate in the program. The A/OPC is responsible for managing and overseeing the command's GPCP, establishing internal guidelines, establishing and maintaining accounts, and assisting cardholders. The AO is the first point of contact to prevent fraud, waste, and/or abuse of the purchase card. The AO supervises the CH and is responsible for reviewing and approving his or her purchases. The AO should also resolve any questionable purchases and report any misconduct. The CH uses the government purchase card to acquire supplies and services within the CH's authority. The CH is responsible for using the card properly and ethically and following all rules and regulations associated with the CH's delegated purchase authority. The DBO oversees invoice processing and payment. The card-issuing bank is responsible for issuing purchase cards, processing merchant charges and credits, and providing monthly AO and CH account statements (GSA, n.d.-d). The government has partnerships with Citibank, JP Morgan Chase, and U.S. Bank (GSA, n.d.-b), and these institutions serve as the issuing banks for government agencies. The following section discusses the training requirements within the federal GPCP.

#### *d. Training Requirements Within the Federal Government Purchase Card Program*

The Office of Management and Budget (OMB, 2009) Circular A-123, Appendix B, requires each agency to provide training to CHs and card managers (including A/OPCs and AOs). At a minimum, the General Services Administration (GSA) requires online training and refresher training offered by the Defense Acquisition University (DAU). Credit worthiness assessments used to be mandated for new CHs, but after the passing of the 2006 Consolidated Appropriations Act, that

requirement was eliminated (Defense Procurement and Acquisition Policy [DPAP], 2011; Rendon, 2011). The GSA SmartPay Program offers free online CH training to all program participants. The program requires participants to complete training prior to appointment to any position within the GPCP. In addition, refresher training is required once every three years or more often based on agency requirements. Finally, ethics training is also required. Program participants should remain familiar with the rules and regulations governing the use of the purchase card (GSA, n.d-c). AOs should also familiarize themselves with their agency's approval and tracking systems.

As previously mentioned, the GSA SmartPay contract provides purchase cards to over 52 federal agencies, one of which is the DoD. The DoD application of the GPCP is discussed in the next section.

### 2. Department of Defense Application of the Government Purchase Card Program

The DoD GPCP currently uses Citibank to process all types of transactions, including those made with the purchase, travel, and fleet card. However, the DoD's independent agencies also use U.S. Bank solely for purchase card transactions. In FY2008, the DoD GPCP had 98,839 cardholders, making 8.8 million transactions totaling $7.9 billion. As of FY2013, the GSA SmartPay Program reported that the DoD purchase card program had approximately 92,647 cardholders making 5.7 million transactions valued around $4.9 billion. (GSA, n.d.-c) The DoD GPCP has significantly downsized in the last five years, which is expected in the current fiscal environment. However, the DoD embraces the purchase card program as it continually seeks methods for cost savings and increased accountability. The next section discusses the DoD guidance for the GPCP.

#### *a. Department of Defense Guidance for the Government Purchase Card Program*

FAR 13.301 (2014) and Defense Federal Acquisition Regulation Supplement (DFARS) 213.270 (2014) and 213.301 (2014) outline the policy for using the GPCP. The DoD also provides guidance for its components to help establish the purchase card program and implement government- and DoD-mandated controls, rules, and regulations. The DoD Purchase Card Program Management Office has oversight of the DoD's GPCP (Office of Financial Management [FMO], n. d.). Each component may adopt more stringent controls if necessary or desired, but the rules and regulations apply to every component utilizing the GPCP. The process of establishing a purchase card program entails determining a need, requesting authority, establishing internal controls, and establishing training programs for program officials (DPAP, 2011). The purpose of

the purchase card is to add value to the business processes in terms of lower costs or increased productivity, but the mandatory outcome is ensuring that "management controls effectively identify, correct, and minimize fraud, waste, and abuse" (DPAP, 2011, p. 2-2).

To minimize risks, the management and internal controls should have support from higher levels, expect integrity and ethical behavior from participants, engage in audits annually, ensure controls are working properly, and provide proper training, both initial and refresher (DPAP, 2011). Following the guidelines for maintaining those controls will ensure that each component's program has strong internal controls, capable processes, and properly trained personnel (Rendon & Rendon, 2014).

One of the management controls in place is the Purchase Card Online System. It is a DoD-wide system used by GPCP users to improve the management and accountability within each component's GPCP organization (DPAP, 2011). Additionally, the DoD has many resources that require management's compliance with specific rules and regulations regarding processes, internal controls, and training. The next section discusses the accountability methods within the DoD GPCP.

#### *b. Department of Defense Accountability Methods Within the Government Purchase Card Program*

Adequately trained program personnel are vital to maintaining accountability. The roles and responsibilities previously outlined in the federal GPCP section are applied to the DoD as well as to the DoN and NPS. An AO may not oversee more than seven CHs, and an A/OPC may not be responsible for more than 300 accounts (DPAP, 2011). An individual CH or AO may be responsible for more than one account. All participants involved in a purchase card program must receive training mandated by the GSA SmartPay Program. The DoD-mandated purchase card course is titled "DoD Government Purchase Card Tutorial" and is hosted by the DAU (DPAP, 2011). The DAU offers two online courses, one to study the training material and the other for refresher training. Each program participant must produce a certificate of completion to the APC after taking the online test.

Now that the DoD application of the purchase card has been covered, the next section reviews the purchase card program application of one of the DoD's components, the DoN.

### 3. Department of the Navy Application of the Government Purchase Card Program

The DoN GPCP services are provided by a task order issued under the main GSA SmartPay2 contract, which expires November 2018 (Naval Supply Systems

Command [NAVSUP], 2012). The DoN instruction applies policy guidance from 10 U.S.C. § 2784 (2014); OMB (2009) Circular A-123, Appendix B; and the DoD government charge card guidebook (DPAP, 2011). These policies discuss the management of a purchase card program, internal controls needed to manage the program, and penalties for violations of the GPCP policies.

The DoN Consolidated Card Program Management Division (CCPMD) serves as the DoN Component program manager, which is organizationally aligned within the NAVSUP Corporate Operations division (FMO, n.d.). In 2012, NAVSUP disseminated an instruction guide to help establish DoN policy for management of the GPCP. In FY2001, the Navy had the "second largest purchase program in the DoD, with approximately 27,900 cardholders making 2.8 million transactions valued at $1.8 billion" (*Purchase Cards*, 2002, p. 1; GSA, n.d.-c). Twelve years later, in FY2013, the program had 10,200 cardholder accounts, made 130,000 transactions, and spent $128.57 million in purchases (NAVSUP, 2013). Like the DoD program, the DoN program has also decreased in size, which is not unusual given the current fiscal environment. Therefore, with this current fiscal environment, it is crucial to use the program efficiently and effectively. The NAVSUP (2012) Instruction 4200.99B outlines roles and responsibilities, program management, use of the purchase card, program oversight, and disciplinary actions associated with the DoN's application of the GPCP, which is discussed next.

#### *a. Department of the Navy Roles and Responsibilities/Training*

All roles and responsibilities are similar to those given for both federal government and DoD programs to include A/OPC, AO, CH, disbursing paying office, and card-issuing bank, among others not mentioned. The one addition is that the A/OPC also serves as a liaison to the DoN CCPMD. In accordance with NAVSUP (2012) Instruction 4200.99B, all CHs and AOs must receive purchase card training and ethics training. The courses are role- and certification system–specific. Furthermore, the DoN requires that its program participants take purchase card refresher training every two years, which is more stringent than the GSA SmartPay Program requirement of every three years, and annual DoD ethics training. The DoN CCPMD sponsored regional training is one way for program participants to complete the purchase card refresher training (NAVSUP, 2013). Training is "key to ensuring that the workforce has the skills necessary to achieve organizational goals" (*Purchase Cards*, 2002, p. 7). The next section discusses the DoN GPCP management.

### *b. Department of the Navy Government Purchase Card Program Management*

The DoN GPCP management is comprised of personnel requirements, separation of duties, span of control, training requirements, and other account information, which are reflective of the guidance given for the DoD and federal government programs. Purchase card program personnel must be civilian government employees or members of the armed forces, with exceptions given to some specific positions. Separation of duties aims to limit the cross interaction of AOs, CHs, and A/OPCs in the same hierarchy. Training requirements, including initial, refresher, and ethics, were previously discussed. Once the training is completed and documented, the participant receives authority in a letter of delegation with the approved spending limit for the position in which the CH was trained (NAVSUP, 2012). Next, the DoN use of the government purchase card is discussed.

### *c. Department of the Navy Use of the Government Purchase Card*

As previously mentioned, the purchase cards' authorized use is for paying for micro-purchases ($3,000 limit) of supplies, services, or construction for government use to meet the government organizations' mission. The purchase card is to be used only for authorized and approved purchases, not for personal use purchases. In addition, statutory requirements must be met in order to use the purchase card as a form of payment. A CH must have the authority to purchase goods and services and must follow DoD and DoN purchasing regulations. Finally, program participants must be in compliance with purchasing internal controls when purchasing for the command (NAVSUP, 2012).

### *d. Department of the Navy Government Purchase Card Program Oversight*

Program oversight is "required to ensure effectiveness of purchasing and management internal controls and includes monthly, quarterly, and semiannual reviews" (NAVSUP, 2012, p. 46). This includes assurances from both CHs and AOs regarding transaction reviews and account reconciliations. There are procedures that need to be followed in order to correctly and thoroughly conduct account and program oversight.

This section discussed the DoN application of the GPCP, including roles and responsibilities, program management, use of the purchase card, and the DoN GPCP oversight. As previously mentioned, the NPS GPCP is discussed in Chapter III. In order for the GPCP to be successful, there must be sufficient

corporate governance, including auditability and adherence to legislature and current practices, which is discussed next.

## E. CORPORATE GOVERNANCE

This section of the literature review provides an overview of auditability, legislature, and current practices, to include the SOX and the COSO. This section is the foundation to understand the internal controls governing purchase card programs.

### 1. Auditability

Auditability is a high-level priority for the DoD because it demonstrates responsible stewardship of taxpayers' money, reduces costs of business operations, and complies with congressional direction (Murphy-Sweet, 2013). The government is striving to achieve auditability by September 30, 2017, which is the deadline outlined in the National Defense Authorization Act (NDAA) for FY2010. To receive a clean audit and reach financial auditability by 2017, the DoD and DoN implemented an audit readiness initiative. The DoN's audit readiness strategy focuses on

> evaluating business processes to ensure the design and operation effectiveness of their internal controls comply with federal financial standards; correcting identified internal control deficiencies; ensuring that internal controls remain effective through continuous monitoring, testing, and auditing; and retaining key supporting documentation demonstrating proper execution of business processes for inspection at all levels. (Patton, 2013, p. 23)

As reflected in this initiative, the DoN's audit readiness strategy is to focus on internal controls. Financial Improvement and Audit Readiness (FIAR) "supports the DoN's audit readiness initiative, with the long-term goal of improving financial processes and systems throughout the Navy," (Murphy-Sweet, 2013, para. 2). However, financial auditability is not the only goal. Strong and effective internal controls, competent people, and capable processes are imperative to auditability and form the basis for the auditability triangle, which is illustrated in Figure 1 (Rendon & Rendon, 2014). The focus of this research is the internal controls part of the auditability triangle.

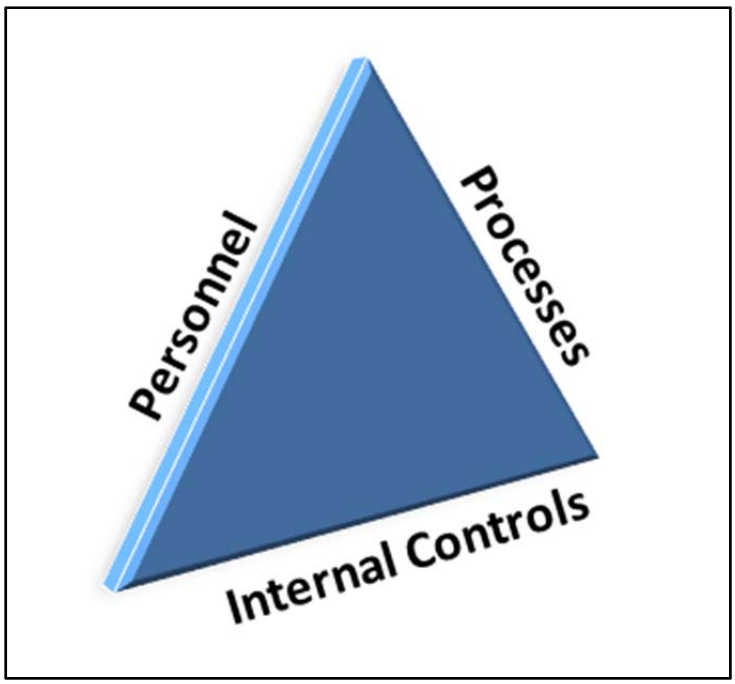


**Figure 1. Auditability Triangle**
(Rendon & Rendon, 2014)

In relationship to internal controls, the SOX and the COSO are addressed next.

