DISSERTATION

THE EFFECTS OF EMPLOYER COMPENSATION, LIQUIDITY MANAGEMENT,

AND EMPLOYEE PRODUCTIVITY ON PROFITABILITY: THE FAILED CASE OF

WASHINGTON MUTUAL

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ABSTRACT

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The purpose of this study was to determine if the effects of three variables—employee productivity, liquidity management, and employee compensation—on employer's profitability performance might have predicted the 2008 organizational failure of Washington Mutual Bank. Researchers have noted that human expertise (that is, people and their skills) is the most important element of organizational strategy.

In this study, salaries and employee benefits were used to measure employee compensation. Total loans to assets ratio was used to measure bank liquidity. Return on average asset was used to measure bank profitability. In addition, the human capital return on investment ratio was used to measure employee productivity. The purpose of this study was to investigate the extent to which the three variables could predict bank performance and ultimately, bank failure. To investigate these relationships, historical data for Washington Mutual Bank were selected from the Federal Deposit Insurance Corporation (FDIC) database and compared to standard data from the FDIC's peer banks. The study's findings indicated that WaMu's return on human capital correlated with the return on average profitability. In the FDIC standard peer group data, both the salaries and employee benefits and total loans to assets variables correlated with return on average profitability.

ACKNOWLEDGMENTS

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DEFINITION OF TERMS

The key terms used in this research study are described and defined in the following paragraphs.

Human resource development (HRD). Human resource development is a theoretical discipline focused on examining the nature of human expertise and its practical value throughout various system layers. Swanson and Holton (2001) defined HRD as "a process for developing and unleashing human expertise throughout organizational development and personnel training and development for the purpose of the improving performance" (p. 4). HRD as a discipline is very broad; however, this broad base allowed the researcher to assimilate different theoretical concepts involving human resources to produce a more robust study.

Bounded rationality. Chermack (2003) defined bounded rationality as information-processing overload and "one main source of decision failure" (p.373).

Return on average assets (ROAA). Return on average assets refers to net income in relation to average total assets (i.e., return or earnings) from each dollar invested. Return on average assets is commonly used as one of two benchmarking ratios for assessing a firm's profit-making ability (the other ratio is return on equity; Gestel & Baesens, 2008).

Salaries and employee benefits (SEB). Salaries and employee benefits represent the value the bank paid for the human expertise of all officers and employees of the bank and its consolidated subsidiaries (FDIC, 2015). According to FDIC (2015), salaries and employee benefits "include salaries, bonuses, hourly wages, overtime pay, and incentive pay for officers and employees of the trust department" (2a).

Total loans to assets ratio (TLTA). According to the FDIC (2013), the total loans to assets ratio is "the median ratio of total loans divided by total assets for FDIC-insured

institutions headquartered in the state, as of the end of the listed period" (para. 60). The total

loans to assets ratio is the combination of total equity, loan loss reserves, current-period

nonperforming loans, and total assets (Barth, Lin, & Wihlborg, 2012). More importantly, the

total loans to assets ratio is also a measure of banking liquidity: A higher ratio indicates a higher

risk of bank default, and a lower ratio indicates that the bank has less risk of defaulting.

Human capital return on investment (HCROI). HCROI is the value that the bank

receives from investing in human expertise. Fitz-enz (2009) described HCROI as "leverage on

pay and benefits" expressed as ratio of Revenue – (Expense – Pay and Benefits) / Pay and

Benefits (p. 51).

Organizational failure. For this study, the FDIC's definition of a bank failure was

adopted, as follows: "A bank failure is the closing of a bank by a federal or state banking

regulatory agency" (FDIC, 2015,

CHAPTER 1: INTRODUCTION

Washington Mutual, Inc. (WaMu), a 120-year-old U.S. financial institution, suddenly and unexpectedly collapsed on September 25, 2008 (FDIC, 2008). Unprecedented financial conditions, poor asset management, and negative liquidity forced the United States Office of Thrift Supervision (OTS) to seize the bank (United States, 2011). Washington Mutual's 2008 failure marked the end for one of the most successful Fortune 500 companies and the beginning of a massive credit crisis caused by a combination of ill-conceived asset-based security structures and dangerously oversimplified long-term risk mitigation strategies (United States, 2011).

This organizational failure was the epicenter of a financial storm that triggered a devastating tsunami-like ripple effect, irreversibly erasing billions of dollars from the U.S. capital markets (United States, 2011). The chain of events the collapse instigated eroded the public trust and directly contributed to the one of the deepest and most complex economic recessions since the Great Depression of the 1930s (Bernanke, 2013). The Congressional Research Service concluded that WaMu's costly failure was partially caused by both the credit rating agencies' inadequate self-regulating procedures and WaMu leaders' catastrophic decision-making inadequacies (U.S. Senate, 2011).

Background

The three dominant financial statistical rating organizations acted overconfidently, failing to assess risk adequately in a timely manner (from the buyer's perspective) for WaMu's securitized higher-risk subprime loan business (United States, 2011). The rating organizations' systematically erroneous conclusions, driven by poor assessments about the impact of the housing market turbulence, led customers, investors, governments, and financial institutions to

conduct business as usual without benefit of truly understanding the destructive power of the looming financial crisis (United States, 2011). Further, WaMu leaders' long-term strategic growth ambitions and lack of effective risk mitigation processes hindered leaders' ability to understand the complex environmental factors influencing market economics (Grind, 2013; United States, 2011).

The demand for the housing market significantly slowed in 2007; however, WaMu's real estate businesses continued to push sales throughout 2008 in order to maintain its large loan production balances (United States, 2011). In 2008, this practice caused a serious misalignment between leaders' anticipated loan growth intentions and actual market demand conditions (Grind, 2013). Finally, the bank's collapse may have been caused in part by guidance and advice from some of the oldest, most reputable strategy-consulting firms that were so focused on financial returns that they ignored the human expertise.

In 2008, just a few months after taking over the struggling bank, JPMorgan announced that it would eliminate 12,000 of WaMu's employees (Grind, 2013). Thus, WaMu's human capital was reduced by 35% in the six months following JPMorgan's acquisition (Talani, 2010). However, WaMu practiced sharp downsizing and elimination of jobs long before its failure. Congressional Hearing (2011) revealed that 10-K filing with the Security and Exchange Commission showed a dramatic reduction of WaMu's workforce, from 60,789 employees on December 31, 2005, to 49,824 on December 31, 2006. Downsizing of WaMu's loan centers and loan personnel was done to preserve profitability. However, although profitability largely depended on external factors such as demand and supply, it also depended on the bank's human expertise strengths (Swanson & Holton, 2008).

The U.S. Senate (2011) subcommittee report on the 2008 financial crisis chronicled many of WaMu's organizational problems but its authors did not explain how human productivity functioned in relation to profitability and efficiency in the years before WaMu's failure. Human productivity is a reflection of human resource development, and human expertise can be a foundation of organizational vitality (Swanson & Holton, 2008). Therefore, a significant link between organizational performance and human productivity can be hypothesized.

According to Swanson and Holton (2008), economic, psychological, and systems theories are foundational to human resource development (HRD) as a discipline promoting human expertise. Thus, it is valuable to consider how the human capital return on investment (the productivity variable), as well as investments in employee compensation and benefits, may have contributed to WaMu's overall demise. This study focused on these economic circumstances in relation to organizational systems in the context of WaMu's rapid decline.

The aim of this research study was to examine how Washington Mutual failed from a human resource development point of view. Specifically, the purpose of this study was to isolate the effects of three performance variables—employee productivity, employer compensation, and liquidity management—on employer's profitability. Accordingly, the researcher hypothesized that employer compensation performance (salaries and employee benefits [SEB]), and liquidity management performance (total loans to total assets [TLTA]) could predict employer profitability performance (return on average asset performance [ROAA]). Next, the researcher hypothesized that employee productivity performance (human capital return on investment [HCROI]) could predict employer profitability performance (return on average asset performance[ROAA]). In order to achieve this goal, Washington Mutual's historical data collected from the Federal Deposit Insurance Corporation's Institutional Demographic report

(quarterly statements) were analyzed. It was hoped that a useful and relevant heuristic would be generated that could prevent future duplication of WaMu's critical leadership mistakes in similar organizations. The study was also designed to compare the data from WaMu to data from the standard peer group banks predefined by FDIC (FDIC, 2015). The comparisons facilitated a more robust interpretation of the results from the WaMu data analysis.

Statement of Research Problem

The overall problem that formed the basis of this research was that the role of human resources in banking failures is poorly understood. More specifically, few if any researchers have examined the effects of employee compensation performance and liquidity management performance on employer profitability performance. Additionally, few if any researchers have examined the effects of popular employee productivity performance on employer profitability performance. Instead, current researchers have primarily explored complex causal relationships by dovetailing psychological, sociological, economic, and systems approaches with organization, process, and individual performance dimensions (Swanson & Holton, 2008). However, research focused on failed organizations, with specific attention to human resources, has been largely absent. Without having a clear understanding of how failed organizations affect HRD knowledge, any plans to improve organizations, processes, and individual performance could quickly become susceptible to criticism (Swanson & Holton, 2008). According to Cascio and Boudreau (2011), "The Great Recession of 2008 demonstrated that proper timing of enlightened HRD human capital philosophies could add more value to its strategic decision-making performance processes by better understanding how to bridge human capital activities with profitability outcomes" (p. 1). Specifically, the recession showed that HRD practitioners need a deeper understanding of human performance before catastrophic revenue losses, performance

failures, and radical reduction in workforce productivity permanently damage or destroy an organization's ability to maintain a competitive advantage.

Deeper understanding of the relationships among human resource and financial variables may help prevent the kinds of catastrophic revenue losses, severe performance inefficiencies, and radical reduction in workforce productivity that have not been seen since the Great Depression of the 1930s (Alesina & Giavazzi, 2013). Insight into these potential relationships may yield a better understanding of how human expertise costs operate in extreme circumstances, such as organizational failure, and may allow future organizations to plan for catastrophic problems related to human expertise costs more effectively. Finally, the study findings might indicate that instances of organizational failure may be reduced but not entirely eliminated; certain economic circumstances can be fatal for every organization regardless of its age and size.

Purpose of the Study

The purpose of this study was to primarily examine the potential connections between compensation, loans to assets performance, and profitability outcomes in order to help organizational professionals gain a deeper understanding of leadership decision making in the context of one case—the failure of Washington Mutual Bank. Additionally, this study examined the possible connection between the return on the percentage of dollars invested in employees and quarterly profitability outcomes. The researcher sought to resolve the question about the degree to which employee compensation and production of loans actually influenced organizational profitability at WaMu. The researcher also sought to investigate potential influence on the return of human cost on organizational profitability.

The effects of the compensation, loan production, and the return on human cost performance were investigated through generally available FDIC data regarding the Washington

Mutual organizational failure. The three independent variables were liquidity management performance (total loans to total assets [TLTA]), employer compensation performance (salaries and employee benefits [SEB]), and employee productivity performance (human capital return on investment [HCROI]). The dependent variable was employer profitability performance (return on average asset [ROAA]).

Significance of the Study

The study adds to the body of knowledge on the topic in several ways. First, the study was designed to examine the effects of employee compensation performance and loan to assets performance on employer profitability performance. Knowing the effects of the two performance variables on employer profitability might have predicted the organizational failure of Washington Mutual.

Second, the study examined a popular human capital return on investment variable, since leadership activities have often focused on contemporary circumstances, recent events, quarterly achievements, competition benchmarking, future strategic endeavors, but rarely on organizational failures (Kayes, 2015). However, without the benefit of strong organizational forensic analysis, there is little hope that future catastrophic failures will be successfully averted (Kayes, 2015). Law enforcement and the medical sciences are examples of professional fields that tend to spend significant time and resources on forensic analysis in order to understand various terminally oriented problems and circumstances (Beran, 2013). These fields could contribute some tools to facilitate a forensic exploration of a specific range from WaMu data in order to understand how the organization's human productivity performed prior to the failure.

Third, little if any human resource development research has focused on conducting an

organizational post-mortem analysis of these variables in relation to profitability. Thus, this

study fills a gap in the literature.

Research Questions

The purpose of this research was to examine how well employee productivity

performance, liquidity management performance, and employer compensation performance

related to overall organizational profitability performance. Figure 1 shows a schematic model of

the relationships of the three variables to the employer's profitability performance.

Compensation Performance
(Salaries and Employee Benefits)
$X_{1.1;\,2.1}$ (Independent Variable)

Loan Performance (Loans to Assets)
$X_{1.2;\,2.2}$ (Independent Variable)

Human Capital Return on Investment
(Employee Performance
Productivity)
$X_{2.3}$ (Independent Variable)

Quarterly Profitability Performance
(Return on Average Assets)
$Y_{1.0;\,2.0}$ (Dependent Variable)
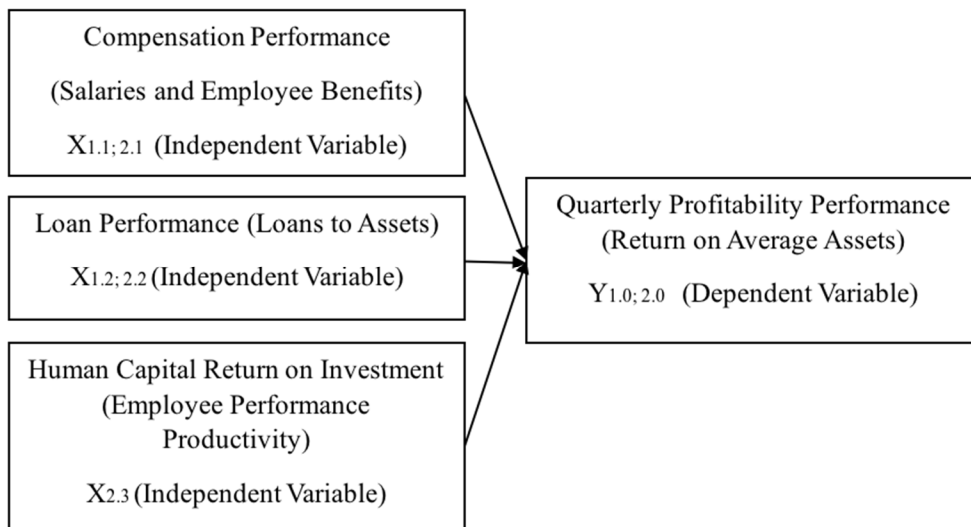
Figure 1. Schematic model of relationships of three variables to employer profitability
performance.

The study was designed to compare the results from the WaMu dataset to the data from

FDCI standard peer banks that did not fail after the 2008 economic recession. This research was

intended to help prevent future organizational mistakes related to these three variables that could

lead to failure. To accomplish this, the study adopted three performance indicators that relate to

the HRD discipline (Swanson & Holton, 2008). Understanding the key performance variables as

they related to the cost of human capital was important because catastrophic organizational failures have often featured leadership characteristics that did not support improved performance at the individual, organizational, or global levels (Bazerman & Watkins, 2004). Thus, the research questions for this research study were:

1. Does historical data from Washington Mutual show that employee compensation and loan management performance could have predicted employer profitability performance?

2. How does data from Washington Mutual longitudinally compare to data from standard peer banks?

3. Does historical data from Washington Mutual and standard peer group banks show that employee compensation performance, loan management performance, and return on employee productivity performance could have predicted employer profitability performance?

This study was structured as an analysis of a historical case, designed to facilitate understanding of complex organizational failure phenomena using the three independent variables described. Retrospectively, historical research has been a useful way to study specific phenomena because researchers do not have the ability to control events (Yin, 2014). The focus of this study was WaMu's organizational failure. The study used archival data from U.S. government sources to examine the implications of this failure on organizational survival.

Assumptions

The researcher collected data from the FDIC, a government agency that maintains a large database of financial statements that can be publicly accessed for a single entity or a group of

entities. The researcher accepted these data in raw form without any further validation. Further, the researcher assumed the quality and validity of this publicly available data were adequate for the purposes of this study.

Summary

This chapter presented the problem of bank failure (specifically, WaMu's 2008 demise) that the researcher hoped to illuminate in this study. As the recession of 2008 showed, bank failure can devastate the market and become a trigger for severe economic recession (Bovenzi, 2015). To help develop a more comprehensive understanding of bank failure, profitability was used as a function of productivity and performance. Profitability was examined through three performance lenses: human capital return on investment, bank liqudity viewed through a total loans to assets ratio, and salaries and employee benefits. Deepening understanding and appreciation of the importance of bank profitability as a function of productivity and performance may provide valuable insight into methods that could be used to predict—and ultimately, avoid—bank failure.

CHAPTER 2: REVIEW OF THE LITERATURE

The purpose of this study was to identify and analyze the relationships that exist between profitability and productivity as a function of human capital return on investment, total loans to total assets, and salaries and employee benefits. After a description of the literature search process, the chapter begins with an overview of Washington Mutual Bank (WaMu), followed by discussions of the impact of the recession on HRD and human expertise. The development of the research questions is presented. The chapter closes with a summary.

Literature Search Process

The primary method of searching for literature on the topic of bank failure was through a keyword search in the 2011 U.S. Senate Permanent Subcommittee on Investigations report entitled, "Wall Street and the Financial Crisis: Anatomy of a Financial Collapse," on the Federal Deposit Insurance Corporation (FDIC) website, and in Colorado State University's library. The keywords used in several combinations included *bank failure, recession, great depression, great recession, human expertise, human capital, HRD, and resource based view*. A "mapping review" method of searching for information was used to identify gaps in the literature (Groves et al., 2006).

Overview of Washington Mutual

Washington Mutual (WaMu) was established on September 21, 1889, with the mission of helping Seattle residents recover from a massive fire that had devastated the region (Loosvelt, 2006). Loosvelt observed that through asset expansion in the early part of the 20th century, the bank was able to withstand the Great Depression. In 1983, WaMu went public, and in the

following decade, the bank expanded its holdings significantly through a series of mergers and acquisitions (Grind, 2012).

The bank began to implement high-risk lending practices in 2004 (U.S. Senate, 2011), which marked a shift in its strategy to complacency toward risk tolerance. The U.S. Senate subcommittee claimed this high-risk lending strategy led to a larger higher-risk loan portfolio (U.S. Senate, 2011). From 2003 to 2006, this portfolio expanded from 19% to 55% (U.S. Senate, 2011). At the same time, the lower-risk loan portfolio dropped from 64% to 25% in originations (U.S. Senate, 2011). This "aggressive and often abusive" (p. 143) sales culture, characterized by high delinquency and default rates among borrowers of the high-risk loans, eventually backfired in 2006. In 2007, the ratings of mortgage-backed securities were downgraded (U.S. Senate, 2011). The result of this "complacency" strategy was significant portfolio losses from poor quality, "fraudulent loans and securities" (U.S. Senate, 2011, p.2). On September 25, 2008, the OTS and the FDIC sold the bank, estimated to be worth $307 billion in assets, to JPMorgan Chase for $1.9 billion (U.S. Senate, 2011).

An investigation into the bank's failure was conducted by the U.S. Senate Permanent Subcommittee on Investigations, a committee that serves as both an ethical and moral compass in the sense that it scrutinizes the integrity, efficiency, and legality of organizations, within both the government and public sectors. The aim of the Senate study was to link growth and securitization to strategy (U.S. Senate, 2011).

First, the U.S. Senate (2011) subcommittee was able to show a direct connection between the growth failure and the high-risk lending origination practice. The subcommittee noted that WaMu's leadership first officially presented the strategy of high-risk lending to the WaMu Board of Directors Finance Committee in January 2005, and at that time, the Board called for an

increase in credit risk tolerance (U.S. Senate, 2011). It is notable that although the strategic shift

had been initiated earlier, this shift was not shared with regulators and the Board of Directors

until the end of 2004 (U.S. Senate, 2011). The Board eventually approved the new strategy, and

WaMu then officially shifted its focus to risky subprime market lending practices (U.S. Senate,

2011). The Senate subcommittee explained the bank practices that led to the bank's growth

during this time:

> Those practices included qualifying high risk borrowers for larger loans than they could
>
> afford; steering borrowers to higher risk loans; accepting loan applications without
>
> verifying the borrower's income; using loans with teaser rates that could lead to payment
>
> shock when higher interest rates took effect later on; promoting negatively amortizing
>
> loans in which many borrowers increased rather than paid down their debt; and
>
> authorizing loans with multiple layers of risk. (p. 49)

Thus, the success of the growth strategy largely depended on profit maximization and risk

ignorance (U.S. Senate, 2011). Second, the Senate subcommittee discovered that WaMu had

sold billions of dollars to both government and private entities (U.S. Senate, 2011). From 2000

to 2007, WaMu had securitized approximately $77 billion in subprime loans (U.S. Senate, 2011).

Two major elements of the bank's practices were identified at the center of the

securitization problem: past-liberal origination procedures and weak supervision. The first

problem, past-liberal standards, involved borrowers claiming income without bank verification.

Specifically, the U.S. Senate (2011) subcommittee stated, "By the end of 2007, stated income

loans made up 50% of its subprime loans, 73% of its Option ARMs, and 90% of its home equity

loans" (p. 24). The average of these three classes of loans was 71%; however, the nationwide

average of other bank loans at the same time was 38%. Thus, WaMu's loans were 33% higher than the national average (U.S. Senate, 2011).

The second problem was weak supervision. The home loan risk division of the bank responsible for these past-liberal loans had a supervisory coverage ratio of approximately one supervisor to 2,449 third-party mortgage brokers (U.S. Senate, 2011). At that time, approximately 60% of all single-family residential loans were coming from this business area (U.S. Senate, 2011).

As socioeconomic conditions worsened during 2006, the volume of credit availability and the housing market became disproportional to consumer and business confidence (U.S. Senate, 2011). As of September 2007, the market was no longer interested in purchasing securitized loans, and all of the operations related to securitized loans were closed (U.S. Senate, 2011). Consequently, as the market continued to deteriorate, WaMu was unable to unload its high-risk loans and leverage delinquencies (U.S. Senate, 2011). When socioeconomic conditions continued to worsen in 2007, it became clear that the WaMu's leaders had exceeded their risk tolerance (Grind, 2013). Because of WaMu leaders' mismanagement, U.S. unemployment climbed to an unprecedented level, which in turn led to a sharp decline in consumer confidence and business investments (U.S. Senate, 2011). Both measures declined steeply. The U.S. economy spiraled downward and collapsed into recession.

Impact of Recession on Human Resource Development (HRD)

Chermack (2011) stated that a looming recession or depression has a significant impact on organizations' long-term survivability. In fact, organizational long-term survivability strategies are increasingly predicated upon the quality of their human expertise (Swanson & Holton, 2008). Rummler and Brache (2013) contended that organizational failure is caused

when the confluence of organizational processes and the quality of individual performances is not understood. The U.S. Senate (2011) concluded that, "complex, high risk financial products were engineered, sold, and traded by the major U.S. investment banks" (p.8). According to Chermack (2011), bounded rationality refers to cognitive overload that prevents humans from making informed decisions. In the years leading to financial crisis, banks developed and promoted complex financial instruments (U.S. Senate, 2011), without fully understanding "the values of anticipated consequences" (Chermack, 2011, p.42).

This mismatch between human expertise needed and that available brought about a sharp increase in all institutional failures and concurrently high unemployment rates. Total failures of all institutions for the United States and other areas increased to 140, and the civilian unemployment rate increased to 9.3% (Figure 2). Information in Figure 2 includes the FDIC facilitated transactions that required payout process (FDIC, 2015).

Historically, this was not the first time that a nationwide recession led to bank failures. Most notably, the bank failures that occurred during the Great Depression brought fear to the U.S. economy (Crafts, 2013). The abnormally high frequency of bank failures paralyzed the incentive of organizations to invest in the struggling and uncertain economy (Verma, 2013).

The rehabilitation of the economy in the wake of the Great Depression was instigated in 1933 with the establishment of the Federal Deposit Insurance Corporation (FDIC, 2014). Since its inception through 2013, there have been more than 3,400 bank failures (FDIC, 2013). This number of bank failures is much lower than to the number of bank failures that occurred during the Great Depression (FDIC, 2015). Prior to the formation of the FDIC, nearly 6,000 banks failed between 1921 and 1930, and between 1930 and 1933 more than 9,000 banks failed (Wicker, 1996). In his seminal book on the history of the Federal Reserve Bank, Meltzer (2003) stated that the government's reluctance to intervene sooner caused an unprecedented number of bank failures.

With respect to the 1930 recession, Bernanke (2013) contended that the Federal Reserve (the Fed) did not do enough to accommodate monetary policy, which may have prevented the recession. The Fed's reluctance was driven by fundamental economic misconceptions and a lack

of understanding about how deflation negatively affects the economy, and leading to unemployment rates averaging 25% (Bernanke, 2013).

Members of the banking industry panicked and froze what was left of the available credit (Wicker, 1996). According to Bernanke (1983), the banking panic in 1930's significantly reduced credit availability and raised the cost of credit intermediation. Consequently, high credit intermediation costs initiated a period of massive workforce layoffs (Bernanke, 1983).

Recessions show that things can go wrong beyond the possibility of any internal or built-in self-correction. In time, the 2008 recession will be marked as the most destructive, complex, and structurally challenging economic downturn since the Great Depression (Bernanke, 2013). The government was compelled to intervene using multifaceted interventions to rescue the economy (U.S. Congress, 2011). Specifically, the United States Secretary of the Treasury was authorized by the Emergency Economic Stabilization Act of 2008 (Division A of Pub.L. 110-343, 122 Stat. 3765, enacted October 3, 2008) to purchase troubled assets and inject money into the struggling banking system

Much of the modern philosophy and methods behind HRD theory were developed during or shortly following the Great Depression (Whalen, 2011). Swanson and Holton (2008) noted that the Great Depression, in fact, served as the foundation upon which 20th-century fundamental scholarly HRD work was built. The main objectives of HRD researchers have been to identify the underlying causes of the Great Depression, both from the perspective of heuristic fallacies and empirical deficiencies, and then to develop strategies and solutions to prevent a recurrence (Swanson & Holton, 2008).

Prior to the Depression, in the early 1900s, Taylor pioneered scientific principles for management, which he based upon the extensive industrial growth that was occurring during that

time (Evans, & Holmes, 2013). However, by the end of the 1920s, the economy had slowed, and researchers shifted their focus to exploring how labor motivation and sustainability shapes profitability (Gagné, 2014).

During the 1920s, Mayo, Warner, and Roethlisberger conducted landmark research, which came to be known as the Hawthorne Effect studies (Swanson & Holton, 2008). The research, conducted at the Hawthorne Works factory, was prompted by the factory employees' decreasing motivation and morale (Swanson & Holton, 2008). After the Hawthorne studies research, management theory began to shift away from relying on anecdotal evidence, such as employee motivation techniques, toward a more scientific rubric (Swanson & Holton, 2008).

Even before the Hawthorne studies, human behavior and interpersonal skills (i.e., soft skills) had not been considered haphazard or occurring within a vacuum; however, declining employee motivation and morale were now observed as a product of the Depression and the certainty of imminent structural labor layoffs (Swanson & Holton, 2008). The Hawthorne studies provided empirical insights into how employees react to change. The main discovery was that human behavior and interpersonal skills are as important to an organization's long-term vitality as employees' technical skills (Swanson & Holton, 2008). The results were later used by Hawthorne Works to revise its management practices in relation to change and workforce sustainability (Mackay, 2007).

As the banking collapse continued, research studies led to a greater understanding and appreciation of how economic cycles influence organizational behavior (Swanson & Holton, 2008). For example, during the Great Depression Allport, the so-called father of social sociology, first explored the fundamental principles of organizational dynamics theory. Dickens, Shanck, and Allport (1932) explored large-scale overproduction, unemployment, and business

losses and the role of each in the behavior of economic cycles during an economic depression. The following year, Allport (1933) published his seminal work, *The Importance of Studying Institutional Behavior*, in which he publically criticized the lack of empirical knowledge and the general lack of interest in understanding institutional behavior dynamics during an economic recession.

The end of the Great Depression marked a new beginning for organizational and human resources research, which was now based on the powerful lessons learned from the Great Depression. Dooley, the Academy of Human Resources and Development's first inductee, argued that World War II productivity was shaped by the great wealth of recession-based scientific knowledge (Swanson & Holton, 2008). That is, all of the lessons learned from the Great Depression culminated in the development of activities and competencies tied to the condition of human capital (Dinero, 2005).

Economists Friedman and Schwartz argued that the collapse of the U.S. banking system determined the pace of inflation and economic activity (Rostagno & Christiano, 2004). In their seminal work, *A Monetary History of the United States, 1867-1960*, Friedman and Schwartz argued that it was the size and the turnover of the money supply that ultimately caused the high unemployment rates, which reached 25% during the Great Depression (Purcell, 2014).