### 2. Sarbanes–Oxley Act of 2002

President George H. W. Bush signed the SOX into law in 2002 (Securities and Exchange Commission [SEC], 2013). The SOX was enacted to "protect investors by improving the accuracy and reliability of corporate disclosures made pursuant to the securities laws, and for other purposes" (Sarbanes–Oxley Act, 2002). More specific to internal controls, Section 404 addresses management assessment of internal controls. Subsections (a) and (b) relate to the rules and evaluation and reporting. Section 404(a) mandated that each annual report would require an internal control report including a statement of management's responsibility for the internal control structure and procedures as well as an assessment of the internal control structure at year end (Sarbanes–Oxley Act, 2002, § 7262(a)). Section 404(b) states that with regard to the requirements in Subsection (a), "each public accounting firm that prepares or issues the audit report for the issuer shall attest to, and report on, the assessment made by the management of the issuer" (2002, § 7262(b)). Although SOX set standards for public companies and public accounting firms to ensure that management creates, maintains, and assesses its internal control structure, the internal control requirements are

applicable to private companies as well as the federal government. An organization that provides guidance on internal controls is addressed next.

### 3. Committee of Sponsoring Organizations of the Treadway Commission

The COSO (n.d.-a) was organized in 1985 and consists of five professional associations dedicated to providing comprehensive frameworks and guidance on internal controls to improve organizational performance and governance: the American Accounting Association (AAA); America, Institute of Certified Public Accountants (AICPA); Financial Executives International (FEI); The Institute of Management Accountants (IMA); and the Institute of Internal Auditors (IIA; COSO, n.d.-b). COSO's (n.d.-a) website states that the organization's "goal is to provide thought leadership with three interrelated subjects: enterprise risk management (ERM), internal control, and fraud deterrence" (para. 6). The five components of an integrated internal control system are discussed next as outlined by the COSO and GAO.

## F. INTERNAL CONTROLS

Internal controls in the government are a continuous built-in component of operations. They are standards in place to ensure, with reasonable assurance, that an organization's objectives are met to improve accountability and to address areas of risk in the organization. The definition of the internal control framework, along with the components and principles of internal control, are discussed next.

Internal control is a process designed to provide reasonable assurance that an organization will achieve "effectiveness and efficiency of operations, reliability of financial reporting, and compliance with applicable laws and regulations" (COSO, 2013; GAO, 1999, p. 4). Further, "there is a direct relationship between the three categories of objectives, which are what an entity strives to achieve, and components, which represent what is needed to achieve the objectives" (COSO, 1992, p. 3).

Snyder, Broome, and Zimmerman (1989) emphasized that "finding the appropriate level of internal control is a critical management responsibility" (p. 49). Salerno (2006) found that "appropriate, properly functioning internal controls offer powerful benefits" to organizations in many ways (p. 1). Furthermore, Snyder et al. (1989) stated that "internal control must be used in a consistent manner" throughout the organization (p. 48).

The five components of an integrated internal control framework are control environment, risk assessment, information and communication, control activities, and monitoring activities (COSO, 2013). Recently, COSO (2013) released an

updated *Internal Control—Integrated Framework (Framework)*, which identifies 17 principles that represent fundamental concepts within each component. Appendix B reflects the integrated internal control components and related principles (Tan, 2013). In addition, the Government Accountability Office (GAO, 2013) exposure draft incorporates the new COSO guidelines, which are discussed later. Each of the five internal control components and 17 principles are discussed in the following sections.

### 1. Control Environment

The control environment is the first internal control component and is considered the foundation of any internal control system as well as the entire organization. Management and employees are responsible for establishing and maintaining an environment that sets a positive tone toward internal controls (GAO, 2001). There are several key factors that support the achievement of this goal, including integrity and ethical values, commitment to competence, management's operating style, and organizational structure. Management must establish a tone at the top that values ethical behavior and integrity and must ensure that the desired behaviors are communicated throughout the organization. Holmes, Langford, Welch, and Welch (2002) proposed that management must encourage cooperation in achieving a moral purpose through ethical behavior. Therefore, a strong, supportive attitude by management toward tight internal controls should discourage unethical activity (Holmes et al., 2002). Management should also take timely and appropriate action as soon as there are signs that a problem may exist (GAO, 2001).

The organization must also seek competence for its workforce. This entails identifying suitable knowledge and skills needed for various jobs and providing the required training (GAO, 1999). Furthermore, management's philosophy and operating style affect the environment, as the philosophy and operation style determine the organization's attitude toward risk-taking and performance-based management. These factors can have a great impact on internal control. A study by Fleak, Harrison, and Turner (2010) illustrated "how weaknesses in the control environment component of the COSO framework can cause or exacerbate weaknesses in the control activities, information and communications, and monitoring components of the framework" (p. 715). The organization must have clearly defined reporting relationships and clearly defined authority and responsibility, and must ensure that the organization is appropriately centralized or decentralized (GAO, 2001). Additionally, Fleak et al. (2010) illustrated that "internal control is vital for organizations of all sizes" (p. 714). Each of the five internal control component sections discusses the associated principles outlined in the COSO (2013) framework. The principles relating to control environment are as follows:

- Principle 1—The organization demonstrates a commitment to integrity and ethical values.
- Principle 2—The board of directors demonstrates independence from management and exercises oversight of the development and performance of internal control.
- Principle 3—Management establishes, with board oversight, structures, reporting lines, and appropriate authorities and responsibilities in the pursuit of objectives.
- Principle 4—The organization demonstrates a commitment to attract, develop, and retain competent individuals in alignment with objectives.
- Principle 5—The organization holds individuals accountable for their internal control responsibilities in the pursuit of objectives. (p. 6)

### 2. Risk Assessment

Risk assessment is the second internal control component which includes the "identification, analysis, and management of risk" (Chang, 2013, p. 16) associated with an organization. Risk could inhibit the organization's efficient and effective ability to achieve its objectives. Risk identification includes recognizing significant interactions between the organization and external factors as well as internal factors at both the entity level and activity level. Other factors identified that may contribute to risks are activities related to past failures, the inherent nature of the organization's mission, and the complexity of programs (GAO, 2001). The analysis of risk also includes estimating the significance of the risk and assessing the likelihood and frequency of the risk (GAO, 2001). When analyzing risk, management needs to develop a tolerable level of risk for the organization to accept and manage. The management of risk entails deciding which internal control activities would best mitigate those risks and helps achieve the internal control objectives of efficient and effective operations, reliable financial reporting, and compliance with laws and regulations (GAO, 2001). The new COSO (2013) *Framework* principles relating to risk assessment are listed as follows:

- Principle 6—The organization specifies objectives with sufficient clarity to enable the identification and assessment of risks relating to objectives.
- Principle 7—The organization identifies risks to the achievement of its objectives across the entity and analyzes risks as a basis for determining how the risks should be managed.

- Principle 8—The organization considers the potential for fraud in assessing risks to the achievement of objectives.
- Principle 9—The organization identifies and assesses changes that could significantly impact the system of internal control. (p. 7)

### 3. Control Activities

Control activities is the third internal control component and consists of the "policies, procedures, techniques, and mechanisms to ensure that management's directives for the organization are carried out" (GAO, 1999, p. 11). The policies, procedures, techniques, and mechanisms are also intended to mitigate the risk identified in the risk assessment process. Control activities take place at all levels of an organization, which include a variety of activities. A manager should consider "whether control activities relate to the risk-assessment process and whether they are appropriate to ensure the management's directives are carried out" (GAO, 2001, p. 33). A reviewer within the organization determines if the proper control activities are in place, if there are a sufficient amount of control procedures, and if they are functioning effectively. It is important to establish control activities, but also to understand them, monitor them, and ensure they are being applied appropriately and working properly.

Other common categories of control activities include management of human capital, performance measures, and segregation of duties. It is imperative that the organization's mission, expectations, and strategies be clearly communicated to all employees so that the organization can manage the workforce to achieve its goals. Performance measures should be established throughout the organization and continually compared against planned goals to assess progress. Performance measures are also used for operational and financial reporting purposes. Segregation of duties can help to reduce the risk of fraud, waste, and abuse, but solely "relying on segregation of duties where the control environment, monitoring, or risk assessment is weak is negligent" (McCuaig & Marks, 2005, p. 37). All of these factors impact an organization's internal control activities, "which should be designed accordingly to contribute to the achievement of the organization's missions, goals, and objectives" (GAO, 2001, p. 33). In addition to the control activities discussed, the following are the COSO (2013) *Framework* principles relating to control activities:

- Principle 10—The organization selects and develops control activities that contribute to the mitigation of risks to the achievement of objectives to acceptable levels.
- Principle 11—The organization selects and develops general control activities over technology to support the achievement of objectives.

- Principle 12—The organization deploys control activities through policies that establish what is expected and procedures that put policies into action. (p. 7)

### 4. Information and Communication

Information and communication is the fourth internal control component. Information and communication is the collection of information that is sent to all the organization's stakeholders through the appropriate channels, both internal and external. Information needs to be "identified, captured, and distributed to the right people in sufficient detail, in the right form, and at the appropriate time to enable them to carry out their duties and responsibilities efficiently and effectively" (GAO, 2001, p. 51). Managers need two types of information: operating and financial (GAO, 2001). Operating information is used to determine compliance with various laws and regulations, whereas financial information is used to make operating decisions on a daily basis and allocate resources. Information and communication also includes an organization's accounting system. An effective information and communication system should allow information to flow up, down, and across the organization (GAO, 1999). Williams (2005) contends that "information and communication hold the COSO framework together. Collecting, analyzing, and using performance measures for decisions are activities that require internal controls to ensure the data used are valid and reliable" (pp. 16–17).

Management should ensure that internal and external communications are taken seriously, that there is a means of communication outside the direct supervisor, and that employees know how their roles fit into the overall structure of the organization. The organization should "continually improve the usefulness and reliability of its communication of information" (GAO, 2001, p. 55) because it is connected to the organization's overall strategic plan and is consequently linked to the accomplishment of the organization's objectives. In addition to the components of information and communication discussed, the COSO (2013) *Framework* principles relating to information and communication are as follows:

- Principle 13—The organization obtains or generates and uses relevant, quality information to support the functioning of internal control.
- Principle 14—The organization internally communicates information, including objectives and responsibilities for internal control, necessary to support the functioning of internal control.
- Principle 15—The organization communicates with external parties regarding matters affecting the functioning of internal control. (p. 7)

### 5. Monitoring Activities

Monitoring activities is the fifth internal control component and is the process of assessing the quality of an organization's performance over time. Williams (2005) identified monitoring as "the process of assessing the quality of internal control performance. Monitoring is also the routine review of the effectiveness of internal controls and is perhaps the most important part of the COSO framework" (p. 17). Monitoring is accomplished through ongoing monitoring, separate evaluations, or a combination of the two. Ongoing monitoring is performed continually and is embedded in the organization's normal operations. It includes "regular management and supervisory activities, comparisons, reconciliations, and other actions people take in performing their duties" (GAO, 1999, p. 20). Separate evaluations are a more in-depth review of a single internal control process at a specific point in time. Separate evaluations can be conducted by an internal individual as a self-assessment or by an external auditor. Any internal control deficiencies that are found need to be reported to the person responsible for that function and his or her supervisor for immediate resolution.