In 1930, panicked depositors withdrew their funds from the banks, negatively affecting the U.S. financial system (Jalil, 2014). Deflation and bankruptcies spread throughout the country and deeply affected every working individual (Jalil, 2014). These monetary losses led to the failures of many banks, as noted earlier (nearly 6,000 between 1921 and 1930, and over 9,000 between 1930 and 1933). HRD interests shifted from a broad scope to a single focus—how

human capital expertise shapes productivity outcomes in relation to profitability (Swanson & Holton, 2008).

Human Expertise

Proponents of the classic resource-based view (RBV) of human resource development have asserted that organizational sustainability is a product of an organization's distinctive competencies (Penrose, 1959). However, contrary to the distinctive competencies explanation, critics of RBV have argued that lack of operationalization specificity makes it difficult to bridge the problem of human expertise measuring. HRD's robust theoretical framework could offer a feasible host bridge between RBV and its critics when it's comes to measuring human expertise.

Specifically, HRD's Scenario Planning theoretical framework argues that quality of human expertise depends on quality of friction (Chermack, 2011). Friction is defined as "double-checks that occur in the social interactions among humans in work processes" (Chermack, 2011, p. 45). Friction in decision-making enables management and executives to detect "important forces in the environment "(Chermack, 2011, p.46). This concept of friction leads to the idea of bounded rationality. Chermack (2011) argued in his scenario book about bounded rationality:

> Scenarios might be helpful to decision-makers in coping with their own bounded
> rationality by providing a vast amount of information in a detailed story exhibiting
> features that are easily remembered. While scenarios can be helpful in addressing this
> core cause of decision failure, it should be acknowledged that bounded rationality, as a
> feature of being human, can never be completely solved. What is further required is a
> series of case studies, or research regarding the specific impact of scenario planning on
> individual habits of information gathering, synthesis, and decision-making. (p.43)

Torraco (1997) wrote, "A theory simply explains what a phenomenon is and how it works" (p. 115). Swanson (1998) proposed the "three-legged stool" metaphor for defining the foundations of HRD theory (as cited in Swanson & Holton, 2001, p. 93); the three legs are economics, psychology, and systems theories. Further, Swanson and Holton (2008) claimed that three theories—scarce, sustainable, and human expertise—were the most influential for HRD.

Torraco (1998) narrowed this idea down further, arguing that out of the three most influential economic theories, human capital theory was the most relatable to HRD's theoretical foundation. Human capital theory focuses on the extent to which human capital, consisting of knowledge, skills, and abilities, adds to the overall organizational capability (Armstrong, 2011). Torraco (1998) also pointed out that a lack of organizational capability could be resolved by acquisition of external human expertise.

On the other hand, Watkins (1989) suggested that HRD is the *developer* of human capital capabilities. The concept of HRD as developer is rooted in the research of Penrose (1959). If one uses Watkins's developer perspective, this then shifts the theoretical underpinning from human capital theory toward a resource-based view. Torraco (as cited in Swanson & Holton, 2008) pointed out in a discussion of supply and demand that HRD enhances a firm's competitive strength through the resource-based view. This assertion was based in part on Penrose's (1959) assertion that developing a firm's resources is paramount to developing organizational competitiveness.

In 1984, Wernerfelt introduced the resource-based view (RBV) framework. Wernerfelt argued that although raw resources are important, essentially internal resources keep an organization competitive. Prahalad and Hamel (1990) noted that organizational competitiveness depends on the availability of internal and inimitable resources. Specifically, competitive

advantage depends on internal resources that are rare, inimitable, valuable, and nonsubstitutable (Barney, 1991; Swanson & Holton, 2008; Torraco, 1998; Wright, McMahan, & McWilliams, 1994). Critics of RBV theory contend that it is ambiguous and hard to operationalize (Godfrey & Hill, 1995). In response to critics, Barney (2001) removed the fourth component, nonsubstitutability.

However, no critic has argued with Barney's focus on the importance of people skills. Barney (1991) argued that the inimitable component of organizational competiveness largely depends on resource immobility. That is, productive resources, such as people skills, cannot be easily transferred from one firm to another (Wernerfelt, 1984). Further, Grant (1991) claimed that RBV as a theoretical framework is based on the premise that resources and capabilities are sources of profitability, and those organizational capabilities are the source of an organization's basic strategic direction. Grant further asserted that these resources are important elements of a firm's internal strength; yet, they are usually the most disregarded elements on financial balance sheets. In short, Grant argued human expertise, in other words, people and their skills, are the most important elements of organizational strategy.

In the next part of this literature review, the three independent variables of this dissertation are explored. At the end of each section, the researcher develops and presents a corresponding hypothesis.

Profitability as a Function of Human Expertise Compensation

Swanson & Holton (2008) believed that performance could be used as a means of employee control and dehumanization. In the case of WaMu, compensation incentives were intentionally designed to reward loan personnel for the volume of the high-risk loans over quality (U.S. Senate, 2011). WaMu's compensation system rewarded loan officers and loan processors

21

for originating large volumes of high-risk loans, paid extra to loan officers who overcharged borrowers or added stiff prepayment penalties, and gave executives millions of dollars even when their high-risk lending strategy placed the bank in financial jeopardy (U.S. Senate, 2011). Compensation mechanisms founded on aggressive payouts created an environment in which loan originators threatened to quit WaMu unless their deals were approved (US Senate, 2011).

Swanson & Holton (2008) believed that human expertise is attained through performance, growth, and adaptation. Organizations with efficient employee performance but minimal time to develop human expertise will heavily rely on automation of processes (Chermack, 2011). Automation of processes depends on growth and adaptation of human expertise (Chermack). Under automated processes, human expertise will only perform if growth and adaptation can follow the pace of automation (Chermack, 2011). This discussion provides the theoretical foundation for adopting the fifth and sixth hypotheses for this study:

H1. There is a statistically significant predictive association between WaMu's salaries and employee benefits (SEB) and the return of average asset profitability (ROAA).

H2. There is a statistically significant predictive association between the standard peer group's (SPG) salaries and employee benefits (SEB) and the return of average asset profitability (ROAA).

Profitability as a Function of Human Expertise Performance

Swanson and Holton (2001) argued that employee performance is the most critical variable in HRD. However, researchers have suggested that the definition of organizational performance varies between industries and organizations. Nonetheless, despite the lack of consensus on a definition for organizational performance, its importance in the banking industy

and for individual banks cannot be ignored. The study uses the U.S. Senate subcommittee

(2011) research findings and conclusions as they relate to organizational performance.

As mentioned, WaMu embarked upon a high-risk lending performance strategy that

resulted in excessive loan delinquencies and defaults (U.S Senate, 2011). According to the U.S.

Senate (2011), WaMu's retail lending performance suffered from numerous problems, including

inadequate systems, weak oversight, risk layering, loan fraud, steering borrowers to high-risk

option ARMs, and marginalization of risk managers (U.S. Senate, 2011). Thus, the mirage of

profitable lending performance was, in reality, a product of circumvented bank policies (U.S.

Senate, 2011).

As stated earlier, proponents of RBV theory have argued that a firm's sustainable

competitive lending advantage invariably depends upon its employees' skills being hard to

duplicate (Wright, Dunford, & Snell, 2001). However, Bromiley (2005) asserted that the logic

behind RBV is naïve, because it excludes discrete tactics (e.g., WaMu's performance was

interrupted by fraud). That is, there was no problem as long as profitability remained stable and

resilient over time. Managers tolerated WaMu's steady increase of earnings as long as there was

revenue was coming in.

Cheng, Chen, and Chen (2013) suggested that strong interorganizational relationships

mitigate risks of failure. In addition, despite Bromiley's (2005) criticism of tactical logic, the

empirical research on RBV's performance has shown that from a strategic perspective, certain

organizational assets, such as employee skills and capabilities, often allow an organization to

outperform its competition (Amit & Schoemaker, 1991, 1993; Barney, 1986; Coyne, 1986;

Dierickx & Cool, 1989; Ghemawat, 1986; Grant, 1991; Hall, 1989).

The U.S. Senate (2011) subcommittee suggested that WaMu's many weak interorganizational relationships were too numerous for the bank to navigate successfully: "WaMu struggled to integrate dozens of lending platforms, information technology systems, staffs, and policies, whose inconsistencies and gaps exposed the bank to loan errors and fraud" (p. 87). The U.S. Senate (2011) concluded that aggressive but poor interorganizational relationships hampered the organization's ability to develop competitive skills and capabilities in a timely manner.

Organizational resources are organized around competitive capabilities, which consist of individual skills or team skills or both (Amit & Schoemaker, 1993; Grant, 1991). Hall (1989) argued that these skills are rarely tangible. However, Collins (1994) contended that they are primarily interaction-based. Collins's assertion was based on numerous empirical RBV studies that emphasized interaction. These studies focused on various subjects, including cultures (e.g., Wernerfelt, 1984); distinctive competencies (e.g., Hitt & Ireland, 1985; Hofer & Schendel, 1978; Selznick, 1957); core skills (e.g., Irvin & Michaels, 1989); intangible capabilities (e.g., Hall, 1992, 1993); core competencies (e.g., Prahalad & Hamel, 1990); and intermediate goods (e.g., Amit & Schoemaker, 1993).

Wang, Tai, and Grover (2013) pointed out that interactional relationships between buyers and suppliers in supply chains are characterized by inherent uncertainty. This inherent uncertainty coincides with the U.S. Senate (2011) findings that WaMu (the buyer) purchased its loans from third-party mortgage brokers (the suppliers), and about half of these loans had fraudulent or erroneous borrower information. This brings to the fore the uncertainty between the buyer and the seller that contributed to WaMu's demise (U.S Senate, 2011). At the time, the

subprime securitization was a relatively new lending technology (U.S. Senate, 2011). The U.S.

Senate (2011) defined securitization as follows:

> In a securitization, a financial institution bundles a large number of home loans into a
>
> loan pool, and calculates the amount of mortgage payments that will be paid into that
>
> pool by the borrowers. The securitizer then forms a shell corporation or trust, often
>
> offshore, to hold the loan pool and use the mortgage revenue stream to support the
>
> creation of bonds that make payments to investors over time. Those bonds, which are
>
> registered with the SEC, are called residential mortgage backed securities (RMBS) and
>
> are typically sold in a public offering to investors. (p. 18)

WaMu's asset-backed securitization of loans performance was a lucrative but often

complex and sometimes fragmented business (U.S. Senate, 2011). Securitization technology

depended on loan volumes keeping up with the speed of rising home prices (U.S. Senate, 2011).

However, borrowers who defaulted on their loans because they could not make their mortgage

payments were unable to refinance their mortgages or sell their homes.

The events that served as precursors to the 2008 recession and WaMu's demise were

similar to the 1980–1994 banking crisis. The banks that failed during the 1980–1994 banking

crisis generally experienced higher ratios of total loans to assets (FDIC, 1998). Specifically, the

FDIC (1998) found that failed banks during the 1980-1994 recession assumed high risks that

were followed by high ratios of total loans to total assets. This discussion provides the

theoretical foundation for adopting the third and fourth hypotheses for this study:

H3. There is a statistically significant predictive association between WaMu's total loans

to assets performance (TLTA) and the return of average asset profitability (ROAA).

H4. There is a statistically significant predictive association between the standard peer group's (SPG) total loans to assets performance (TLTA) and the return on average asset profitability (ROAA).

Profitability as the Value behind Human Expertise

From a neoclassical organizational theory point of view, a single determinant of action is profitability maximization, which suppresses or ignores any productivity issues (Mahoney & Pandian, 1990). The best evidence of the suppression of knowledge or ignorance regarding its productivity issues comes from WaMu's own internal investigation. In 2004, WaMu launched a lending strategy to boost its productivity by adopting a high-risk loan profit maximization policy (U.S. Senate, 2011). This new "higher risk landing strategy" called for an increase in the production of higher-risk loans (U.S. Senate, 2011, p. 61). The U.S. Senate (2011) showed that "a 2005 internal WaMu investigation of two high volume loan centers in Southern California that accepted loans from brokers found that 78% of the funded retail broker loans reviewed were found to contain fraud" (p. 89).

Despite specific evidence of fraud from two high volume centers in 2005, the bank did not take any discernible actions to address this problem until April 2008 (U.S. Senate, 2011). This evidence shows that management failed to conceptualize or fully appreciate the impact of dysfunctional productivity on its future profitability (U.S. Senate, 2011). Thus, the bank's lack of sound conceptualization was revealed.

The lack of conceptualization is a fundamental organizational problem that can be best understood and resolved through HRD analysis. Conceptualization of problem solving begins with understanding how past decisions shape future outcomes. Swanson and Holton (2001)

asserted that HRD could conceptualize problem solving and improve managerial learning processes.

Thus, conceptualizing and resolving a problem is part of a manager's decision-making process (Senge, 1987). In 2007 and 2008, WaMu managers' reluctance to understand and ameliorate problematic processes had devastating consequences, proving that conceptualization is not sound if it does not include an actionable improvement in learning processes (Mahoney & Pandian, 1990; Swanson & Holton, 2001; U.S. Senate, 2011). As revealed in the U.S. Senate Report (2011), in 2007, regardless of an estimated 78% fraud rate, only 14 full-time WaMu employees supervised 34,000 third-party brokers. Shortly thereafter, in June 2008, the bank closed 180 loan centers that processed third-party broker loans and terminated 3,000 employees (U.S. Senate, 2011). Three months later, WaMu Bank's doors closed.

The bank's closure brings up important questions about how human productivity might be measured and studied as a component of profitability. McWilliams, Van Fleet, and Wright (2001) argued that employees are the most valuable and unique aspect of Barney's (1991) theoretical view that rarity, inimitability, value, and nonsubstitutability are important components of a firm's overall assets. However, Porter (1991, 1996) noted that although employees are valuable, RBV does not address how competitive processes are achieved or developed.

The theory of dynamic capabilities encompasses Porter's criticism in the sense that organization processes need to be both stable and resilient in order for the organization to remain competitive (Helfat & Peteraf, 2003; Teece, Pisano, & Shuen, 1997). However, some researchers have pointed out that the theory of dynamic capabilities lacks practical rationality (Teece, Pisano, & Shuen, 1997).

Weber (1978) identified two types of goal orientations: *zweckrational* and *wertrational*. Zweckrational is a strategic or formal goal orientation; wertrational is a tactical or substantive goal orientation (Weber, 1978). Bromiley (2005) argued that RBV does not distinguish between a manager's formal (zweckrational) and substantive (wertrational) rationality. For example, WaMu's 2005 zweckrational goal was to achieve higher profits that were stable and resilient; however, the wertrational risks were ignored because the overall profitability of the bank was stable and resilient.

Law and Kesti (2014) argued that the best indicator of productivity is HCROI, the value of which comes from revenue, expenses, and pay and benefits (Fitz-enz, 2009). Law and Kesti (2014) suggested that HCROI should have minimum and maximum alarm limits. For example, a maximum alarm limit might be an indication that employee stock options need to be increased.

This discussion has provided the theoretical foundation for adopting the first two hypotheses for this study:

H5. There is a statistically significant predictive association between WaMu's human capital return on investment (HCROI) and the return of average asset profitability (ROAA).

H6. There is a statistically significant predictive association between the standard peer group's (SPG) human capital return on investment (HCROI) and the return of average asset profitability (ROAA).

Summary

This chapter provided an overview of the history of Washington Mutual Bank. The bank was established after the great Seattle fire of 1889 and closed 118 years later in the 2008 U.S. recession. WaMu's failure was caused by a high-risk lending strategy. In addition, the recession

can be understood using HRD theory. The HRD theoretical framework was proposed as a

method to clarify the argument between the proponents of resource-based view (RBV) theory

and its critics. Finally, this chapter provided the theoretical underpinning for the six hypotheses

in this case study.

CHAPTER 3: RESEARCH METHODOLOGY

The purpose of this study was to examine the potential connections between employee compensation and loan production on profitability outcomes in order to help organizational professionals gain a deeper understanding of bank failure in the context of one case—the failure of Washington Mutual Bank. In addition, the study also explored employee productivity return on profitability outcome. The two independent variables were employer compensation performance (salaries and employee benefits [SEB]) and liquidity management performance (total loans to total assets [TLTA]). Additionally, the third independent variable of employee productivity performance (human capital return on investment [HCROI]) was added and explored. The dependent variable was employer profitability performance (return on average asset [ROAA]).

In this chapter, significant relationships that may exist between profitability and selected organizational ratios are identified and analyzed. A description of the research design is presented. The research questions and hypotheses are reviewed. The population and sample are defined and discussed, followed by a description of the measurements and data analysis methods. The chapter closes with a summary.

Review of Research Questions

This study focused on answering the following research questions:

1. Does historical data from Washington Mutual show that employee compensation and loan management performance could have predicted employer profitability performance?

2. How does data from Washington Mutual longitudinally compare to data from standard peer banks?

3. Does historical data from Washington Mutual and standard peer group banks show that employee compensation performance, loan management performance, and return on employee productivity performance could have predicted employer profitability performance?

Review of Hypotheses

Several hypotheses, developed in Chapter 2, were used to operationalize the research questions, as follows:

H1. There is a statistically significant predictive association between WaMu's salaries and employee benefits (SEB) and the return of average asset profitability (ROAA).

H2. There is a statistically significant predictive association between the standard peer group's (SPG) salaries and employee benefits (SEB) and the return of average asset profitability (ROAA).

H3. There is a statistically significant predictive association between WaMu's total loans to assets performance (TLTA) and the return of average asset profitability (ROAA).

H4. There is a statistically significant predictive association between the standard peer group's (SPG) total loans to assets performance (TLTA) and the return on average asset profitability (ROAA).

H5. There is a statistically significant predictive association between WaMu's human capital return on investment (HCROI) and the return of average asset profitability (ROAA).

H6. There is a statistically significant predictive association between the standard peer group's (SPG) human capital return on investment (HCROI) and the return of average asset profitability (ROAA).

Research Design

The study used a nonexperimental, quantitative, correlational design using multiple regression statistical techniques. Correlational design uses standard multiple regression expression of two or more independent variables and one dependent variable, tested for their predictive power (Field, 2009). Figure 3 shows the overall research design.


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┌─────────────────────────────────┐
│   Compensation Performance      │
│  (Salaries and Employee Benefits)│
│  X₁.₁; ₂.₁  (Independent Variable) │
└─────────────────────────────────┘

┌─────────────────────────────────┐        ┌─────────────────────────────────┐
│  Loan Performance (Loans to Assets)│      │  Quarterly Profitability Performance│
│  X₁.₂; ₂.₂ (Independent Variable)  │ ──>  │     (Return on Average Assets)   │
└─────────────────────────────────┘        │  Y₁.₀; ₂.₀  (Dependent Variable) │
                                             └─────────────────────────────────┘
┌─────────────────────────────────┐
│  Human Capital Return on Investment│
│    (Employee Performance         │
│       Productivity)              │
│  X₂.₃ (Independent Variable)      │
└─────────────────────────────────┘
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The study's overall research design contains three independent variables predicting one dependent variable. The three independent variables are: Compensation Performance (Salaries and Employee Benefits) $X_{1.1;2.1}$, Loan Performance (Loans to Assets) $X_{1.2;2.2}$, and Human Capital Return on Investment (Employee Performance Productivity) $X_{2.3}$. The dependent variable is Quarterly Profitability Performance (Return on Average Assets) $Y_{1.0;2.0}$.
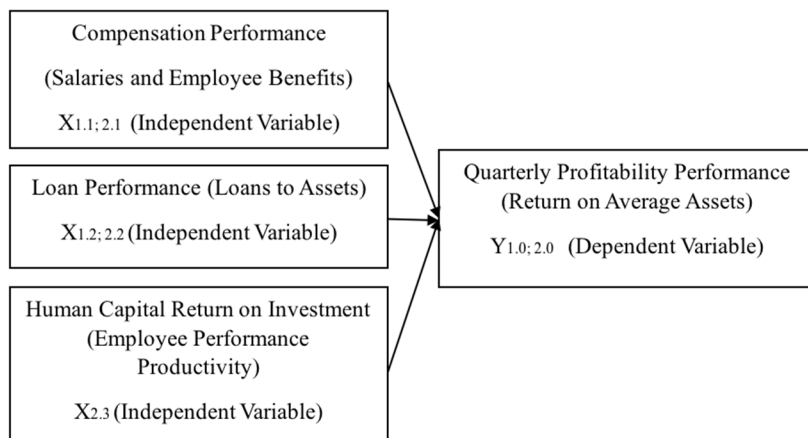
Figure 3. Organizational profitability dependent variable and three independent variables.

Population

The population studied in this research consisted of Washington Mutual Bank (WaMu) and a standard set of FDIC-chosen peer banks (SPG). Because of the complexities involved in comparing WaMu with other banks, this study was limited to FDIC-generated peer bank information.

The first set of correlations was specific to WaMu's FDIC certificate no. 32633. It must be clarified that the WaMu name appeared throughout four certificates as follows: (a) FDIC certificate no. 32633, (b) FDIC certificate no. 33891, (c) FDIC certificate no. 9576, and (d) FDIC certificate no. 28089 (FDIC, 2015). Certificate no. 9576 was inactive as of January 1, 1995, and certificate no. 28089 was inactive as of December 2, 1995. At the time of failure, FDIC certificate no. 32633 had approximately $307 billion in total assets, and FDIC certificate no. 33891 had approximately $46 billion in total assets (FDIC, 2015). The study used FDIC certificate no. 32633 for the correlational data analysis because of time constraints and the strong 86.96% overall asset representation of WaMu at the time of failure.

The second set of identical correlations for the standard peer group banks (SPG) was used as a benchmark against which to compare the WaMu data. The SPG dataset included all comparable national bank data generated by the FDIC. Contrasting the two datasets was intended to analyze WaMu's performance against the performances of other nationally recognized banks.

Sample

This study consisted of an analysis on the performance of WaMu and its standard peer bank group using a range of data from March 31, 2004, to December 31, 2007. Kleinbaum, Kupper, Nizam, and Rosenberg (2014) cautioned that using mathematical models for calculating multiple variable sample sizes is complicated. Thus, the researcher used an approach recommended by Hsieh, Bloch, and Larsen (1998). A sample size with one independent variable for multiple regression models could be easily approximated using the simple multiple linear regression analysis (Kleinbaum et al., 2014). The available data for WaMu and its standard peer

group were obtained through a publicly available FDIC website under the section of statistics on depository institutions.

WaMu and standard peer group data from 16 quarters were analyzed. The standard peer group sample was extracted using "all intuitions-nationally reported institutions" as the primary search criteria. The standard peer group or "all intuitions-nationally reported institutions" represented a selection of banks predetermined by the FDIC. The goal of the selection process was to ensure that the characteristics of the comparison standard peer group was similar to those of WaMu (see Table 1). In order to show how the performance ratios differed across the two samples, two regression models and the corresponding analysis are described and explained in detail.

Table 1

Search for WaMu and Standard Peer Group (SPG) Banks

Report	Range
WaMu (FDIC certificate no. 32633)	March 31, 2004–December 31, 2007
Standard Peer Group	

Power Analysis

The study used 16 quarters of data for WaMu and comparable standard peer group banks. To identify minimum sample size requirements, G*Power software was programmed with effect size 0.15 (medium), an alpha level of .05 (statistical significance), and a power level of .95 (minimum value). G*Power results showed that a minimum sample size of 115 banks were required to potentially achieve statistical significance. The study analyzed an average of 8815

banks over time (standard peer group). The data time frame covered 16 quarterly observations; data related to the high-profit and high-risk loan strategy were available for only four years.

<div align="center">**Instruments and Measurements**</div>

In this section, the measurement of the dependent variable and the three independent variables is explained. The emphasis of the study was to examine a hypothesis and to explain highly complex variable interactions for WaMu. As such, the research variable measurements were designed to compare, relate, and describe relationships between variables.

Measuring Bank Profitability

Profitability was measured using the earning analysis trail indicator or return of average asset. The FDIC regulations safety manual, section 5, defined the return on average assets as the material shift in the balance sheet structure that signifies the behavior of banks' earning outcomes (FDIC, 2014). Plewa (1996) stated that profitability, as measured by return on average asset (ROAA), is a direct reflection of the profitability of a firm's assets (in this case, a bank's profitability) and is expressed as a percentage of average total assets.

Prior use in organizational research. O'Keefe and Wilcox (2011) described the return on asset predictability effect for banks that were experiencing difficulties for the periods between 1980 and 1990 and 2007 to 2010. O'Keefe and Wilcox found mixed effect outcomes that generally signaled that a return on assets could be a reliable predictor of a bank's performance problems or lack thereof.

For example, the intensity of assets performance for WaMu appeared problematic starting in 2006, evidenced by a large loan portfolio and high rates of delinquency and default (U.S. Senate, 2011). High delinquency and default appeared to have created high demand for more assets and cash, which were no longer readily available (U.S. Senate, 2011). Assets and cash

were scarce because of overall economic decline and a massive shift in demand for residential mortgages. Further, Wheelock and Wilson (2000) mirrored banking conditions using the 36 various ratios. Tabachnick and Fidell (2001) reduced analysis to only 19 ratios, and Golin (2001) focused on the organizational-level management performance using ROAA as predictor. In short, there is a well-established history of using ROAA as a general assessment of organizational profitability.

Measuring Bank Employer Compensation and Benefits

Upon review of WaMu's financial statements, no line item dedicated to investments in training and development was evident. Such a line item would have been the ideal indicator of HRD's involvement (Swanson & Holton, 2008). The only line item related to HR and HRD activities was titled "salaries and employee benefits" (FDIC, 2015). After inquiring with the FDIC, it was determined that any investments in training and development were likely to be subsumed in the salaries and employee benefits line item, given the financial reporting practices of WaMu (FDIC, 2015).

The salaries and employee benefits item was located under the "All Summary Information" section, "Income and Expenses" Part 65 (FDIC, 2015). According to the FDIC's definition of an inactive financial institution, the category included salaries, bonuses, hourly wages, overtime pay, incentive pay for trust department officers and employees, investments in employee development, and training costs, which can be a general category. If officers or employees only a portion of their time in the trust department, that proportional share of their salaries and employee benefits was allocated (FDIC, 2015). Expenses associated with employee benefits, for example, pension, profit-sharing, 401(k), and ESOP, included health and life

insurance, social security and unemployment taxes, tuition reimbursement, education and training and all other so-called fringe benefits, were included on this line (FDIC, 2015)

HRD as a professional field of practice is concerned with employee compensation and benefits because these costs reflect training performance quality (MacLagan, 1989; Swanson & Holton, 2008). According to the Bureau of Labor Statistics National Compensation Survey (NCS; 2015), employer cost for wages and benefits is the leading component of the Employment Cost Index. The Employment Cost Index measures changes in labor costs (NCS, 2015). In addition, NCS measures how accessible benefits are to employees (NCS, 2015).

Prior use in organizational research. The compensation system is one of the pillars of organizational strategic performance (Berg, 1969, 1973). Initially, the aim of many empirical research studies on employee compensation practices has been to understand how organizational strategies directly affect compensation structures (Gomez-Mejia & Berrone, 2010). Next, researchers turned the focus away from diversification strategies to the firm's performance, which was viewed as a subject of employee compensation (Gomez-Mejia & Berrone, 2010). Cappelli (2012) argued that employee perspective or quality of benefits and the organization's mission combined with low pay did not result in employee loyalty. Bryman (2009) argued that studying compensation and benefits would not be very important in organizational research. On the other hand, organizational research has also been concerned with how leadership style influences employee interpretation of compensation and benefits meaning (Barling & Cooper, 2008).

Measuring Bank Performance

The asset performance structure is best measured by dividing total asset loans by total assets (Chorafas, 2007). The U.S. Federal Reserve considers total loans divided by total assets

(TL/TA) to be one of the most important supervisory quality measures of a bank's performance (FDIC, 2013).

Market risk exposure is a reflection of management's risk tolerance. In this case, securitization of delinquency-prone loans destroyed WaMu's ability to operate competitively (U.S. Senate, 2011). For example, the U.S. Senate (2011) stated, "By 2007, home equity loans made up $63.5 billion or 27% of its home loan portfolio, a 130% increase from 2003" (p. 3). In this study, one objective was to understand how TL/TA profitability historically behaved for WaMu and how it related to a set of standard peer group banks. The aggregated data was calculated for this measure because this analytical method facilitated observation of a form of historical sequence trending or longitudinal study (Lahiri & Moore, 1992). For example, the first and second coincident indicators were developed for WaMu and standard peer group banks. This historical comparison enabled the ability to track the comparisons over a segment of history.