Audit resolution includes findings and recommendations from formal audits, informal reviews, internal separate evaluations, and management studies and assessments (GAO, 2001). The organization should be responsive to these recommendations, find ways to strengthen its internal controls, and take appropriate action to follow up and resolve any issues. The COSO *Framework* (2013) updated this component to "Monitoring Activities" in 2013, discussing the same concepts, with the addition of the following principles:

- Principle 16—The organization selects, develops, and performs ongoing and/or separate evaluations to ascertain whether the components of internal control are present and functioning.
- Principle 17—The organization evaluates and communicates internal control deficiencies in a timely manner to those parties responsible for taking corrective action, including senior management and the board of directors, as appropriate. (p. 7)

The previous sections discussed the five internal control components and the corresponding principles in accordance with the updated COSO *Framework*. These five components of internal control are important to the purchase card program's success because the absence of effective internal controls can expose the program to inefficiencies and vulnerabilities to fraud (Rendon, 2011, p. 11). The next section discusses the GAO standards in the GAO 2013 exposure draft as they were developed from and relate to the COSO *Framework*.

## G. INTERNAL CONTROLS IN THE FEDERAL GOVERNMENT

### 1. Government Accountability Office Internal Control Framework

The GAO internal control framework is the COSO *Framework* applied to the federal government. Prior GAO reports were referenced in the previous sections of discussion of the internal control components; however, a new set of internal controls standards was released by the GAO (2013) as an exposure draft of the *Standards for Internal Control in the Federal Government* (*Green Book*) that implements the new COSO integrated internal control framework. The GAO is currently in the process of updating the *Green Book*. The GAO exposure draft of the *Green Book* was open to the public for comments through February 18, 2014, so the GAO will be releasing the new standards sometime this year, which will supersede the 1999 edition of the *Green Book*. These standards provide the framework for establishing and maintaining effective internal controls in the federal government (GAO, 2013).

The goal is to develop an effective internal control system to achieve an organization's goals; however, it is imperative to understand that the control system can only provide reasonable assurance, not absolute assurance, that those objectives will be met. The GAO 2013 exposure draft details the implementation of the internal control components and principles in a federal government environment similar to the implementation discussed in the previous sections. The next section discusses the Managers' Internal Control Program (MICP), which is another tool used to hold federal managers accountable for their internal control system.

### 2. Managers' Internal Control Program

The Federal Managers' Financial Integrity Act (FMFIA) of 1982 was signed into law to ensure that agencies were conducting ongoing evaluations and reporting on the adequacy of their internal control systems. The Office of the Under Secretary of Defense (Comptroller; OUSD[C]) is responsible for implementing, managing, and monitoring the secretary of defense's program over internal control management (2013). Although the USD(C) is responsible for the program, he/she instructs the director of financial improvement and audit readiness (DFIAR) to manage and oversee operations of the DoD's MICP (OUSD[C]/Chief Financial Officer, 2013). The FMFIA is implemented through the DoD MICP (OUSD[C], 2013). The MICP requires all DoD managers to be involved in the program and remain active participants to "review, assess, and report on the effectiveness of internal management controls within their command" (OUSD[C], 2013, p. 1). The MICP is the Navy's method for demonstrating compliance with the FMFIA, and it is crucial to stay in compliance with this program because the command compliance will be reviewed and evaluated during external audits and inspections (NPS, 2013a).

NPS Instruction 5200.1S states, as outlined in Title 31 of the United States Code (U.S.C.) § 3512 (2011), the following regarding internal controls:

> commands [are required] to implement a system of internal controls to provide reasonable assurance that programs achieve their intended results; resource use is consistent with the Department of the Navy mission; programs and resources are protected from waste, fraud, and mismanagement; laws and regulations are followed; and reliable and timely information is obtained, maintained, and used for decision-making and reporting. (NPS, 2013a, p. 1)

The implementation of internal control systems was previously required of federal managers, but now reporting is an additional obligation and will continue to be a requirement to support the auditability of the DoD. The OMB (2009) Circular A-123 and its Appendix B further discusses management's responsibility for internal controls.

### 3. Office of Management and Budget Circular A-123

OMB (2004) Circular A-123, *Management's Responsibility for Internal Control,* was previously named *Management Accountability and Control*. It outlined and defined management's responsibility for internal control in the federal government. This revision of the circular was written in 2004 after the new requirements for publicly traded companies were established in the SOX; however, the circular was not implemented until FY2006. Agencies were given time to prepare for its implementation, and in the interim followed the previous version of Circular A-123 (OMB, 2004). The revised OMB Circular A-123 was to supersede all previous versions once implemented. At the time, this circular and the statute it implemented, FMFIA of 1982, were the core federal requirements to improve internal controls (OMB, 2004). The content of the circular was meant to strengthen the requirements for assessment of internal controls and emphasize the connection between internal control assessments and internal control-related activities (OMB, 2004).

Appendix B of Circular A-123 was "Improving the Management of Government Charge Card Programs" (OMB, 2004). The revised Appendix B outlined policies and procedures regarding how to maintain internal controls in government charge card programs (OMB, 2009). It established minimum requirements and identified best practices from all issuing agencies, such as the OMB, GSA, Department of Treasury, and others. The goal of the guidance was to improve the GPCP and maximize the benefits to the federal government. Benefits included reduction of administrative costs, decrease in transaction time and costs, mitigation of risks, improvement of financial and administrative processes, and policy compliance monitoring (OMB, 2009). The information contained in the OMB Circular A-123 Appendix B must be distributed to all employees in the purchase card

program and “included in internal agency procedures and training materials” (OMB, 2009, p. 3).

## H. SUMMARY

This literature review presented a background of the research with an overview of the evolving role of the purchasing function. It also presented the industry purchase card program and its associated roles and responsibilities. In addition, the GPCP and its application in the federal government, the DoD, and the DoN were discussed. Corporate governance, which includes auditability, the SOX, and COSO were addressed. Furthermore, the integrated internal control components were discussed and as well as internal controls in the federal government.

The next chapter introduces the Naval Postgraduate School (NPS) and its use of the GPCP. NPS is the focal organization for this research on the analysis of perceptions of internal controls in the GPCP.

# III. NAVAL POSTGRADUATE SCHOOL

## A. INTRODUCTION

The Naval Postgraduate School (NPS) is located in Monterey, CA. The school provides graduate education to U.S. and foreign military officers and government employees. NPS's mission is to "provide relevant and unique advanced education and research programs" (Office of the Chief of Naval Operations [CNO], 2012, p. 3), and through this mission, NPS fulfills the graduate education needs of the Department of Defense (DoD). The institution is comprised of four schools, several departments, and a number of centers, all of which have staff, faculty, and students with purchasing requirements who are working to accomplish their specific missions, which support NPS's mission.

The staff at the school supports the operations of NPS in functional areas including, but not limited to, contracting and purchasing. The Department of Contracting and Logistics governs the contracting and purchasing functions for all of NPS, and the staff in the department supports the purchasing requirements for NPS schools, departments, and centers. This chapter provides a discussion of the Contracting and Logistics Department and NPS's purchasing organizational structure. Finally, the GPCP at NPS is discussed, including the span of control, training requirements, and administrative actions for noncompliance.

## B. CONTRACTING AND LOGISTICS MANAGEMENT

A recently released NPS instruction states, "Under the direction of the Director of Contracting and Logistics Management, the Contracting and Logistics Management organization provides procurement and contracting support for the acquisition of supplies and services for the Naval Postgraduate School" (NPS, 2013b, p. 13). The organization was recently restructured to enhance efficiency and effectiveness within the department, as well as provide clarity for the employees and end users. As previously mentioned, all staff, faculty, and students have purchasing requirements in order to complete their specific missions, which support NPS's mission. To accomplish the mission of NPS, the staff involved in the purchasing function must be properly equipped with the right tools. The purchasing organizational structure, which differentiates the two types of purchasing support provided at NPS, is discussed next.

## C. PURCHASING ORGANIZATIONAL STRUCTURE AT THE NAVAL POSTGRADUATE SCHOOL

Purchasing in support of NPS is organized into a hybrid structure, which is an organizational design that provides flexibility to meet changing business conditions

(Monzcka et al., 2011). Organizational design refers to the process of selecting a "structured and formal system" that incorporates communication, control, authority, and other responsibilities needed to accomplish the organization's goals (Monzcka et al., 2011). Monzcka et al. (2011) contended that "one of the most critical aspects of organizational design is the decision to centralize or decentralize purchasing authority" (p. 158). The purchasing authority at NPS is a hybrid because it has both centralized and decentralized aspects. The purchasing agents who are mostly responsible for large orders ranging from $3,000–$150,000 are centralized, whereas the purchase cardholders (CHs) who are responsible for the small orders under the micro-purchase threshold of $3,000 are decentralized.

In FY2012, the NPS Government Purchase Card Program (GPCP) was responsible for making approximately 21,000 transactions totaling approximately $24.2 million (M. Morales, personal communication, July 24, 2013). Both purchasing agents and government purchase CHs report to the director of contracting and logistics management (NPS, 2013b). The GPCP at NPS is discussed next, which includes span of control, training requirements, and administrative actions for noncompliance.

## D. NAVAL POSTGRADUATE SCHOOL GOVERNMENT PURCHASE CARD PROGRAM

The Department of Contracting and Logistics Management owns the NPS GPCP, but the agency program coordinator (APC) has overall responsibility of the program to ensure its integrity and success. The APC's responsibility is to ensure all program participants, specifically approving officials (AOs) and CHs, are properly equipped with the knowledge, skills, and abilities to accomplish their purchasing requirements. The APC is also responsible for tracking training completion, ensuring that proper oversight and management controls are in place and working, and conducting compliance reports. The APC is tasked with making sure that AOs and CHs complete the mandatory training requirements (including refresher training when necessary), remain familiar with all policies and procedures associated with the program, and are aware of the internal controls in place. The following sections discuss span of control, training requirements, and administrative actions for noncompliance regarding the GPCP at NPS.

### 1. Span of Control

The NPS GPCP is composed of a total of 24 AOs and 32 CHs dispersed throughout the campus to serve their departments' customers. The responsibilities of an AO and a CH are collateral duties to be performed in conjunction with primary duties. Given the ratio of CHs to AOs at NPS, an AO is responsible for overseeing no more than two CHs, which complies with current DoN regulation on span of

control, which specifies that an AO may not oversee more than seven CHs (NAVSUP, 2012). In addition, the DoN instruction states that an APC may not oversee more than 300 AOs, so NPS is also in compliance with that requirement.

### 2. Training Requirements

NPS (2012) Instruction 4410.1C outlines the training requirements for its AOs and CHs. After the passing of the 2006 Consolidated Appropriations Act, the requirement for credit worthiness assessments for new CHs was eliminated (DPAP, 2011; Rendon, 2011). However, agency officials and APCs are allowed to continue implementing this requirement at their discretion (Rendon, 2011). Credit worthiness assessments are not required for new CHs at NPS.

Required training for AOs and CHs at NPS align with the requirements for the DoN. Those requirements include a course from the Defense Acquisition University (DAU), online DoN purchase card training for their specific role, and DoD ethics training (NAVSUP, 2012). In addition, purchase card refresher training is required every two years, which can be completed through the Consolidated Card Program Management Division (CCPMD) sponsored regional training, specific DAU courses, or online DoN purchase card training. Furthermore, DoD annual ethics training is required as well. Initial training with Citibank is required, and NPS also requires that all purchase card personnel attend local annual procedures training. Lastly, all new cardholders must complete a class on using Funds Administration and Standardized Document Automation (FASTDATA) and the Kuali Financial System (KFS). The FASTDATA is used as NPS's financial management tool to input purchase card transactions into the Standard Accounting and Reporting System (STARS). The KFS is used as the business management system for NPS (NPS, 2013b).

### 3. Administrative Actions for Noncompliance

If the AO and/or CH do not comply with appropriate regulations and policies, administrative actions will be taken. NPS (2008) Instruction 4200.1A, titled *Navy Purchase Card Rule Violations and Applicable Administrative Actions*, identifies two types of card violations and associated administrative actions. The APC is responsible for informing, investigating, and confirming all violations to the appropriate leadership (NPS, 2008). Category "A" violations occur when AOs and CHs fail to adhere to proper record keeping and training requirements, whereas Category "B" violations occur when AOs and CHs violate purchasing rules and regulations. The administrative actions for a Category A violation depend on whether it is the first, second, or third violation. The first violation requires corrective action, the second violation may result in a suspended account and required remedial training, and the third violation results in a cancelled account for the CH and a suspended account for the AO. Based on the results of a Category B violation, the

comptroller may immediately cancel the account and provide guidance and additional training (NPS, 2008).