Prior use in organizational research. Loans-to-assets ratio is part of approximately 30 different banking trend indicators for the end-of-period data financial statistics (FDIC, 2013). The FDIC website revealed well over 1,600 results related to a "loans to assets ratio" query. The main purpose for the loans-to-assets ratio measure is risk quantification (FDIC, 2013). Although to date, there are no loans-to-assets studies directly related to HRD, Anderson (2004) argued that bottom-line focused organizational development practitioners are capable of helping managers reduce financial risk. Specifically, this practice helps managers identify correct financial risk threats (Anderson, 2004). Risk phenomena is the subject of many HRD studies (Swanson & Holton, 2008).

Measuring Bank Productivity Performance

Productivity performance is the difference between output and revenue, which can be divided into three categories: input (expenses), labor pay, and benefits (Prokopenko, 1987, 1992). Fitz-enz (2000) described human capital predictive power as follows:

The accounting function does a fine job of telling the state of our past and present financial health. But it says nothing about the future. Additionally, it does not speak to human capital issues. To see the future, we need leading indicators. These indicators tell us the state of our human capital as we prepare for the future. (p. 249)

Fitz-enz (2009) linked human capital productivity to human capital return on investment (HRCOI). Law and Kesti (2014) argued that HCROI was "one of the best indicators for human capital productivity" performance (p.42). The development of effective human capital depends on capital intensity, which in return strengthens organizational market performance (Orlando and Nancy, 2001). Thus, HCROI established its relationship to profitability. Mathis, Jackson, and Valentine (2014) provided HCROI formula or revenue (operating expense – [compensation + benefit costs])/ (compensation + benefit costs) (p.74). In this study, productivity was measured using the HCROI, calculated by revenue – (expense – pay and benefits)/pay and benefits (Fitz-enz, 2009).

Prior use in organizational research. Because HCROI is a standard financial metric, its reliability and validity have been well established, and it therefore constitutes the primary measure of labor productivity. Human resource development (HRD) scholars have looked favorably on HCROI because measuring employee return on investment can be directly linked to quality of learning and training (Swanson & Holton, 2001). In other words, return on human capital can be a quantitative parameter of HRD's qualitative learning and training functions.

Fitz-enz (2009) declared that the relationship between total expense and human cost is directly related to profit ratio. Fitz-enz warned that status quo investing in total expense spending would result in a lower human capital profit ratio. Shirazi and Ravindran (2013) empirically analyzed the connection between the new employee recruitment and the HCROI variable. Shirazi and Ravindran analyzed three different cases, and each case scenario further reinforced the value of HCROI as a productivity assessment tool (what an organization gets back from investing in human expertise). Gordon (2000) argued in his book that organizational investment in education and training of its employees is measured using HCROI as a productivity variable. Mathis, Jackson, and Valentine (2014) also believe that an organizational investment in employee labor productivity is measured using an HCROI variable.

Data Collection and Analysis

Data Collection

The FDIC offers reliable forensic information on the financial behavior of U.S. banks (U.S. Senate, 2011). The data were collected from the FDIC archival database, which is accessible to the public. This archival database covers filings from U.S. banks from December 31, 1992, through the present and provides the most comprehensive database of publicly traded U.S. financial institutions. In addition, the study used longitudinal data from the SPG banks as a chain of evidence maintenance process. The FDIC database contains all the insured banks organized by asset size, thus allowing the researcher to select standard peer banks and collectively investigate the accompanying data using contextual information.

Reliability and validity of the data. The reliability and validity of the data used in this study were guaranteed by the source of the data, the Federal Deposit Insurance Corporation,

which could be considered both dependable and trustworthy (Yin, 2014). The data in this study consisted of quarterly measurements, reflective of organizational viability and were readily available for public inspection.

Data Analysis

The independent variables for the standard peer group banks (SPG) were HCROI, SEB, and TLTA, and the dependent variable was ROAA quarterly performance. Standard descriptive statistics are reported for both WaMu and the set of SPG banks. Frequency statistics were used in the data analysis in order to understand central tendency, dispersion, and distribution. These variable values were grouped annually, and a multiple regression analysis was used to explore how the profitability (ROAA) of WaMu varied with the performance variables (HCROI, TLTA, and SEB) in comparison to the standard peer group (SPG).

Descriptive statistics. The descriptive statistics' frequency of ascending and descending values were determined, after which the variables were categorized into individual percentages. The primary reason for dealing with the various descriptive statistics was to determine the extent to which the assumptions required to perform multiple regressions were met. First, minimums, maximums, means, and modes were assessed. Next, the researcher explored the dispersion of data in terms of the standard deviation (SD). The third and fourth steps were to measure data distribution. The third step determined skewness or asymmetry of the data distribution. The fourth step determined kurtosis or clustering of data around a central point. Skewness and kurtosis are frequently used in data forecasting (Field, 2009). In this study, the researcher hypothesized that because WaMu and its standard peer group were part of a complex adaptive system, the data would most likely exhibit large right skewness (vis-à-vis location) and excess kurtosis (vis-à-vis variability).

One dependent variable and three independent variables were selected to determine the relationship between skewness and kurtosis. All four variables were coincident; representative indicators showed how a bank's behavior related to specific skewness and kurtosis datasets over time (see Table 2).

Table 2

Skewness and Kurtosis Results

Descriptive Statistics	Salaries and Employee Benefits	Total loans to assets	Human Capital Return on Investment	Return on Average Asset
N	2004-2007	2004-2007	2004-2007	2004-2007
Mean	Ratio	Ratio	Ratio	Ratio
Skewness	+/-1	+/-1	+/-1	+/-1
Std. Error of Skewness	0.565	0.565	0.565	0.565
Kurtosis	+/-3	+/-3	+/-3	+/-3
Std. Error of Kurtosis	1.10	1.10	1.10	1.10

Note: Standard error for skewness: sqrt (6*16) *(16-1)/(16-2)*(16+1)*(16+3); Standard error for kurtosis: 2*.56 sqrt (16^2-1)/(16-3)*(16+5); Calculations adapted from "Skewness and kurtosis statistics," by G. A. Morgan, N. L. Leech, G. W. Gloeckner, & K. C. Barrett, 2012, IBM SPSS for introductory statistics: Use and interpretation (5th ed.), p. 60. New York, NY: Routledge/Taylor & Francis Group.

Descriptive statistics were analyzed first for mean, median, and mode using SPSS version 22. The purpose of examining average behavior was to determine if WaMu or SPG had better performance numbers. The researcher sought to discern if better performance averages for the independent variables actually related to better profitability for the dependent variable.

A Pearson's correlation matrix was examined to test a null hypothesis against alternative hypothesis. For all inferential testing in this study, parameters were set at $p < .001$ and $p < .05$

for one-tailed tests (Field, 2009). All variables were examined for skewness and kurtosis, variance inflation factor (VIF), scatterplots, normal P-P plots, and histograms.

Specifically, in the context of financial data, Mandelbrot (1963) presented evidence that large skewness or kurtosis have predictive power. Mandelbrot hypothesized, based on the Lévy (1925) stability principle, "*calcus des probabilitiés,*" that long-tailed distribution jumps were the result of the scaling distribution of the jumps (Mandelbrot, 1963). This study proceeded based on Mandelbrot's original proposition that large skewness and kurtosis could be potential indicators of future outcomes, though this was necessarily identified as a potential limitation. Specifically, for this study, positive skewness would indicate frequent small decreases and a few extreme increases in employee expenditures. On the other hand, negative skewness would indicate frequent small increases and a few extreme decreases in employee expenditures. The researcher examined how negative and positive skewness related to the profitability comparison for WaMu and the SPG. Additionally, the researcher tested whether skewness and kurtosis behaved in any predictable way.

A variance inflation factor (VIF) test showed the strength of the dependent variable relationship with the independent variables. The VIF number should not be greater than 1, because multicollinearity will influence multiple regression analysis (Bowerman & O'Connell, 1990). Distribution assumptions were addressed using scatterplots to look for a random array of dots that were evenly dispersed around the mean. Next, P-P plots were examined for normality of distributed residuals, which should be aligned around a 45-degree angle line (Filed, 2009). If a bell-curved histogram is evenly distributed around the mean, then normality is assumed (Filed, 2009). The purpose of checking these three graphs related to assumptions about linearity and

homoscedasticity. Field (2009) argued that if the assumptions violate linearity and homoscedasticity, then sample conclusions could not be generalized beyond the study.

Next, the multiple regression models were examined for R^2, F, and $p < .05$. R^2 measures how much variability of the dependent variable can be accounted for by the independent variables (Filed, 2009). Specifically, R^2 indicates at what, if any, percent are independent variables accounted for in the variance of the return on average asset profitability (Filed, 2009; FDIC, 2015). Adjusted R^2 is a measure of how much can be generalized from R^2 alone (Filed, 2009). The F ratio must be greater than 1 in order to prevent producing a model by chance (Filed, 2009). If a model is produced by chance, it simply means that it cannot be generalized or reproduced with the same outcomes (Filed, 2009). For all inferential testing in this study, parameters were set at $p < .001$ and $p < .05$ for one-tailed tests (Field, 2009).

The calculation of variances was used to explain probable relationships between human capital return on investment (HCROI), total loans to assets (TLTA), and salaries and employee benefits (SEB) relating to the return on average profitability (ROAA).

Effect Size

Morgan et al. (2012) defined effect size as the "strength of the relationship between the independent variable(s) and dependent variable(s)" (p. 101). This study set the small effect size at .02, medium effect size at .15, and large effect size at .35 (Cohen, 1992). However, the researcher also recognized Morgan's argument that "effect size measures are not direct indexes of the importance of a finding" (p. 103). In other words, a degree of interpretation was important in considering whether the independent variables had a practical and useful influence on the dependent variables in the study.

Limitations

In historical research, the response rates depend on the availability of archived information. The data collection for this study was narrowly limited to the FDIC's website, which included only the financial statements of FDIC-insured banks. However, the information provided by the government is considered highly accurate and reliable, albeit limited in scope because of the supervisory nature of the FDIC (Yin, 2014). In addition, archival research is often limited to "dead" past events from which present or future conditions cannot be fully explained (Yin, 2014, p. 98). This, too, is relevant for the proposed study, because WaMu no longer exists in its original form after its 2008 failure.

Human Capital Return on Investment formula uses a revenue data component, which is calculated as part of the Employer Compensation and Benefits variable. There is little to no research about how and if the HCROI ratio correlates with profitability.

In research, little is known regarding (proxy) relationship between HCROI and human expertise

In stepwise multiple regression analysis, the independent variables that best predict the dependent variable are based on purely mathematical criterion (Filed, 2009). Other multiple regression methods, such as hierarchical (researcher's discretion) and forced entry (no researcher's discretion), could yield somewhat different results. Another major disadvantage in stepwise analysis is the potential influence of random variations on the data and its replication quality (Field, 2009).

Therefore, the data for this study were limited to available documents, archival records, and physical artifacts. As noted earlier, the researcher assumed and relied on the integrity,

quality, and reliability of these data. Archival records generally contain quantitative data that have a degree of integrity and reliability (Yin, 2014).

External Validity

External validity refers to accurate and consistent data reporting (Yin, 2014). Again, because data for this study were collected from the FDIC database, the accuracy and consistency of data reporting and collections were assumed, which means the degree to which this was actually true was unknowable to the researcher. In accordance with Creswell (2008), the following potential problems were noted and addressed:

- This findings of the study may not be generalizable to other banks because of the incomparable characteristics associated with the researched subject. The solution, then, was to choose banks from the FDIC database based on characteristics other than their asset size.

- This study focused on examining a failed bank whose demise characteristics may not be generalizable to other banks. Thus, only comparable variable characteristics were compared.

- The findings of the study may not be used to generalize past or future outcomes. Thus, the goal of this research was not to prove, but rather to explain what could happen to other banks if faced with similar circumstances.

In this study, the criterion for judging the sample data integrity was based on the integrity of the source of the data, which were provided to the public by the FDIC. The researcher assumed the data provided were reliable. All variables were assessed on quarterly performance, which may indicate some degree of confidence in the data, because any falsification of financial reporting would have to have taken place over a decade or more.

Summary

The preceding chapter presented a summary of the research design, data-gathering activity, and data analysis process. Data were extracted from the FDIC website and placed into a Microsoft Excel file, transformed into the appropriate corresponding ratios, and entered into SPSS. Finally, data were analyzed according to the various procedures described in this chapter using HCROI, TLTA, and SEB as the predictor variables of a bank's ROAA. The results of the analysis are presented in Chapter 4.

CHAPTER 4: DATA ANALYSIS

The purpose of this study was to examine the potential connections between human expertise performance activities, return on investment, compensation, risk management, and profitability outcomes in order to help HRD professionals gain a deeper understanding of human expertise in the context of one case—the failure of Washington Mutual Bank. The three independent variables were employee, employer compensation performance (salaries and employee benefits [SEB]), liquidity management performance (total loans to total assets [TLTA]), and productivity performance (human capital return on investment [HCROI]). The dependent variable was employer profitability performance (return on average asset [ROAA]). This chapter includes a discussion of the research findings and concerns about reliability and validity. The multiple regression analysis used is described and correlations are reported for each hypothesis. Each area is discussed in detail. The chapter closes with a summary.

Research Findings

The target populations were Washington Mutual Bank (WaMu) and the FDIC's standard peer group banks (SPG). The data covered 16 quarters because data related to the high-profit and high-risk loan strategy were available for only four years. Although the number of quarters was lower than anticipated, 16 quarters of data was adequate to observe the period before the failure event.

The sample characteristics are displayed in Table 3 for WaMu and Table 4 for the SPG. The findings are summarized as follows:

- Regarding ROAA, WaMu had a mean score of 0.006, and the SPG was slightly higher at 0.008. The SPG's +0.002 higher average profitability score indicates better efficiency of asset utilization.

- Regarding SEB, WaMu had a mean score of 0.114, and the SPG was slightly higher at 0.136. The SPG's +0.022 higher than average compensation mean score indicates that employees were better paid compared to WaMu's employees.

- Regarding TLTA, WaMu had a mean score of 0.777, and the SPG was lower, at 0.600. In this case, WaMu's +0.177 mean score shows a higher than average dependency on debt to grow its revenue.