## E. SUMMARY

This chapter presented a brief overview of NPS, including its mission and purchasing requirements. In addition, a discussion of the Contracting and Logistics Department and its purchasing organizational structure was provided. Finally, the GPCP at NPS was discussed including the span of control, training requirements, and administrative actions for noncompliance. The next chapter presents the methodology of this research.

# IV. METHODOLOGY

## A. INTRODUCTION

This chapter provides an outline of the methodology used to conduct this research study. The method used to develop the survey, the sources used to develop the individual questions used in the survey instrument, and the deployment of the survey are discussed. The process used to analyze the data is also addressed.

## B. SURVEY DEVELOPMENT

The survey was developed using two sources. The first source was a previously validated survey developed by the New York State Internal Control Association (NYICA; 2011). Questions from the survey that were most pertinent to the five components of internal control were utilized. The second source was questions developed by the research team. Demographic questions and additional questions based on the information provided in the literature review conducted on the government purchase card program were developed. The survey consisted of 69 Likert-based survey items with seven options ranging from “Strongly Agree” to “Strongly Disagree.” The participants also had the option to choose “I don’t know” or “I prefer not to answer,” which were part of the seven options.

The survey was developed to analyze the approving officials’ (AOs’) and cardholders’ (CHs’) perceptions of internal controls within the purchase card program at the Naval Postgraduate School (NPS). First, the demographic questions addressed the participants’ employment category, position in the Government Purchase Card Program (GPCP), time in their position, numbers of schools/departments/people they support or oversee, and percentage of their working hours that were spent conducting GPCP collateral duties. Second, the survey focused on questions relating to the five components of the Committee of Sponsoring Organization of the Treadway Commission (COSO) integrated internal control framework to include control environment, risk assessment, control activities, information and communication, and monitoring activities.

Control environment survey items relate to ethical standards, trust, management’s conduct, training requirements and knowledge, and overall work environment. Risk assessment survey items relate to accountability, sufficient resources, and factors that may affect the employee’s work environment and ability to complete his or her duties. Control activities survey items relate to current policies and procedures, the process for reporting, the knowledge of consequences, supervision, and computer systems’ security. Information and communication survey items relate to the interaction between management and work units, knowledge of

expected behavior and performance, channels of communication, and the process of sharing information to reach their units' objectives. Monitoring activities survey items relate to output measurability and performance reviews, reviews of policies and practices, and program oversight.

Finally, there were three open-ended questions at the end of the survey. The open-ended questions asked the participant to list or describe the top five critical success factors needed for an organization to achieve its mission for the GPCP, to list or describe the top five issues that could hinder the success of the GPCP, and to explain why he or she disagreed or strongly disagreed with any of the survey questions.

## C. SURVEY DEPLOYMENT

The survey was deployed to AOs and CHs in the purchase card program at NPS. Each participant was sent an e-mail with a link to the web-based survey on LimeSurvey. The survey was voluntary and anonymous. No personally identifiable information was collected. All participants were given permission to complete the survey at their workstation and during work hours. The survey was available for three weeks. Once the survey was closed, the researchers collected the responses from LimeSurvey to conduct an analysis of the data. The population consisted of 56 potential participants, 13 of whom submitted a complete survey; therefore, the survey participation rate was 23%.

## D. PROCESS USED TO ANALYZE DATA

Because of the low participation rate, the data was analyzed using only descriptive statistics. The collected data was analyzed using IBM SPSS Statistics Version 19. The responses were coded to assist with the analysis. Descriptive statistics "involves arranging, summarizing, and presenting a set of data in such a way that useful information is produced. Its methods make use of graphical techniques and numerical descriptive measures (such as averages) to summarize and present the data" (Keller, 2009, p. 12). The survey did not ask knowledge questions because the research study was not assessing participants' knowledge of internal controls; it was simply identifying their perceptions of compliance to internal controls within the NPS GPCP. The data gathered from the results were analyzed in several different ways, as discussed later; however, the basis of analysis was the mean, or average, response.

Initially, the overall frequency of the demographics questions is identified. Then, the mean for each of the five internal control components are calculated and presented. The mean is the average, and the frequency is the rate of occurrence. In addition, the five internal control components are analyzed by the participants' position in the government, AO or CH, which are used to identify any differences in

perceptions of internal controls between AOs and CHs. Additional observations based on other analysis are discussed. The frequency of “I don’t know” responses is also discussed. Finally, any potential implications of the survey findings on internal controls may have on auditability are discussed.

## E. SUMMARY

This chapter provided an outline of the methodology used to conduct this research study. The method used to develop the survey, the sources used to develop the individual questions used in the survey instrument, and the deployment of the survey were discussed. The process used to analyze the data was also addressed. The next chapter discusses the results of the research, provides an analysis of the results, identifies any implications of the research results, and provides recommendations based on the data analysis.

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# V. RESULTS, ANALYSIS, IMPLICATIONS, AND RECOMMENDATIONS

## A. INTRODUCTION

In this chapter, the results of the online survey collected from LimeSurvey are presented, which include survey items pertaining to demographics and the five components of internal control: control environment, risk assessment, control activities, information and communication, and monitoring activities. The overall population's mean of the Likert-based responses in addition to the frequency of the demographics survey items are identified. The mean for each of the five internal control components are also calculated and presented. The mean and frequency of responses from the approving officials (AOs) and cardholders (CHs) are compared and analyzed to identify any differences in perceptions of internal controls between AOs and CHs. Additional analysis based on the results is discussed. The open-ended questions were not analyzed as part of this research study. Furthermore, any potential implications of the survey findings on internal controls, or lack thereof, on auditability within the Government Purchase Card Program (GPCP) at the Naval Postgraduate School (NPS) are addressed. Finally, recommendations based on the data analysis are presented.

## B. ANALYSIS OF DEMOGRAPHIC QUESTIONS

### 1. Survey Response

The survey was deployed on Tuesday, January 14, 2014, and was open for three weeks until Tuesday, February 4, 2014. During the time that the survey was available, 13 participants responded. The web-based survey link was sent to 56 people, so the response rate was 23%. All participants were federal civilian employees, and out of the 13 responses, six were AOs and seven were CHs. The survey consisted of Likert-based survey items with seven options ranging from "Strongly Agree" to "Strongly Disagree." The participants also had the option to choose "I don't know" or "I prefer not to answer." Of the total survey items, there were eight demographics survey items, including employment category and position, which are discussed next.

### 2. Responses by Experience

The response options were divided into six categories based on years of experience in the role as AO or CH. The options were 0–1, 2–3, 4–5, 6–7, 8–9, and over 10 years. Figure 2 displays the responses. Based on the responses, approximately 8% of participants indicated that they had less than one year of

experience, while 38% of the participants had four to five years of experience, and 23% had over 10 years of experience.

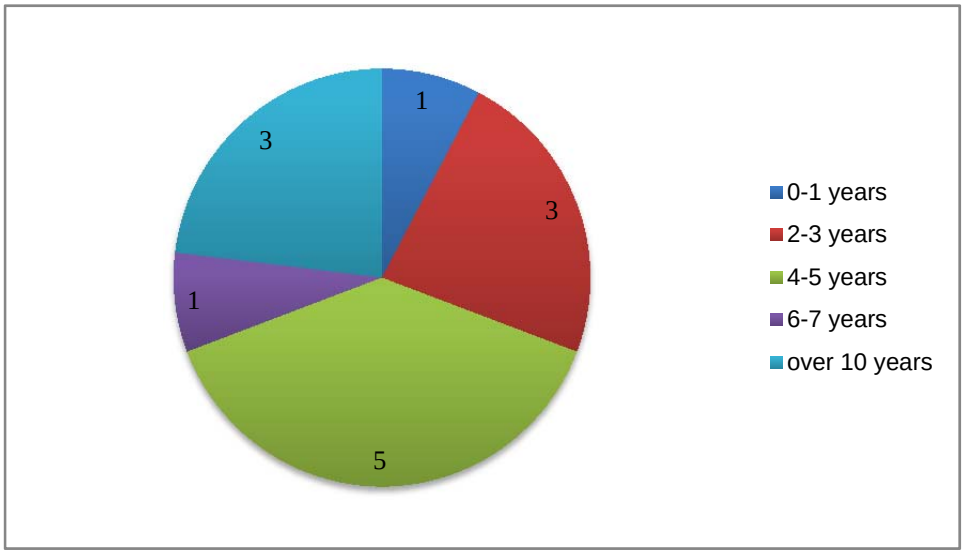


**Figure 2. Number of Responses by Years of Experience as an AO or CH**

### 3. Responses by Number of Schools

The response options were divided into four categories based on the number of schools each participant was responsible for in the GPCP. The options were 1, 2, 3, or 4 schools. Figure 3 displays the responses. Out of the four possible options, participants chose only two of the available options. Based on the responses, approximately 77% of the participants were responsible for one school in the GPCP, while the remaining 23% were responsible for four schools in the GPCP.

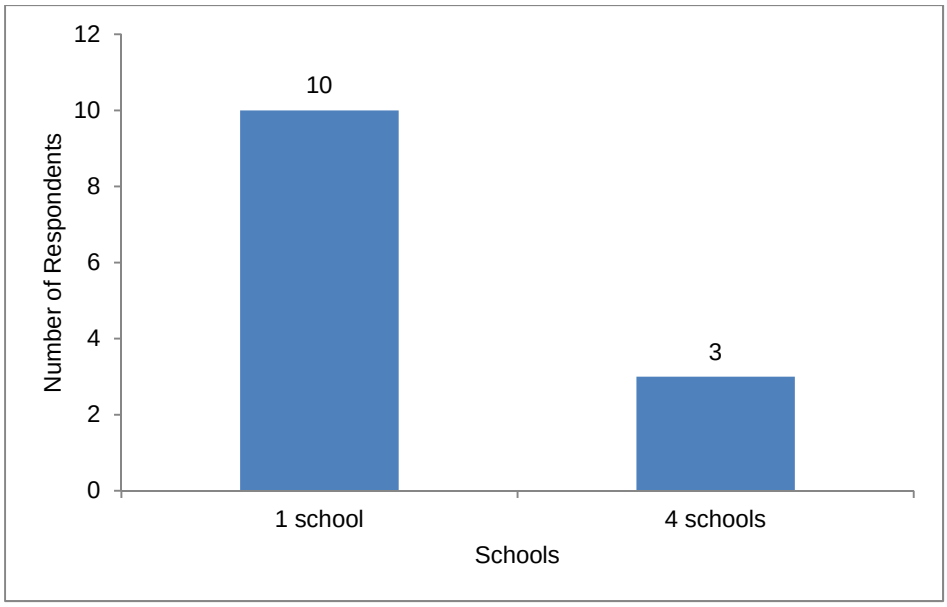


**Figure 3. Number of Responses to Number of Schools Supported**

### 4. Responses by Number of Departments

The response options were divided into four categories based on how many departments each participant was responsible for in the GPCP. The options were 0–3, 4–6, 7–10, or more than 10 departments. Figure 4 displays the responses. The data shows that 54% of the participants were responsible for 0–3 departments, and only 15% were responsible for more than 10 departments. The remaining 31% were responsible for 4–10 departments; one for 4–6 departments (8%) and three for 7–10 departments (23%).