- Regarding HCROI, WaMu showed a mean score of 3.28 and the SPG was slightly lower at 3.210. In this case, WaMu's +0.07 mean score indicates a better return on employee expenditure

The percentage of change between SPG's benchmark ROAA mean value to WaMu was about the same; SEB was 32%, TLTA was -11%, and HCROI was -30%. The percentage of difference between SPG's benchmark ROAA minimum value to WaMu was about the same; SEB was 39 %, TLTA was -9 %, and HCROI was -11 %. The percentage of difference between SPG's benchmark ROAA maximum value to WaMu was about the same; SEB was 28 %, TLTA was -13, and HCROI was -92 %.

Table 3

Sample Characteristics—WaMu

	N	Minimum	Maximum	Mean
ROAA	16	0.00	0.01	0.01
SEB	16	1.00	1.20	1.14
TLTA	16	0.74	0.82	0.78
HCROI	16	3.13	3.58	3.30

Table 4

Sample Characteristics—SPG

	N	Minimum	Maximum	Mean
ROAA	16	0.00	0.01	0.01
SEB	16	1.30	1.40	1.37
TLTA	16	0.58	0.61	0.60
HCROI	16	3.09	3.31	3.21

A first correlation matrix was not generated because multiple regression analysis found that there was no discernible linear relationship between ROAA, SEB, and TLTA. Next, a correlation matrix was generated for SPG to explore all possible relationships of the potential variables related to the ROAA (without HCROI variable) performance. SPG's SEB was significantly correlated (-0.534 at $p < .05$); SPG's TLTA was not significantly correlated (0.384 at $p > .05$). There were no significant correlations between SPG's TLTA and SEB variables.

Although a correlation matrix was presented, WaMu's multiple regression analysis could not be

computed because there was no discernible linear relationship between ROAA, SEB, and TLTA.

Table 5

Correlation Matrix—SPG without HCROI

	ROAA Sig. (1-tailed)	SEB Sig. (1-tailed	TLTA Sig. (1-tailed)
ROAA Sig. (1-tailed)	-		
SEB Sig. (1-tailed)	−0.534 0.017*	-	
TLTA Sig. (1-tailed)	0.384 0.071	0.104 0.351	-

Note. Pearson correlations *p* < .05 ** *p* < .01 ***p* < .001.

A correlation matrix was generated to explore all possible relationships of the potential

variables related to ROAA (with HCROI variable) performance (see Table 5). WaMu's HCROI

was significantly correlated (0.509 at *p* < .05). WaMu's SEB and TLTA were significantly

correlated (−0.831 at *p* < .001) but the finding was not relevant to this study. There were no

significant correlations between other variables.

Table 6

Correlation Matrix—WaMu

	ROAA Sig. (1-tailed)	SEB Sig. (1-tailed)	TLTA Sig. (1-tailed)	HCROI Sig. (1-tailed)
ROAA Sig. (1-tailed)	-			
SEB Sig. (1-tailed	−0.250 0.176	-		
TLTA Sig. (1-tailed)	0.077 0.389	−0.831 0.001**	-	
HCROI Sig. (1-tailed)	−0.509 0.022*	0.311 0.121	-0.355 0.089	-

Note. Pearson correlations *p* < .05   **p* < .01 ***p* < .001.

Table 6 shows the correlations for the SPG dataset. The SPG ROAA and HCROI were significantly correlated (−0.428 at *p* < .05). ROAA and SEB were significantly correlated (−0.534 at *p* < .05). TLTA and HCROI were significantly correlated (−0.708 at *p* < .001) but the finding was not relevant to this study. There were no significant correlations between other variables.

Table 7

Correlation Matrix—SPG

	ROAA Sig. (1-tailed)	SEB Sig. (1-tailed)	TLTA Sig. (1-tailed)	HCROI Sig. (1-tailed)
ROAA Sig. (1-tailed)	-			
SEB Sig. (1-tailed	−0.534 0.017*	-		
TLTA Sig. (1-tailed)	0.384 0.071	0.104 0.351	-	
HCROI Sig. (1-tailed)	−0.428 0.049*	0.028 0.460	−0.708 0.001**	-

Note. Pearson correlations $*p < .05$ $** p < .01$ $***p < .001$.

Reliability and Validity

All data for this study came from the Federal Insurance Deposit Corporation (FDIC) public website. Data provenance was provided by the Federal Financial Institution Examination Council (FFIEC) quarterly Consolidated Report of Condition and Income (Call Report). Specifically, Call Report quarterly data submission in accordance with Section 1817(a) (1) of the Federal Deposit Insurance Act is mandatory for all national banks, state member banks, and insured nonmember banks. The FDIC compiles these reports into a user-friendly format that is both reliable and valid for use in longitudinal research. Information presented on the FDIC website provides data that are otherwise only available on individual banks. The study used financial ratios applied to quarterly data to measure the study's variables.

Data Assessment

Descriptive statistics were examined for all data distribution assumptions. The

distribution assumptions for WaMu and SPG were assessed using skewness and kurtosis,

variance inflation factor (VIF), scatterplots, normal P-P plots, and histograms.

Skewness and Kurtosis

The skewness and kurtosis statistics are presented in Table 7 for WaMu and in Table 8

for the SPG. The analysis indicates the normality assumptions were not violated.

Table 8

Skewness and Kurtosis Statistics—WaMu

	Mean	Skewness	Std. Error of Skewness	Kurtosis	Std. Error of Kurtosis
ROAA	0.006	0.162	0.564	-0.818	1.091
SEB	1.138	-0.731	0.564	-0.541	1.091
TLTA	0.777	0.305	0.564	-1.271	1.091
HCROI	3.304	0.971	0.564	-0.018	1.091

Note. ROAA = return on average asset-quarterly profitability; SEB = salaries and employee benefits (human expertise pay); TLTA = total loans to assets liquidity (human expertise risk); HCROI = human capital return on investment (human expertise leverage).

Table 9

Skewness and Kurtosis—SPG

	Mean	Skewness	Std. Error of Skewness	Kurtosis	Std. Error of Kurtosis
ROAA	0.008	0.127	0.564	-1.096	1.091
SEB	1.369	-0.895	0.564	-1.391	1.091
TLTA	0.600	-1.126	0.564	1.857	1.091
HCROI	3.209	-0.331	0.564	-0.187	1.091

Note. ROAA = return on average asset-quarterly profitability; SEB = salaries and employee benefits (human expertise pay); TLTA = total loans to assets liquidity (human expertise risk); HCROI = human capital return on investment (human expertise leverage).

The findings regarding skewness and kurtosis are summarized as follows:

- Regarding ROAA, WaMu had a skewness of 0.162 and a standard error of 0.564, while SPG skewness was slightly less at 0.127 with a standard error of 0.564. WaMu's +0.04 smaller skewness score indicates smaller than average frequency of higher losses and fewer extreme losses in asset utilization.

- Regarding SEB, WaMu had a skewness of -0.73 and a standard error of 0.564, while the SPG was -0.90 with a standard error of 0.564. In this case, WaMu's 0.164 indicate higher than average frequency of smaller employee losses and higher extreme declines in employee compensation.

- Regarding TLTA, WaMu had a skewness of +0.305 and a standard error of 0.564, while the SPG was slightly lower at −1.13. In this case, the WaMu's +1.43 skewness

indicates frequent small declines and a few extreme increases in average debt dependency.

- Regarding HCROI, WaMu had a skewness of +0.971 and a standard error of 0.564, while SPG was slightly lower at −0.331 with a standard error of 0.564. In this case, the WaMu's +1.30 skewness indicates frequent small decreases and a few extreme increases in employee expenditures.

Three variables had positively skews to the right distribution (skewness > 0), and one (SEB) was negatively skewed to the left (skewness < 0). Thus, the distribution was moderately skewed (Bulmer, 1979). All four variables exhibited negative (platykurtic) kurtosis or low degree of peakedness distributions. The distribution of kurtosis was within ±2 range (George & Mallery, 2010). Hence, no violations of normality assumptions were detected for skewness and kurtosis. The approach outlined in Chapter 3 was intended to use multiple regression analysis to analyze the relationships between WaMu's quarterly profitability and the three independent variables. This was possible given the skewness and the kurtosis of the variables reported.

Variance Inflation Factor (VIF)

Collinearity was assessed for the WaMu and the SPG datasets both with and without HCROI. The variance inflation factor (VIF) pattern for all generated models was close to 1. In the case of WaMu, the average VIF was exactly 1, which confirmed that collinearity was not a problem. VIF for the SPG in Model 1 was 1, and in Model 2 was 1.011. The results presented in Tables 9 and 10 indicate that multicollinearity did not bias the regression models (Bowerman, & O'Connell, 1990).

Table 10

Collinearity Diagnostics—WaMu

Model		Correlations		Collinearity Statistics	
		Partial	Part	Tolerance	VIF
1	(Constant)				
	HCROI	−.509	−.509	1.000	1.000

Note. Dependent variable: ROAA (return on average asset-quarterly profitability)

Table 11

Collinearity Diagnostics—SPG with and without HCROI is the same

Model		Correlations		Collinearity Statistics	
		Partial	Part	Tolerance	VIF
1	(Constant)				
	SPG SEB	−.534	−.534	1.00	1.00
2	(Constant)				
	SPG SEB	−.625	.577	.989	1.011
	SPG TLTA	.523	.442	.989	1.011

Note. Dependent variable: ROAA (return on average asset-quarterly profitability)

Scatterplots

The scatterplots of the standardized residuals against standardized predicted values were fairly random yet evenly dispersed for the SPG (without HCROI), as shown in Figure 0.4. Figure 0.4 do not show data funnels; no curve shapes are present. Thus, chances for making Type II errors were reduced, which increased the accuracy of the model findings. The scatterplot for WaMu could not be computed because there was no discernible linear relationship between ROAA, SEB, and TLTA.

The scatterplots of the standardized residuals against standardized predicted values were randomly and evenly dispersed, as shown in Figure 4 and Figure 5. Both figures do not show data funnels; no curve shapes are present. Thus, no visual anomalies were detected, and patterns for both figures met linearity and homoscedasticity assumptions (Field, 2009). The strength of correlation among clustered points was near zero. Thus, chances for making Type II errors were reduced, which helped enhance the accuracy of the overall research findings. In sum, there was no evidence of linear relationships, and data had no perceived predictability.
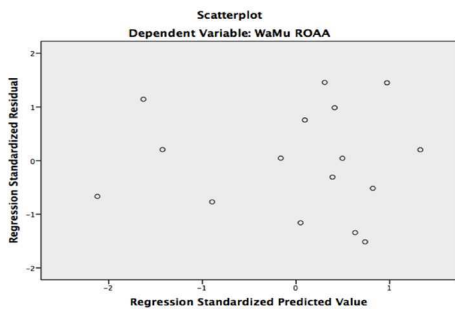

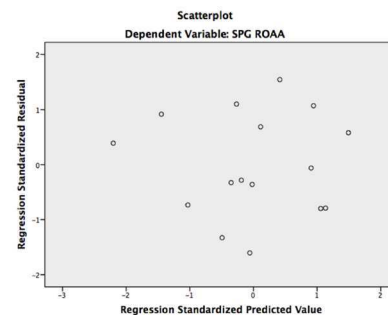*Figure 4*. Scatter plot of predicted values and residual for WaMu.

Figure 5. Scatter plot of predicted values and residual for SPG is same for with and without HCROI variable.

Normal P-P Plots

The normal P-P plot shown in Figure 0.7 shows a straight line with the points closely aligned with the line. This pattern shows that SPG data without HCROI variable were approximately normally distributed. For the SPG, the data followed a relatively straight line around a 45-degree theoretical distribution. No substantial deviations were detected. The normal P-P plot for WaMu could not be computed because there was no discernible linear relationship between ROAA and SEB and TLTA. The normal P-P plots shown in Figures 6 and 7 show straight lines with points aligned on the line. This pattern shows that both datasets were approximately normally distributed. For both WaMu and the SPG, the data followed a relatively straight line around a 45-degree theoretical distribution. No substantial deviations were detected, although sequencing for WaMu was slightly different than the sequencing seen in the SPG pattern.
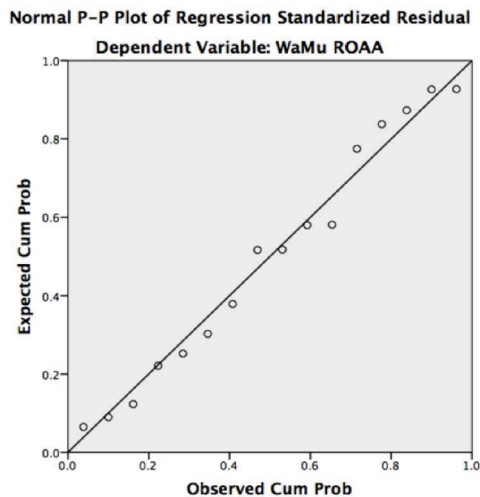

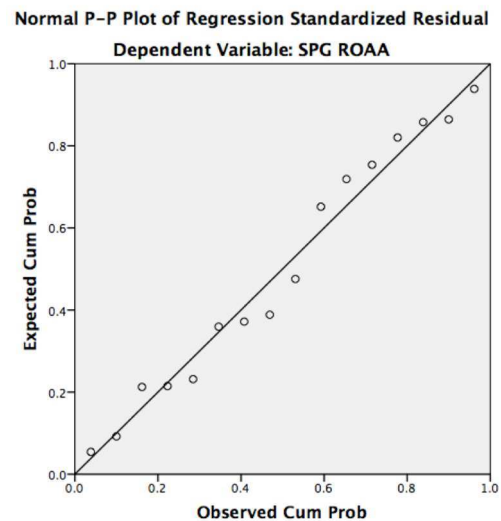*Figure 6.* Normal P-P plot of residual value for WaMu.

Figure 7. Normal P-P plot of residual value for SPG is same with or without HCROI variable.

Histograms

Finally, histograms were generated for each dataset. Bell-shaped curves for SPG met an assumption for the normality of residuals. Diffusion of the SPG data (without HCROI) around its mean indicates opposite polarity. The SPG's ROAA had a negative mean (M = -5.57, SD = 0.966, see Figure 0.10). Thus, the ROAA histogram shows opposite conditional directions in its mean diffusion for the same economic condition. The histogram plot for the WaMu could not be computed because there was no discernible linear relationship between ROAA, SEB, and TLTA.