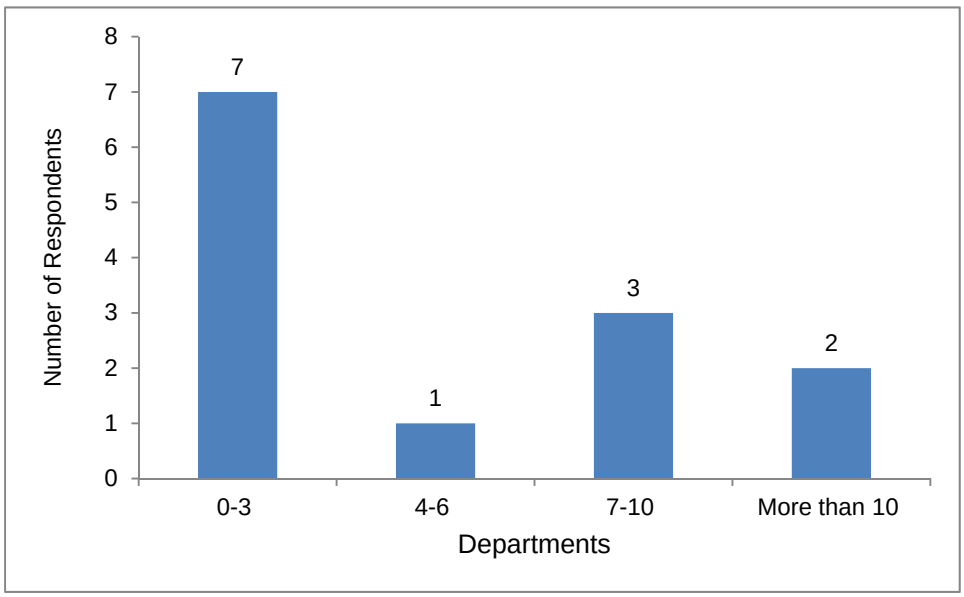


**Figure 4. Number of Responses to Number of Departments Supported**

### 5. Responses by Number of People AO Oversees

The AOs were asked how many people they oversee in the GPCP. The options were 0–5, 6–10, 11–15, 16–20, or more than 20 people. Figure 5 displays the responses. Based on the responses, 83% of the AOs oversaw 0–5 people and 17% oversaw 6–10 people. It is important to note that the numbers are consistent with the regulation that an AO may oversee no more than seven CHs.

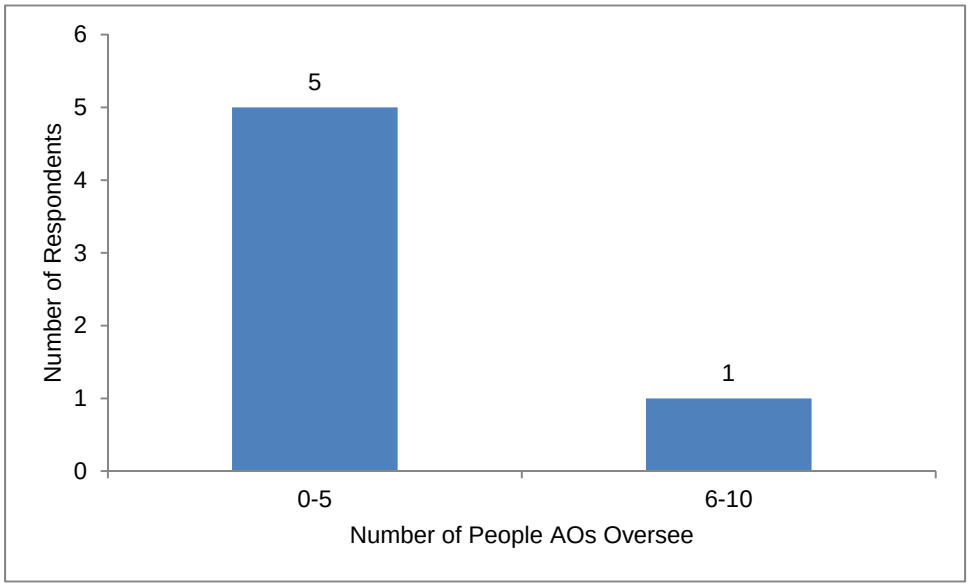


**Figure 5. Number of Responses by Number of People AOs Oversee**

### 6. Responses by Number of People CH Supports

The CHs were asked how many people they support in the GPCP. The options were 0–5, 6–10, 11–15, 16–20, or more than 20 people. Figure 6 displays the responses. Based on the responses, 29% of CHs responded that they supported 0–5 people and 71% of CHs responded that they supported more than 20 people. The number of people each CH supported may be related to the size of the school(s) and department(s) they each supported.

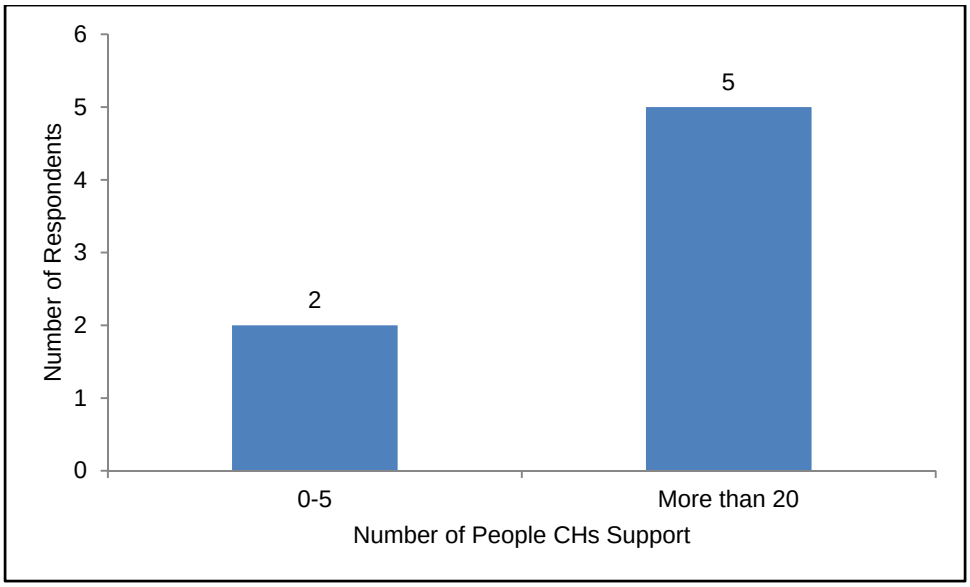


**Figure 6. Number of Responses by Number of People CHs Support**

### 7. Responses by Percentage of Time Spent on Collateral Duty

The participants were also questioned regarding the percentage of their working hours that were spent conducting GPCP collateral duty assignments. The options were 100%, 75%, 50%, 25%, or less than 25%. Figure 7 displays the responses. Based on the responses, approximately 46% of participants—five AOs and one CH—responded that they spent less than 25% of working hours conducting GPCP collateral duties and 38% of participants, all of whom were CHs, spent more than 75% of their working hours conducting GPCP collateral duties. Only one responded that 100% of their working hours were spent conducting GPCP collateral duty assignments, which implies that this was not a collateral duty for this one person; it was a full-time duty.

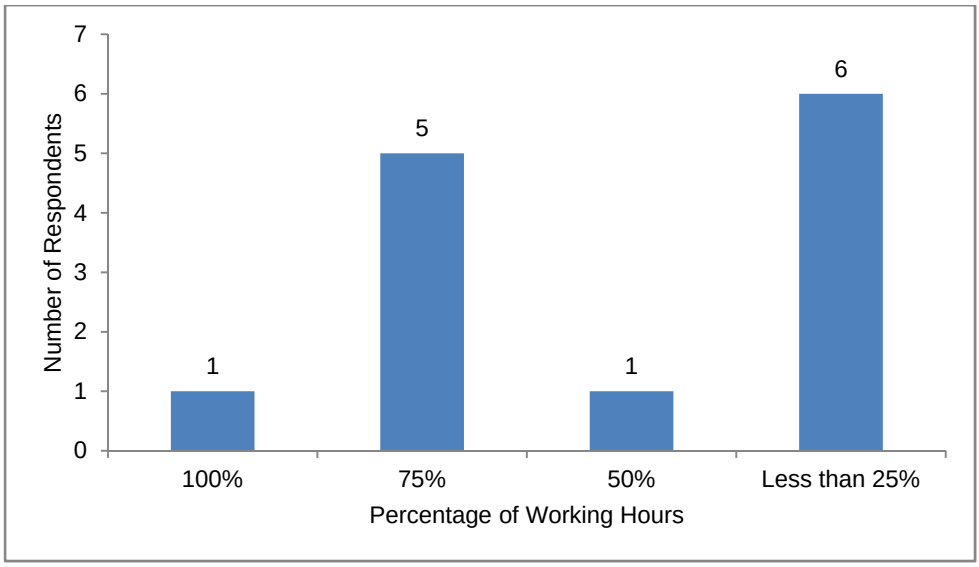


**Figure 7. Number of Responses by Collateral Duty as Percentage of Working Hours**

In this section, overall frequency data for the demographics was presented. The analysis of the data for the five internal control components is presented next.

## C. ANALYSIS OF INTERNAL CONTROL QUESTIONS

The survey consisted of 69 survey items relating to Committee of Sponsoring Organization of the Treadway Commission's (COSO) five internal control components. The mean calculations did not include one survey item from the risk assessment component that only pertained to AOs; therefore, 68 survey items were used in the analysis. During analysis of the individual survey items within each component, "I don't know" responses were coded as 0 (zero value). The "I don't know" responses were not included in the mean calculations. They were converted to blanks in the Excel spreadsheet and were identified as missing responses in SPSS. The open-ended questions were not analyzed as part of this research.

Figure 8 displays the overall mean for each internal control component. Based on the survey results, risk assessment scored the lowest with a mean of 3.2, meaning this component had more "disagree," or "neither agree nor disagree," responses to the survey items pertaining to risk assessment. Control activities scored the highest with a mean of 3.78, meaning this component had more "agree," or "neither agree nor disagree" responses to the survey items pertaining to control activities. Thus, the risk assessment controls were perceived to be the weakest of the five internal control components, whereas the control activities were perceived to be the strongest internal control component within the GPCP at NPS.

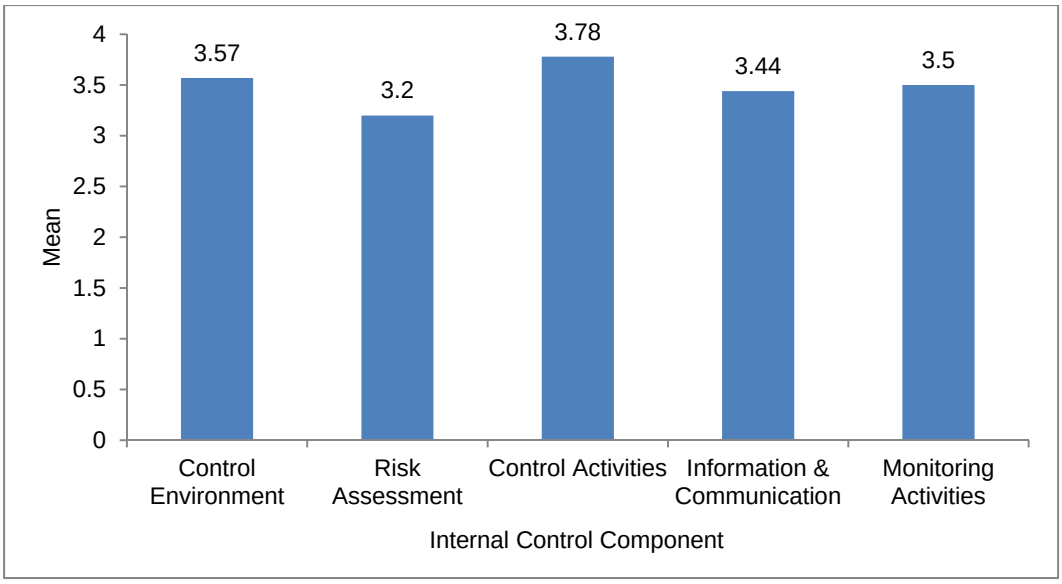


**Figure 8. Average Response by Internal Control Component**

### 1. Control Environment

As shown in Figure 8, the overall mean for the control environment component was 3.57, second highest after control activities. Comparing the two groups, Figure 9 shows a mean of 3.69 for AOs and 3.47 for CHs.

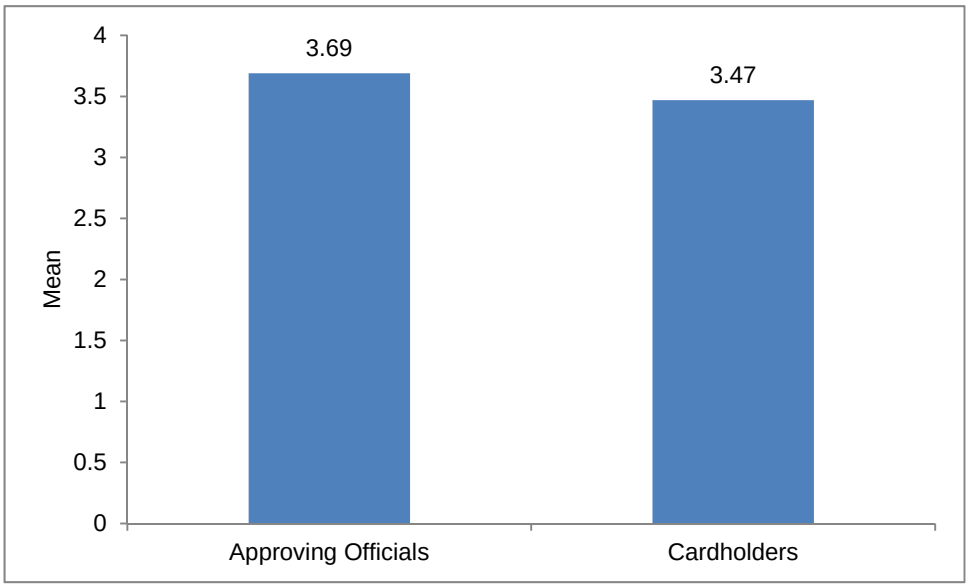


**Figure 9. Average Response for Control Environment Component**

### 2. Risk Assessment

The lowest overall mean of the five internal control components was risk assessment, with a mean of 3.2 as shown in Figure 8, and that finding is corroborated by the data in Figure 10. The mean responses of AOs and CHs were

compared, and the data indicates that CHs disagree with more components of risk assessment than AOs. The AOs' mean response for survey items pertaining to risk assessment was 3.56, whereas the CHs' mean response was 2.94.

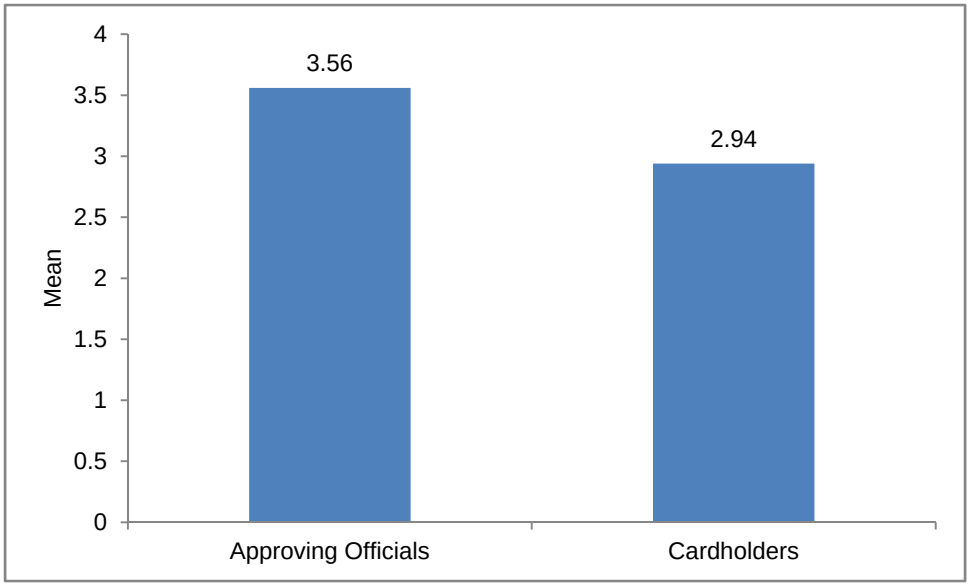


**Figure 10. Average Response for Risk Assessment Component**

### 3. Control Activities

The highest overall mean of the internal control components was for control activities, with a mean of 3.78 as shown in Figure 8, and that finding is supported by the data in Figure 11. The AOs' mean response to the survey items pertaining to control activities was 3.85 and the CHs' was 3.7.

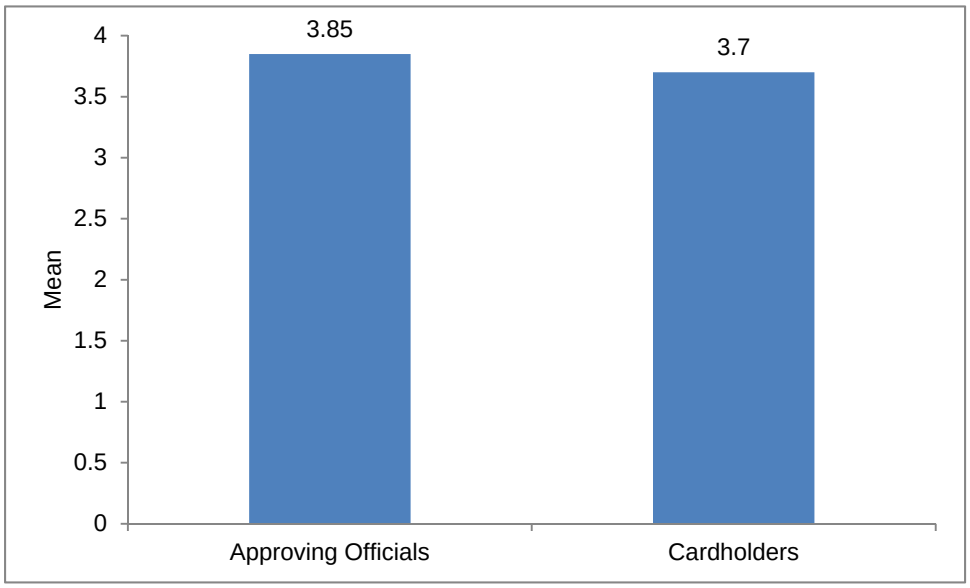


**Figure 11. Average Response for Control Activities Component**

### 4. Information and Communication

As shown in Figure 8, the internal control component information and communication had the second lowest overall mean with 3.45. Figure 12 shows the comparison of the AOs' mean response within this component of 3.53 and the CHs' mean of 3.36.

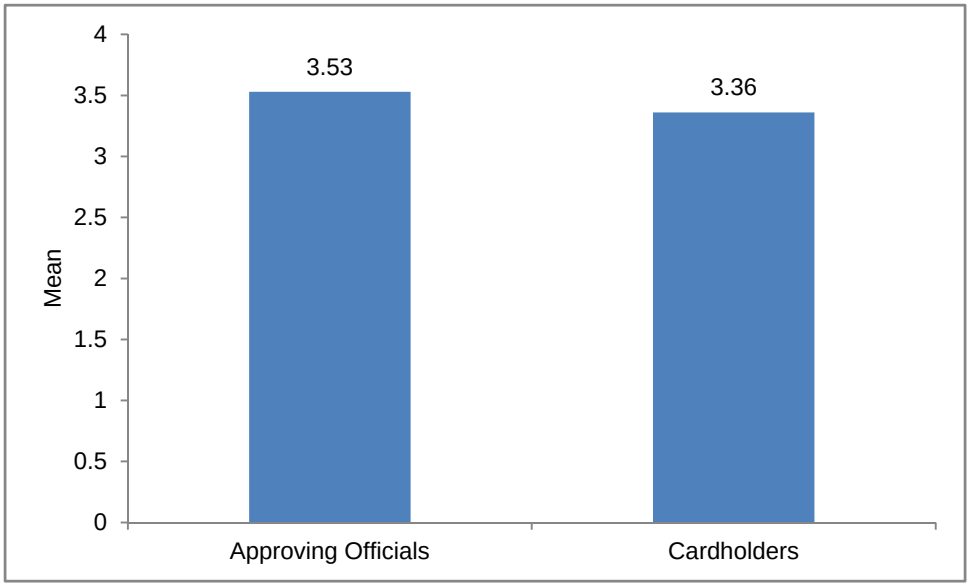


**Figure 12. Average Response for Information and Communication Component**

### 5. Monitoring Activities

The monitoring activities component had an overall mean of 3.5 as shown in Figure 8. Figure 13 compares the AOs' overall mean of 3.59 and the CHs' of 3.45.

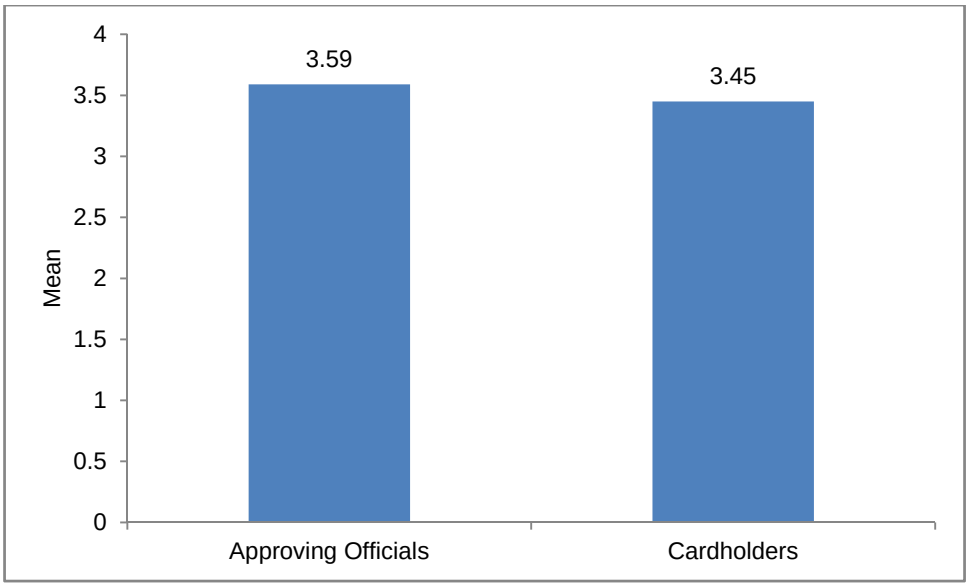


**Figure 13. Average Response for Monitoring Activities Component**

Table 2 presents the number of survey items within each of the five internal control components and the mean response from AOs and CHs for each component. The "I don't know" responses were not calculated in the mean.

**Table 2. Number of Survey Items and Mean Responses From AOs and CHs for the Five Internal Control Components**

| Internal Control Component | Number of Survey Items | Mean of Approving Officials | Mean of Cardholders |
|---|---|---|---|
| Control Environment | 17 | 3.69 | 3.47 |
| Risk Assessment | 8 | 3.56 | 2.94 |
| Control Activities | 14 | 3.85 | 3.70 |
| Information and Communication | 16 | 3.53 | 3.36 |
| Monitoring Activities | 14 | 3.59 | 3.45 |
| Total | 68 | | |

The mean was used to analyze the data for each of the five internal control components separately, which produced one mean per internal control component, as shown in Figure 8. In addition, the mean of the responses from AOs and CHs, in relation to each survey item within each component, was compared to identify any differences in overall responses between AOs and CHs.

## D. ADDITIONAL ANALYSIS

From additional data analysis, survey items that were deemed significant or important to discuss were considered noteworthy. In this section, the frequency and type of survey items to which participants responded "I don't know" are identified and discussed. In addition, survey items are addressed by individual survey item as well as by the differences in means between AOs and CHs based on newly created criteria, which are explained within each section of analysis.

### 1. Analysis of "I Don't Know" Responses

This section provides analysis of the "I don't know" responses. The "I don't know" responses indicated possible uncertainty regarding the specific survey item, which can have important implications. During analysis of the individual survey items within each component, "I don't know" responses were coded as 0 (zero value). The

“I don’t know” responses were not included in the mean calculations. They were converted to blanks in the Excel spreadsheet and were identified as missing responses in SPSS. Overall, there were 26 “I don’t know” responses, which are referred to as missing responses.

There were two missing responses within the control environment component. Those survey items related to the discussion of performance standards and personal conduct. The control environment component had the least uncertainty among the participants, with only two missing responses. Within the risk assessment component, there were four missing responses. Those survey items pertained to pressure to get the job done and staff accountability. An analysis of the control activities component revealed that there were also four missing responses. Those survey items pertained to the span of control for the oversight of the GPCP, appropriate consequences to those who break laws and rules, and knowledge of measures in place to block certain vendors.

The information and communication component had nine missing responses. This component had the most uncertainty among the participants. These survey items addressed knowledge of employee protection for reporting impropriety, consequences of illegal/improper use of the purchase card, and information systems’ provision of reports to management on a unit’s performance related to its objectives. One possible implication of the relatively high number of “I don’t know” responses is that important information may not be disseminated; therefore, the employees may not be aware of existing regulations. The monitoring activities component had seven missing responses. This component had the second highest level of uncertainty among the participants. These survey items were regarding timely follow-up to feedback and complaints, policy review to ensure compliance, GPCP monitoring to ensure correct span of control, and systems’ ability to prevent or detect missing or incorrect information. The overall implications of possible uncertainty in the area of information and communication are addressed later. The next section provides an analysis of Agree and Disagree categories by internal control component.