Bell-shaped curves for both WaMu and SPG met assumption of the normality of residuals. However, diffusion of WaMu's and SPG's data around their respective means indicates completely opposite polarity. WaMu's ROAA had a positive mean (M = 3.18, SD = .97; see Figure 8). The SPG's ROAA had a negative mean (M = −1.15, SD = .93; see Figure 9). Thus, the two ROAA histograms show opposite conditional directions in their mean diffusions for the same economic conditions.
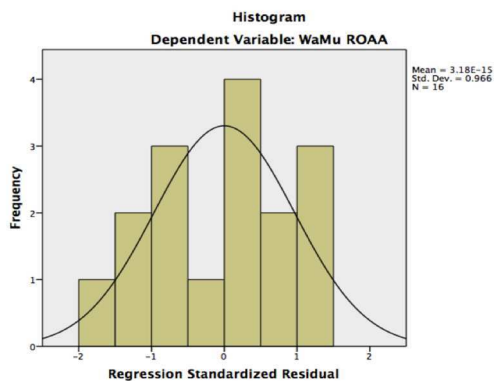

Figure 8. Histogram of the profitability of WaMu's assets and normal curve alignment.
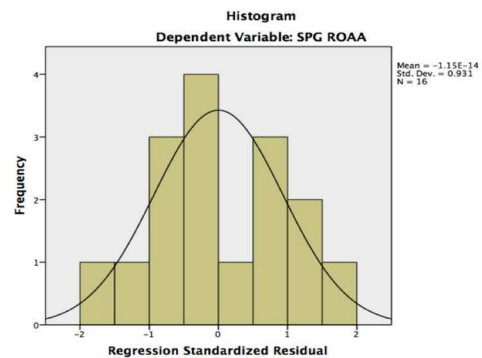
Figure 9. Histogram of the profitability of SPG's assets and normal curve alignment is same with or without HCROI variable

In addition, the central part of both histograms reveals that small changes in economic conditions produced the opposite effects on their respective ROAA profitability. WaMu's

ROAA had more frequently small positive and a few negative movements, while SPG had more frequently negative movements compared to the few positive movements in its profitability. However, observation of the edges indicates that WaMu experienced rare but large losses, while rare events for SPG were more evenly distributed between losses and gains.

Data Analysis

The variable ROAA relates to bank performance because it measures how well a bank's assets perform on a quarterly basis. However, other variables such as HCROI, TLTA, and SEB also affect a bank's assets utilization. HRD professionals should be aware of how ROAA correlates with HCROI, TLTA, and SEB in relation to bank failure. Understanding these relationships using actual data is important—survey instruments are too stationary compared to the revealing movement of real economic conditions. In this study, relationships between variables were discerned from available, timely, observed data acquired from the FDIC database and thus offer insight into real-life models constructed from actual observed data. The relationships between ROAA, HCROI, TLTA, and SEB show different trajectories for WaMu and SPG in relation to bank failure.

Results and Analysis by Hypothesis

The data analysis was performed using a stepwise regression method. The choice of a stepwise regression statistical method was based solely on mathematical criteria. The method is effective in removing redundant predictors and minimizes researcher involvement with the input of researched variables and selection of "target" dependent variables in SPSS (Field, 2009). The sample limitations were discussed in the beginning of Chapter 4. The findings are reported by variable, first for WaMu and then for the SPG banks.

Hypothesis 1. There is a statistically significant predictive association between WaMu's salaries and employee benefits (SEB) and the return of average asset profitability (ROAA).

The statistical significance between WaMu's salaries and employee benefits (SEB) and the return of average asset profitability (ROAA) were evaluated with and without the HCROI variable. The statistical evaluation without HCROI was rejected because there was no discernible linear relationship between SEB, TLTA, and ROAA.

The statistical significance of using HCROI between WaMu's salaries and employee benefits (SEB) and the return of average asset profitability (ROAA) was evaluated. The multiple regression model rejected the variable, $p > .05$ (0.691). Therefore, the hypothesis is rejected, because WaMu's SEB showed no statistical predictive significance in predicting the ROAA.

Hypothesis 2. There is a statistically significant predictive association between the standard peer group's (SPG) salaries and employee benefits (SEB) and the return of average asset profitability (ROAA).

The statistical significance between SPG's salaries and employee benefits (SEB) and the return of average asset profitability (ROAA) was evaluated with and without the HCROI variable. The multiple regression model produced two models. Model 1 showed $R^2 = 0.285$, $F = 5.58$ (change), $p < .05$ (0.033). Model 2 showed $R^2 = 0.480$, $F = 4.89$ (change), $p < .05$ (0.014). The first model indicated that SEB accounted for 28.5% of the variations in the ROAA. The second model also included TLTA, and together, the two variables accounted for 48% of the variations in the ROAA. Therefore, the hypothesis is accepted, because SPG's SEB alone and in combination with TLTA showed statistical predictive significance for the ROAA.

Hypothesis 3. There is a statistically significant predictive association between WaMu's total loans to assets performance (TLTA) and the return of average asset profitability (ROAA).

The statistical significance between WaMu's total loans to assets (TLTA) performance and the return of average asset profitability (ROAA) were evaluated with and without the HCROI variable. The multiple regression calculations without HCROI were rejected because there was no discernible linear relationship between ROAA and TLTA.

The statistical significance between WaMu's total loans to assets (TLTA) performance and the return of average asset profitability (ROAA) was evaluated. The multiple regression model rejected the TLTA variable, $p > .05$ (0.647). Therefore, the hypothesis is rejected because WaMu's TLTA performance showed no statistical predictive significance in predicting the ROAA.

Hypothesis 4. There is a statistically significant predictive association between the standard peer group's (SPG) total loans to assets performance (TLTA) and the return on average asset profitability (ROAA).

The statistical significance between SPG's total loans to assets (TLTA) performance and the return of average asset profitability (ROAA) were evaluated with and without the HCROI variable.

The statistical significance between SPG's total loans to assets (TLTA) performance and the return of average asset profitability (ROAA) was evaluated. The multiple regression for Model 2 produced $R^2 = 0.480$, $F = 4.89$ (change), $p < .05$ (0.014). The second model included salaries and employee benefits (SEB) ratio, and together, the two variables accounted for 48% of the variation in the ROAA. Therefore, the hypothesis is accepted, because SPG's TLTA combination with SEB showed statistical predictive significance for the ROAA.

Hypothesis 5. There is a statistically significant predictive association between WaMu's human capital return on investment (HCROI) and the return of average asset profitability (ROAA).

The statistical significance between WaMu's human capital return on investment (HCROI) and the return of average asset profitability (ROAA) was evaluated. The multiple regression model produced $R^2 = 0.259$, $F = 4.99$ (change), $p < .05$ (0.044). That means that HCROI accounted for 25.9% of the variation in the ROAA. Therefore, the hypothesis is accepted, because WaMu's HCROI showed statistical predictive significance for the ROAA.

Hypothesis 6. There is a statistically significant predictive association between the standard peer group's (SPG) human capital return on investment (HCROI) and the return of average asset profitability (ROAA).

The statistical significance between the SPG's human capital return on investment (HCROI) and the return of average asset profitability (ROAA) was evaluated. The multiple regression model rejected the HCROI variable for Model 1, $p > .05$ (0.064), and for Model 2, $p > .05$ (0.506). Therefore, the hypothesis is rejected, because the SPG's HCROI showed no statistical predictive significance in predicting the ROAA.

The ANOVA tables (see Tables 11 and 12) summarize the output that SPSS produced in analysis of WaMu and SPG.

Table 12

ANOVA Summary—WaMu was available and computed only with HCROI

Model		Sum of squares	Df	Mean square	F	Sig.
1	Regression	.000	1	.000	4.888	.044
	Residual	.000	14	.000		
	Total	.000	15			

Note. Dependent variable: return on average asset (ROAA); independent variable: human capital return on investment (HCROI).

Table 13

ANOVA Summary - SPG results with and without HCROI variable are the same

Model		Sum of squares	Df	Mean square	F	Sig.
1	Regression	.000	1	.000	5.580	.033[a]
	Residual	.000	14	.000		
	Total	.000	15			
2	Regression	.000	2	.000	6.009	.014[b]
	Residual	.000	13	.000		
	Total	.000	15			

Note. Dependent variable: return on average asset (ROAA)
[a] independent variable: salaries and employee benefits (SEB)
[b] independent variable: salaries and employee benefits (SEB), total loans to assets (TLTA)

Tables 13 and 14 show the regression results for WaMu and the SPG. The regression *F* value of 4.89 for WaMu yielded a statistically significant outcome at $p < .05$; thus, the null hypothesis was rejected, and the alternative was accepted. The regression *F* value of 5.58 and improved 6.01 for SPG yielded a statistically significant outcome at $p < .05$; thus, the null hypothesis was rejected, and the alternative was accepted.

Table 14

Regression Results—WaMu results with HCROI variable

					Change Statistics					
Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	R^2 Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.509	.259	.206	.0026785	.259	4.888	1	14	.044	2.461

Note. Dependent variable: return on average asset (ROAA); independent variable: human capital return on investment (HCROI).

Table 15

Regression Results—SPG results with and without HCROI variable are the same

					Change Statistics					
Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	R^2 Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.534[a]	.285	.234	.0030069	.285	5.580	1	14	.033	
2	.693[b]	.480	.400	.0026600	.195	4.889	1	13	.046	2.028

Note. Dependent variable: return on average asset (ROAA)
[a] independent variable: salaries and employee benefits (SEB)
[b] independent variable: salaries and employee benefits (SEB), total loans to assets (TLTA)
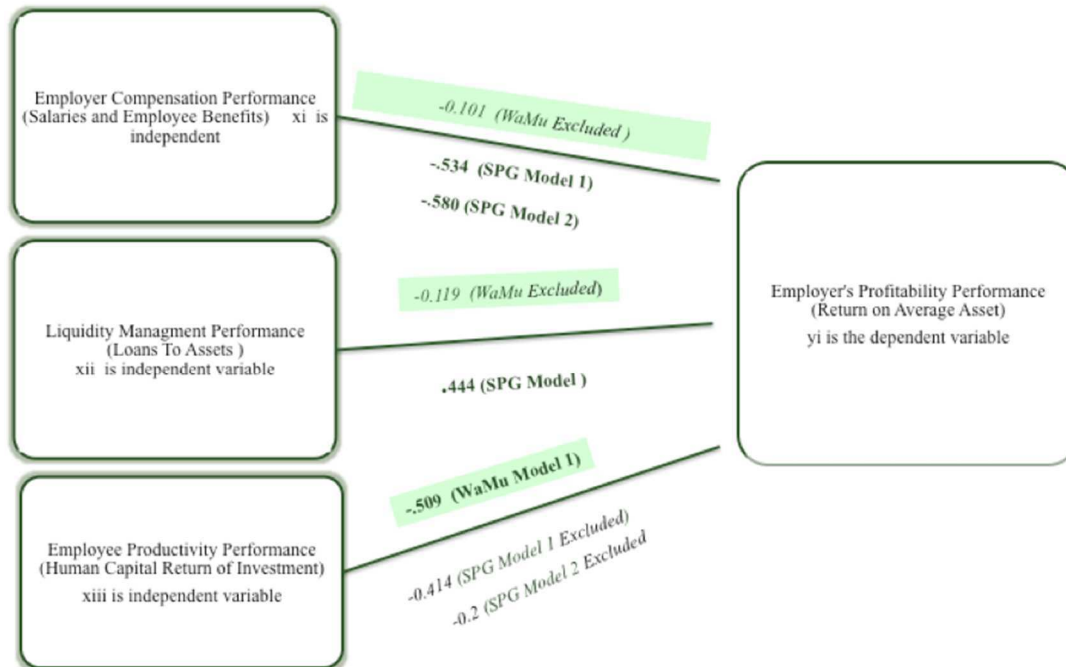
Figure 10. Researched variables with regressions beta weights.

Summary

The purpose of this chapter was to present the analysis of the relationships found between the ROAA, HCROI, TLTA, and SEB variables for WaMu and the SPG. Each hypothesis was individually analyzed using multiple regression analysis. The findings showed that WaMu's human capital return on investment (HCROI) accounted for 25.9% of the return of average asset profitability (ROAA). In addition, no significant predictive relationship was found between ROAA and total loans to assets (TLTA). Finally, no significant predictive relationship was found between ROAA and salaries and employee benefits (SEB). The findings indicate that SPG's salaries and employee benefits (SEB) alone accounted for 28.5% and 48% in combination with total loans to assets (TLTA) for the effect on ROAA. However, no significant relationship

was found between HCROI and ROAA for the SPG banks. Chapter 5 provides conclusions of

the findings and recommendations for future research.

CHAPTER 5: CONCLUSIONS AND IMPLICATIONS

The purpose of this study was to examine the potential connections between human expertise performance activities, return on investment, compensation, risk management, and profitability outcomes in order to help HRD professionals gain a deeper understanding of human expertise in the context of one case—the failure of Washington Mutual Bank. The three independent variables were employee productivity performance (human capital return on investment [HCROI]), employer compensation performance (salaries and employee benefits [SEB]), and liquidity management performance (total loans to total assets [TLTA]). The dependent variable was employer profitability performance (return on average asset [ROAA]).

This chapter provides a discussion of the findings in the context of existing literature. Previous researchers have claimed that the failure of an organization and its profitability is closely related to the behavior of these variables. The chapter includes recommendations for future research and implications for theory and practice. The chapter closes with a summary.

Discussion of Findings

The study's aim was to increase understanding of the potential causes of bank failure in the context of HRD. The findings help fill a gap in HRD research in relation to bank failure. The impetus of this study was the failure of Washington Mutual Bank. The failure of the WaMu bank was attributed to poor human expertise and the rise of high risk lending (U.S. Congress, 2011). Swanson & Holton (2008) noted that research on human expertise is evolving, and there is no single best way to study this phenomenon.

The first goal of this study was to identify any significance in the proposed relationships between variables and to determine how well the variables correlated with the U.S. Senate's

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Congressional case study analysis of WaMu's failure (U.S. Senate, 2011). To analyze the potential causes leading up to bank failure, the researcher selected quarterly data from WaMu and compared it to a similar dataset for a standard peer group of banks provided by the FDIC.

The researcher identified opposite behaviors related to HCROI. The WaMu data produced a significant correlation between HCROI and ROAA, while the SPG data did not produce any significance. These contradictory findings show that WaMu's profitability (ROAA) on human capital (HCROI) was not aligned with prudent loan production (TLTA) and appropriate salaries and employee benefits (SEB). In addition, WaMu's TLTA and SEB did not demonstrate a significant relationship with ROAA. The conclusion from these findings is that WaMu's high-risk lending pushed human expertise into an underwriting incompetence.