### 2. Analysis of Agree and Disagree Categories by Internal Control Component

This section discusses the additional analysis on the “agree and strongly agree” and the “disagree and strongly disagree” responses, based on newly created categories and criteria. To determine whether responses to a question was interesting to note for individual survey items, using SPSS, the valid percent was calculated for each of the five response options: “strongly agree,” “agree,” “neither agree nor disagree,” “disagree,” and “strongly disagree.” Those who responded “I

don't know" were not included in the valid percent calculation. The valid percent calculation was based on only the actual responses for each particular survey item.

The valid percents for "strongly agree" and "agree" were combined to form category "Agree," and the valid percents for "strongly disagree" and "disagree" were also combined to form category "Disagree." The total percentages for category "Agree" and for category "Disagree" were then separated into three sub-categories: (1) greater than 50% but less than 75%, (2) greater than 75% but less than 100%, and (3) 100%. However, only the survey items in which 100% of the participants agreed or more than 50% of the participants disagreed were further analyzed. The response for "neither agree nor disagree" was not included in these particular calculations.

The survey items that fell into the 100% agree sub-category and into the greater than 50% disagree sub-category are identified and explained in each internal control component section. All findings were practically significant, meaning it has valuable implications to the management of the GPCP.

### *a. Control Environment*

There were no survey items that fell into the 100% agree sub-category in the control environment component. There were, however, three survey items that fell into the greater than 50% disagree sub-category. More than 50% of the participants responded that an atmosphere of mutual trust and open communication between management and employees had not been established within the organization. Also, more than 50% of the participants disagreed on whether their work units were cross-trained so that they could fill in for each other when necessary. Furthermore, more than 50% of participants responded that personnel turnover has impacted their units' abilities to effectively perform their functions.

### *b. Risk Assessment*

The one risk assessment survey item that 100% of the participants agreed on was that AOs hold their staff accountable; however, only three out of six AOs responded to this question. The missing three may have answered "not applicable"; however, that is not consistent with the demographics question asking AOs to identify how many people they oversaw. There were no survey items that fell into the greater than 50% disagree sub-category in the risk assessment component.

### *c. Control Activities*

Two survey items within control activities fell into the 100% agree sub-category. One hundred percent of participants agreed that they were discouraged from sharing their computer passwords with others. In addition, 100% of the participants agreed that their organization effectively established processes so that

no single person in the organization buys, receives, and certifies funds within the purchase card program. There were no survey items that fell into the greater than 50% disagree sub-category within the control activities component.

#### *d. Information and Communication*

There was one survey item that fell into the 100% agree sub-category in the information and communications component. One hundred percent of the participants agreed that they knew where to report employee misconduct. There was no survey item that fell within the greater than 50% disagree sub-category within this internal control component.

#### *e. Monitoring Activities*

There was only one question that fell into the 100% agree sub-category in the monitoring activities component, which was that 100% of participants knew what action to take if they became aware of unethical or fraudulent activity. Additionally, more than 50% of participants did not agree that internal and/or external feedback and complaints were followed up on in a timely and effective manner. The next section provides an analysis of the differences in means between AOs and CHs.

### 3. Analysis of Differences in Means

This section discusses additional analysis on the differences in means between AOs and CHs, based on a newly created category. From the data analysis, survey items that were deemed significant or important to discuss were considered noteworthy. During analysis of the individual survey items within each component, "I don't know" responses were coded as 0 (zero value). The "I don't know" responses were not included in the mean calculations. To determine if the difference in means by survey item between AOs and CHs was noteworthy, the difference in means between AOs and CHs was calculated using SPSS. If the difference was found to be greater than 90%, the survey item was deemed noteworthy. However; all findings were practically significant, meaning they have valuable implications to the management of the GPCP. The eight survey items with a noteworthy difference in means between AOs and CHs are identified below. Of the eight noteworthy differences, seven survey items indicated that CHs responded significantly lower than AOs, whereas only one question indicated that AOs responded significantly lower than CHs.

There were three noteworthy differences in the risk assessment component where CHs responded significantly lower than AOs. CHs responded that they felt unreasonable pressure to get the job done, their departments did not identify barriers or resolve issues that could impact achievement objectives, and they did not

have enough time in the day to get the job done, including their collateral duties. The third survey item indicates that CHs perceive that they do not have enough time to perform their GPCP collateral duties along with their regular job duties.

There were also three noteworthy differences within the information and communication component where CHs responded significantly lower than AOs. CHs disagreed that their information systems provided management with timely reports on their units' performance relative to objectives. The CHs also disagreed that the interaction between management and their work units enabled them to perform their jobs effectively. Furthermore, the CHs disagreed that management was aware of their business units' actual performance.

Finally, there were two noteworthy differences within the monitoring activities component where AOs responded significantly lower than CHs, and one item where CHs responded significantly lower than AOs. The AOs did not agree that computerized data entry systems within their units effectively prevented or detected missing information and CHs disagreed that, in their absences, a qualified CH was available as a backup if needed. There were no noteworthy differences in means between AOs and CHs in the control environment or the control activities survey items.

This section presented an analysis of "I don't know" responses. An analysis of the Agree and Disagree categories by the five internal control components and an additional analysis of the difference in means between AOs and CHs were presented. The next section provides implications of findings related to the research questions.

## E. IMPLICATIONS OF FINDINGS RELATED TO RESEARCH QUESTIONS

The purpose of the research was to answer the questions below through the development and deployment of the online survey as well as the analysis of the results.

- What are the differences in perceptions of internal controls between the approving officials and cardholders in the Government Purchase Card Program at the Naval Postgraduate School?

Based on the analysis of the results, eight significant differences in perceptions between AOs and CHs were identified in three of the five internal control components: risk assessment, information and communication, and monitoring activities.

Within the risk assessment component, the following significant differences between AOs and CHs were identified:

1. CHs responded that they did not have enough time in a workday to complete their duties, including collateral duties, whereas AOs did not appear to have this perception.
2. CHs felt unreasonable pressure to get the work done, whereas AOs did not appear to have this perception.
3. CHs responded that their departments did not identify barriers or resolve issues that could impact achievement of department objectives, whereas AOs did not appear to have this perception.

Within the information and communication component, the following significant differences between AOs and CHs were identified:

4. CHs responded that management did not receive timely reports on their units' performance relative to their objectives, whereas AOs did not appear to have this perception.
5. CHs responded that interaction between management and their units did not enable them to do their jobs effectively, whereas AOs did not appear to have this perception.
6. CHs responded that management was not informed or aware of their units' actual performance, which differs significantly from the responses from AOs.

Within the monitoring activities component, the following significant differences between AOs and CHs were identified:

7. AOs' responded that their units' computerized systems were not able to effectively prevent or detect missing and incorrect information, which differed from CHs perception.
8. CHs did not agree that there was a qualified CH available as a backup to meet their end users' needs in their absences. AOs, on the other hand, strongly agreed that there was a qualified AO available as a backup in their absences.

Overall, the means for each internal control component for AOs were consistently higher than for CHs. This finding implies that AOs generally perceive the strength of the GPCP's internal controls to be stronger than the CHs perceive them.

- What are the implications to auditability from the differences in perceptions of internal control between approving officials and cardholders within the Government Purchase Card Program at the Naval Postgraduate School?

Both strong and weak internal controls have implications on auditability. The analysis identified potential implications of internal controls, or lack thereof, on auditability within the GPCP at NPS. An implication of the differences in perceptions in the risk assessment component is that GPCP participants may be rushed to complete the job in order to meet their organization's goals. This could lead to making mistakes in the process, increasing the vulnerability for possible fraud, waste, and abuse, and hindering the organization's auditability (GAO, 2008). An implication of the differences in perceptions in the information and communication component is that progress and objectives are possibly not being measured, and proper oversight may not be present. CHs and management may not be communicating effectively to achieve the best results for the organization. If management is unaware of a unit's performance, it may hinder them from making informed decisions for the organization.

Another implication of the differences in perceptions in the information and communication component is that participants appear to know where to report suspected wrong-doing or improprieties and appear to be aware of the potential consequences. However, the results indicate that majority of them may not know if management ensures appropriate actions after the initial reporting. If management does not take proper action against wrong-doing and improprieties, CHs and AOs may not take management or the potential consequences seriously. An implication of the differences in perceptions in the monitoring activities component is from the difference of perceptions regarding reliability of the organization's computer systems. If the organization cannot rely on the unit's computerized system, the employee must have comprehensive knowledge of the system to prevent errors themselves, and if they rely on the computer system which may be unreliable, it may hinder the organization from becoming auditable. Finally, if qualified people are not available to act as backups, the organization would not be able to support its end users. The absence of effective internal controls can expose the purchase card program to inefficiencies and vulnerabilities to fraud, which would impact auditability in the organization. The next section provides recommendations based on the data analysis.

## F. RECOMMENDATIONS BASED ON DATA ANALYSIS

The recommendations based on the data analysis of the five components of internal control and the implications of differences in perceptions between AOs and CHs are presented below.

### 1. Strengthen the Organization's Control Environment

In order to be a productive organization, management needs to maintain ethical values and cultivate trust with their employees. Although the management

personnel in the GPCP may not be the AOs, who are direct supervisors of the CHs, it is imperative to act with integrity and strong ethical values to set an example for those who work within the GPCP. Based on the data analysis, there may be a lack of mutual trust and open communication between management and employees. Management should ensure that their communication plan and organizational goals are transparent and communicated throughout the organization. In addition, the reporting relationships should be clearly identified so employees may feel comfortable communicating with their supervisor and other management personnel. This may increase employees' trust and open communication with management.

Another aspect of the control environment that should be addressed is the formal codes and policies that communicate ethical behavior and standards. A weakness identified by the data analysis is that employees may not have known the penalties of unacceptable behavior or if prompt action is taken when there is improper use of the purchase card. The codes of ethics and integrity should be periodically reviewed and acknowledged by signature from all employees. In addition, management should clearly communicate and disseminate information regarding processing and handling of an incident with the purchase card.

### 2. Enhance Communication

Information and communication should be taken seriously, so it is imperative to clearly communicate the organization's mission, expectations, and strategies to all employees. The data analysis identified several areas of weaknesses within the information and communication component; therefore, several recommendations are made to enhance communication within the GPCP. A message regarding the GPCP's organizational structure and objectives should be generated out to AOs and CHs, and it should be clearly stated so that there are no misunderstandings or miscommunications. To increase understanding of the organization, management should also encourage AOs and CHs to read the existing policies and procedures regarding the GPCP, if they have not done so before. In addition, management should review changes to policies and procedures in both AOs' and CHs' meetings to generate a clear, unified message.

Furthermore, CHs responded that interaction between management and their units did not enable them to do their jobs effectively. This may be an area of improvement for management to continue communicating clear objectives and maintain flexibility to enable CHs to do their job effectively. If a CHs' AO is preventing them from doing their job effectively, there should be a means of communication outside of a direct supervisor. If an alternate line of communication is available, that information should be disseminated to all employees.

Finally, the purpose of information and communication is to distribute information at the right time and to the right people in order to carry out roles and responsibilities. An identified potential weakness is that management may not be informed of their units' performance. Management may be unable to make the most informed decision if they are unaware of their employees' units' actual performance and do not receive timely reports. In order to strengthen that perceived weakness, a report or spreadsheet should be provided to management with weekly or monthly progress based on objectives set by the unit or the GPCP. It is imperative that management receives operating information to determine the organization's level of compliance with laws and regulations. Ensuring that the units' data and performance measures are valid and reliable is crucial to making informed decisions.

### 3. Realign Government Purchase Card Program Structure

The GPCP organizational structure should be realigned to balance the number of departments and number of people that each CH supports. The data analysis indicated that 38% of participants, all of whom were CHs, spent 75% of their working hours conducting GPCP collateral duties. In addition, CHs responded that they felt unreasonable pressure to get the job done, and they did not have enough time in the day to perform all their duties, including collateral duties. To increase productivity, the program structure should identify the CHs who may be overworked and spending more than half their working day on GPCP collateral duties, and reorganize it to balance the purchasing support. The organization should ensure that CHs receive clear objectives and have a reasonable amount of time to complete their duties, including collateral duties. This recommendation may increase productivity in both the CH's primary and collateral duties.

Furthermore, another recommendation for realigning the GPCP structure is to ensure all AOs and CHs are properly trained and equipped with the necessary tools and information to achieve their goals. In order to maintain productivity and achieve their units' objectives in the absence of an AO or CH, information should be available to the units' end users regarding points of contact and proper procedures that should be followed in their absence. Each unit may not have more than one CH; therefore, the organization should also ensure that all pertinent information is available to both AOs and CHs when needed.

## G. SUMMARY

In this chapter, the results of the online survey collected from LimeSurvey were presented, which included survey items pertaining to demographics and the five components of internal control. The overall population's mean of the Likert-based responses in addition to the frequency of the demographics survey items were identified. The mean for each of the five internal control components were also

calculated and presented. The mean and frequency of responses from the AOs and CHs were compared and analyzed to identify any differences in perceptions to internal controls between AO and CH. Additional analysis based on the results was discussed. Furthermore, any potential implications of internal controls, or lack thereof, on auditability within the Government Purchase Card Program (GPCP) at the Naval Postgraduate School (NPS) were addressed. Finally, recommendations based on the data analysis were presented.

# VI. SUMMARY, CONCLUSIONS, AND AREAS FOR FURTHER RESEARCH

## A. SUMMARY

The Department of Defense (DoD) and the Department of the Navy (DoN) purchase card programs process hundreds of thousands of transactions accounting for billions of dollars annually. In 2013, the federal government's 300,900 cardholders (CHs) spent $16.5 billion on 18.9 million transactions (GSA, n.d.-c). In FY2012, the Naval Postgraduate School (NPS) Government Purchase Card Program (GPCP) was responsible for making approximately 21,000 transactions totaling approximately $24.2 million (M. Morales, personal communication, July 24, 2013). Approving Officials (AOs) and CHs play an important role in the success of the GPCP. Additionally, in order for the GPCP to be successful, there must be sufficient corporate governance, specifically effective internal controls and auditability. The purpose of this research was to determine whether there were differences in perceptions between AOs and CHs regarding internal controls within the GPCP at NPS.

## B. CONCLUSIONS

Although there were slight differences in the survey item means between AOs and CHs, there is still practical significance to all of the findings. The AOs consistently responded higher than the CHs with regard to the five internal control components. This section briefly provides conclusions as they relate to the research questions.

- What are the differences in perceptions of internal controls between the approving officials and cardholders in the Government Purchase Card Program at the Naval Postgraduate School?

There were slight differences of perceptions of internal control between AOs and CHs within each of the five internal control components. However, there were eight significant differences in perceptions of internal controls between AOs and CHs. They were identified in three of the five internal control components: risk assessment, information and communication, and monitoring activities. The research findings revealed that AOs consistently responded more positively to internal controls in the five internal control components than CHs, implying that AOs perceive the strength of the internal controls to be stronger than the CHs perceive them to be within the NPS GPCP.

- What are the implications to auditability from the differences in perceptions of internal control between approving officials and

cardholders within the Government Purchase Card Program at the Naval Postgraduate School?

Both strong and weak internal controls have implications on auditability. There were survey items to which both AOs and CHs responded strongly agree, which included such things as password protection, separation of duties, and adequate fraud education. However, the absence of effective internal controls can expose the purchase card program to inefficiencies and vulnerabilities to fraud, which would impact auditability in the organization. Weaknesses mentioned in the implications of findings could lead to employee's making mistakes somewhere along the process, creating possible fraud, waste, and abuse, and further hindering the organization's auditability. Any differences in perceptions between AOs and CHs can have an impact on auditability within the GPCP. The following section suggests areas for further research.

## C. AREAS FOR FURTHER RESEARCH

The following areas for further research are suggested:

One area for further research is to expand the survey to other DoN organizations to analyze the differences in perceptions of internal controls within the organizations' purchase card program. The expansion of the survey population would provide more data and potentially identify similar perceived trends within each organization's purchase card program. In addition, this research would potentially provide insight into each organization's internal control system and identify the strongest and weakest components of internal control.

Another area for further research would be to expand the potential survey participants at NPS to include purchasing agents within the contracting office. This addition would increase the number of potential participants and provide additional information from those who purchase full-time and have warrants for purchases greater than $150,000. This line of research would allow for a more diverse analysis between the perceptions of AOs, CHs, and purchasing agents.

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# APPENDIX A. INDUSTRY P-CARD PROCESS

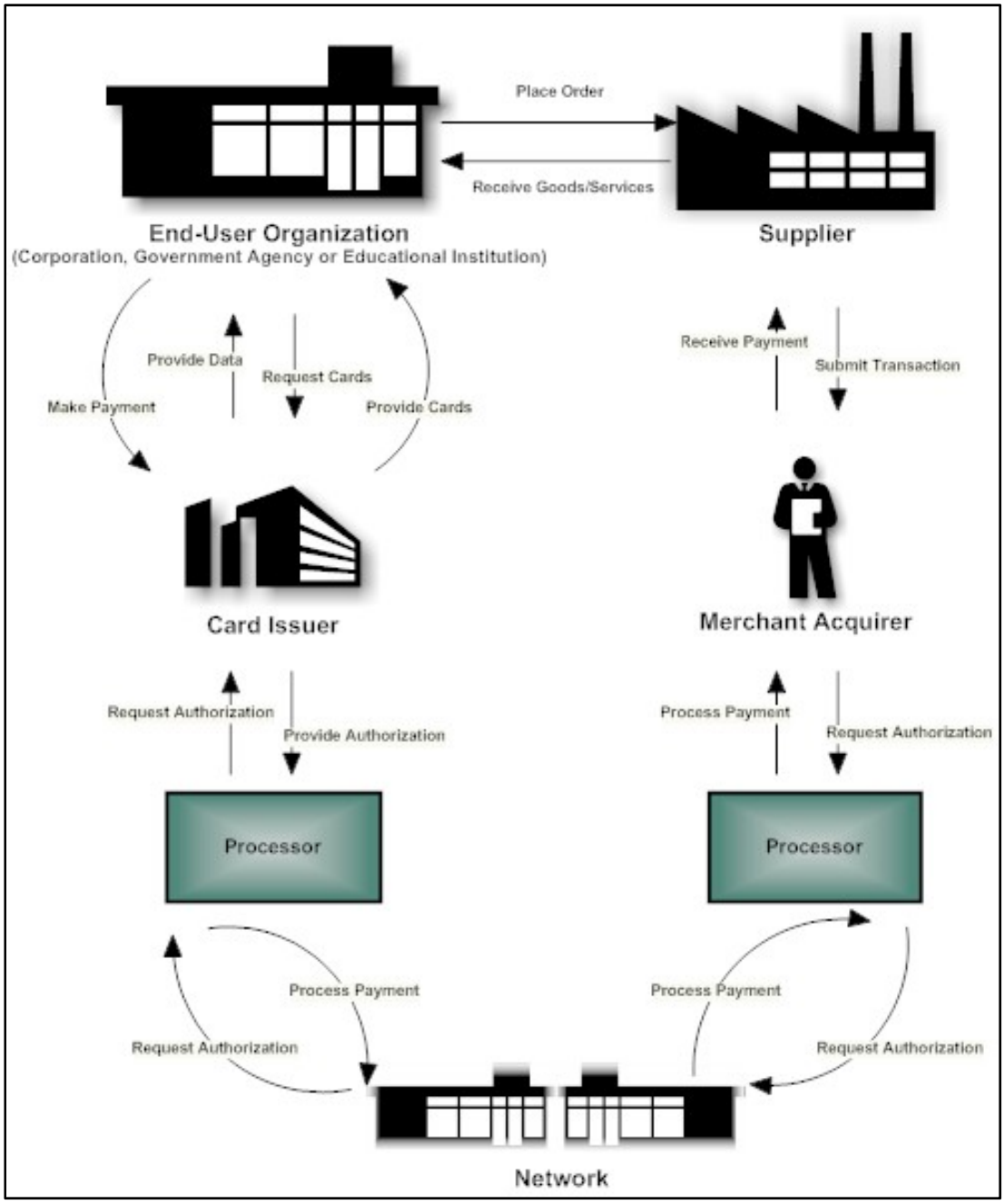


**Figure A1. Industry P-Card Process**
(NAPCP, 2013b)

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# APPENDIX B. COSO'S 17 FUNDAMENTAL PRINCIPLES

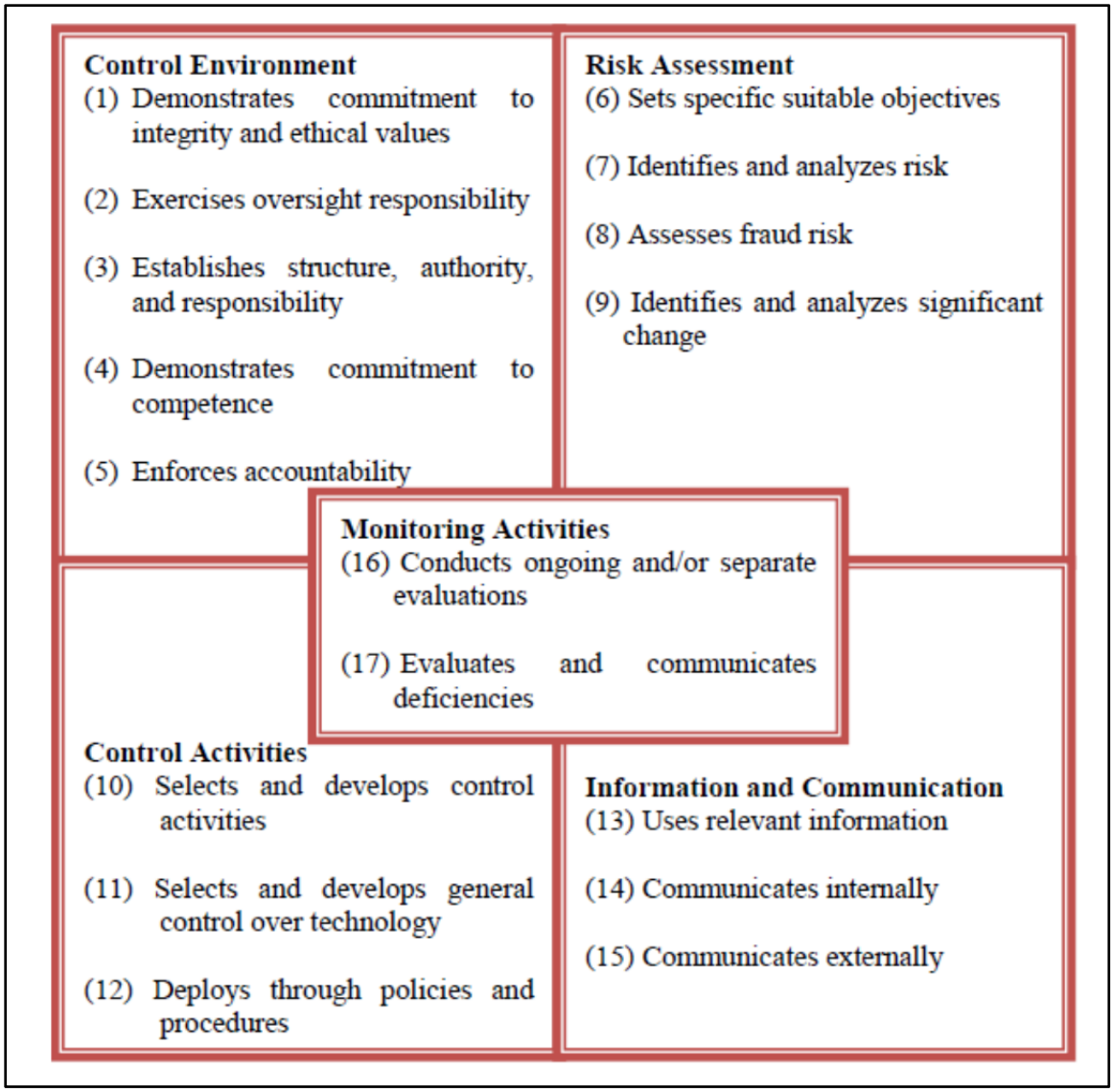


**Figure B1. COSO's 17 Fundamental Principles**
(Adapted from COSO, 2013; Tan, 2013)

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GRADUATE SCHOOL OF BUSINESS & PUBLIC POLICY
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555 DYER ROAD, INGERSOLL HALL
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