This study was guided by the following research questions:

1. Does historical data from Washington Mutual show that employee compensation and loan management performance could have predicted employer profitability performance?

2. How does data from Washington Mutual longitudinally compare to data from standard peer banks?

3. Does historical data from Washington Mutual and Standard Peer Group show that employee compensation performance, loan management performance, and return on employee productivity performance could have predicted employer profitability performance?

In the following sections, the results from each hypothesis are described, first for WaMu, and then for the SPG, and implications of the results are provided.

H1. There is a statistically significant predictive association between WaMu's salaries and employee benefits (SEB) and the return of average asset profitability (ROAA).

The multiple regression analysis found no correlation between SEB with the ROAA. This result showed that WaMu's salaries and employee benefits were not a good predictor of the return of average asset. This statistical confirmation implies that compensation was not linked to profitability. Congressional investigation determined that compensation incentives rewarded loan personnel for speed and volume over loan quality (U.S. Senate, 2011). Compensation structure called for minimum underwriting standards, and "loan originators constantly threatened to quit and to go to Countrywide or elsewhere if the loan applications were not approved" (U.S. Senate, 2011, p 103). Hypothesis 2 helps to explain this statistical significance, confirming a strong link between comparable national banks' compensation with their profitability. The aim of this hypothesis was to determine if salaries and employee benefits (SEB) could predict the return on average profitability (ROAA), a hypothesis that was rejected.

H2. There is a statistically significant predictive association between the standard peer group's (SPG) salaries and employee benefits (SEB) and the return of average asset profitability (ROAA).

The multiple regression analysis found a correlation between the SPG's SEB with the ROAA. The analysis showed that salaries and employee benefits (SEB) performance accounted for 28.5% of the variance in Model 1 and 48% of the variance in Model 2 with regard to the return of average asset profitability (ROAA). The implication of this finding is that national member bank salaries and employee benefits influence profitability. Therefore, the hypothesis was accepted. SPG's salaries and employee benefits (SEB) alone and in combination with loans

to assets (TLTA) showed statistical predictive significance for the return of average asset profitability (ROAA).

H3. There is a statistically significant predictive association between WaMu's total loans to assets performance (TLTA) and the return of average asset profitability (ROAA).

The multiple regression analysis found no correlation between TLTA and ROAA. This statistical confirmation implies that total loans to assets (TLTA) was not linked to profitability. Further, this finding concurs with the Congressional conclusion that high-risk loans represented a financially dangerous emphasis for WaMu (U.S. Senate, 2011). Beginning in 2004, WaMu embarked upon a lending strategy to pursue higher profits by emphasizing high-risk loans (U.S. Senate, 2011). By 2006, WaMu's high-risk loans began incurring high rates of delinquency and default, and in 2007, its mortgage-backed securities began incurring rating downgrades and losses (U.S. Senate, 2011). The aim of this hypothesis was to determine if total loans to assets (TLTA) could predict the return on average profitability (ROAA), a hypothesis that was rejected.

H4. There is a statistically significant predictive association between the standard peer group's (SPG) total loans to assets performance (TLTA) and the return on average asset profitability (ROAA).

The multiple regression analysis found a correlation between TLTA with the ROAA. The analysis indicated total loans to assets performance accounted for 48% of the variation in the return of average asset profitability in Model 2. The implication of this finding is that national member banks total loans to assets outcomes directly influenced profitability. The aim of this hypothesis was to determine if total loans to assets (TLTA) could predict the return on average profitability (ROAA), a hypothesis that was accepted.

H5. There is a statistically significant predictive association between WaMu's human capital return on investment (HCROI) and the return of average asset profitability (ROAA).

The analysis indicated that HCROI accounted for 25.9% of the variations in the ROAA. The multiple regression model did not violate regression assumptions with HCROI when the two other variables were excluded. This statistical confirmation implies that WaMu's HCROI was linked to profitability. This finding is aligned with the U.S. Senate (2011) conclusion that an inadequate amount of WaMu personnel produced a high return on investment but without adequate oversight. Essentially, a disproportionally small number of supervisors provided weak oversight and systematically tolerated the issuance of poor quality, even fraudulent, loans (U.S. Senate, 2011).

U.S. Senate (2011) report examining the failure of WaMu found that from 2003 to 2007, the bulk of its residential loans—from 48% to 70%—came from third-party lenders and brokers. The report authors determined that WaMu had 14 full-time employees overseeing 34,000 third-party brokers doing business with the bank nationwide in 2007 (U.S. Senate, 2011).

The aim of Hypothesis 1 was to determine if the human capital return on asset (HCROI) could predict the return on average profitability (ROAA), a hypothesis that was accepted.

H6. There is a statistically significant predictive association between the standard peer group's (SPG) human capital return on investment (HCROI) and the return of average asset profitability (ROAA).

The multiple regression analysis did not find any correlation between the SPG's HCROI and the ROAA. The data was tested in two models but no significance was found. The implication of this finding is that national member banks emphasized compensation and returns that were not influencing profitability. The focus of this hypothesis was to determine if human

capital return on investment could predict the return on average profitability, a hypothesis that was rejected.

Conclusions

The findings for Hypothesis 1 for WaMu's salaries and employee benefits indicated no measurable impact on the profitability pattern (ROAA). On the other hand, the Hypothesis 2 findings from the multiple regression analysis indicated that the SPG's salaries and employee benefits (SEB) accounted for an impact of 28.5% alone and 48% in combination with the loans to the assets (TLTA) variable on the profitability pattern (ROAA). The Hypothesis 3 findings for WaMu's loans to the assets (TLTA) variable indicated no measurable impact on the profitability pattern (ROAA). However, the Hypothesis 4 findings for the SPG indicated that TLTA in combination with SEB accounted for 48% of a profitability pattern (ROAA). The analysis of the multiple regression results for Hypothesis 5 showed that WaMu's employee productivity performance (HCROI) could predict profitability (ROAA) at 25.9%. Finally, the Hypothesis 6 findings for SPG's human capital return on investment variable indicated no measurable impact on profitability pattern (ROAA).

The results from this study show that management at the banks should pay closer attention to the quarterly ROAA and more frequently evaluate their SEB and TLTA performance strategies. Distinct patterns emerge when these variables are analyzed by impact on quarterly profitability. SPG's SEB proves to be the single best predictor of ROAA (impact presence in two regression models).   Holding all other variables equal, SPG's levels of SEB rise with each additional quarter of the measured timeframe. At extremes, differences between WaMu's and SPG's SEB quarterly performances are high at -26% (4th quarter 2004) and low at -8% (4th quarter 2007). Holding all other variables equal, levels of SPG's TLTA remains about the same with each

additional quarter of the measured timeframe. At extremes, differences between WaMu's and SPG's TLTA quarterly performances reached a high of 36% (3rd quarter 2004) and a low of 23% (3rd quarter 2007). Although, this study shows that the data collected about human capital return on investment does not impact SPG's ROAA, the small but measurable impact of WaMu's HCROI on quarterly profitability is still useful as a foundation of the discussion about bank failure. Holding all other variables equal, levels of SPG's HCROI remains about the same with each additional quarter of the measured timeframe. At extremes, differences between WaMu's and SPG's HCROI quarterly performances saw a high of 6% (4th quarter 2004;1st quarter 2007) and a low of -2% (3rd and 4th quarter 2007). These two ratios' trajectories result in almost identical patterns. Researchers studying organizational performance have emphasized that any development and change in employee performance behavior is a process that requires time (Swanson & Holton, 2008). Human expertise was undoubtedly inefficient when only one WaMu employee 2,429 brokers. This study showed that circumventing organizational performance by promoting higher profits through higher risk production does not lead to human expertise. Swanson and Holton (2008) concluded that human expertise needs to be both optimally efficient and effective.

The study showed that salaries and benefits, together with knowing how to perform the work (loans to assets), are benchmark indicators of a bank's profitability.

Recommendations for Future Research

Implications and recommendations for future research, theory, and practice are offered in the context of an explanation of why three hypotheses were significant and three were not. Future researchers should seek to expand the potential of the current research study. The implications for theory address the issue of evaluating Chermack's scenario planning research

(Chermack, 2011). The implications for practice provides guidance to scholars and practitioners who seek to use the methodology presented in this research study to prevent banks from failing. Finally, speculation on the significance and lack of significance of these findings may provide possible reasons why the WaMu and the SPG data showed different results.

Implications for Future Research

Half of six hypotheses were rejected, indicating that WaMu did not show the same statistical patterns as did the SPG in terms of the researched variables. The implication for research is that other failed banks should be studied in relation to the SPG in the context of preventing bank failure. In that context, it is no coincidence that the gap between WaMu and SPG multiple regression results are so drastic. Discrepancies between the WaMu and the SPG data gaps may indicate that economic outliers were not equally perceived. It is possible that WaMu's pre-failure strategic maneuvering lacked robustness. WaMu's new aggressive growth and risk strategy from 2004 was two sides of the same coin, yet two completely different animals. Perusing bold growth does not necessarily entail being risk averse and perusing risk aversion does not necessarily entail perusing bold growth. The end effect of aggressive growth was a failure of risk management to successfully mitigate economic outliers.

The scenario planning analysis discussed in the next section could be used to explore the value of the findings from this research study. The proposed variable analysis and its interpretation could advance the use of scenario planning analysis. Other future research could focus on methods to help the FDIC quickly uncover problematic organizational patterns. Another possible study could assess HRD activities (in banking settings) based on information related to the study's methodology. Future researchers should develop a better method of understanding how financial ratios are influenced by patterns of strategic behavior.

Implications for Theory

The results from this study showed that SPG's salaries and employee benefits affect quarterly profitability. In addition, the results for WaMu didn't confirm the same correlation. This research reveals that despite the wealth of information that is available on the subject of salaries and employee benefits, very little is known about its predictive impact on profitability. More specifically, it is not known whether complete changes in strategy require a complete change in the salaries and employee benefits structure.

Next, the results from this study showed that total loans to asset's performance affect quarterly profitability. While the subject of the fiscal position of the total loans to assets performance has been largely absent from human resource development research, it is still the foundation of many solvency strategy books. More specifically, a bank failure occurs when a bank's financial position becomes insolvent. This study shows that WaMu didn't have a significant correlation between its total loans to assets performance and profitability. On the other hand, the SPG did have significant correlation between its loans to assets performance and profitability. Thus, the solvency strategy avoids bank failure but also creates information overload. This study operationalized Chermack's scenario planning process related to the concept of bounded rationality (Chermack, 2011). Chermack (2011) argued that bounded rationality, also called information-processing overload, has been linked to organizational failure. The findings of the study provide quantitative support for the operationalization of Chermack's argument that bounded rationality is a function of scenario planning analysis. The study's limited number of targeted variables produced encouraging causational results. Results empirically proved that Chermack's argument for bounded reality in scenario planning logic was

well warranted. However, Chermack (2011) offered a word of caution about the integration of bounded reality with scenario planning analysis:

> Scenarios might be helpful to decision-makers in coping with their own bounded rationality by providing a vast amount of information in a detailed story exhibiting features that are easily remembered. While scenarios can be helpful in addressing this core cause of decision failure, it should be acknowledged that bounded rationality, as a feature of being human, can never be completely solved. What is further required is a series of case studies, or research regarding the specific impact of scenario planning on individual habits of information gathering, synthesis, and decision-making. (p.43)

This study did find useful implications for scenario planning theory when it comes to opening door analysis. Opening door analysis would refer to empirical analysis that proves a need for scenario planning utilization.

Finally, the results from this study showed that human capital return on investment has a small effect on quarterly profitability. Despite popularity in the literature, HCROI's impact on the SPG's profitability was not validated. Study results show that human capital return on investment ratio is probably too narrow to produce a measurable impact on profitability. The study raises the question of what other theoretical limits of HCROI ratio exist.

Implications for Practice

Academics, practitioners, and lawmakers should work together to coproduce research that will help prevent future bank failures. The study of WaMu's failure revealed a significant causational disconnect between academics, practitioners, and lawmakers. Specifically, the subject of bank failure has not been well explored quantitatively by organizational academics (Letiche & Lighfoot, 2014). Lawmakers tend to retroactively address problems by developing

even more regulations (U.S. Senate, 2011). Special attention should be paid to the problem of information overload. The case of WaMu's failure clearly demonstrated that all sorts of information were available to all stakeholders but not in a cognitively manageable form. This is where academics could help practitioners' better render valuable information. Scenario planning analysis would be greatly beneficial in reducing information overload to cognitively manageable levels. This in turn could help lawmakers to be more proactive and better informed.

Speculation on why findings for WaMu and the SPG banks were different may offer some insights. The results for WaMu indicated that neither loans nor employee compensation were predictors of profitability. However, the results for the SPG indicated that the human capital return on assets productivity variable correlated with profitability. The study results found link between the human capital return on assets variable in relation to WaMu's rapid decline.

The findings of this study concur with the government findings that bad loan production, ill-conceived compensation structures, and underestimated employee productivity contributed to WaMu's failure (U.S. Senate, 2011). The SPG findings helped to contrast how the majority of peer banks did not behave like WaMu during the same period.

Another reason for the contradictory findings between WaMu and SPG could be explained by scenario planning analysis. Bounded rationality is a main source of decision failure (Chermack, 2011). The overwhelming frequency and complexity of various internal reports, in addition to federal reports containing large volumes of information, test the limits of human cognition (U.S. Senate, 2011). Chermack (2011) stated that scenarios have the potential to reduce bounded rationality "into a detailed story exhibiting features that are easily remembered" (p. 43). The main benefit of scenarios is a reduction of bounded rationality. However, the main

disadvantages of scenario planning are the absence of door opening and door closing analysis. The study demonstrated how scenario planning analysis could open the door to a cognitively manageable bounded rationality. For example, bank managers could identify a potential mismatch by comparing their data with the SPG's employee production, compensation, and loan production data in relation to quarterly profitability. Scenario planning would then help to explain why the mismatch is occurring, if it is warranted, or if leaders should revise their strategic decisions. Finally, the same analysis could be performed for door-closing analysis outcomes of scenario planning.

Failure of WaMu was most likely not an unfortunate byproduct of sudden changes in the socioeconomic market structures and conditions, but rather case of systematically mismanaged bounded rationality.

Summary

The purposes of this study was to analyze and explore the relationships between ROAA, HCROI, TLTA, and SEB and compare them between two 16-quarter datasets for Washington Mutual Bank (WaMu) and a group of standard peer group banks (SPG). The study focused on how profitability (ROAA) interacted with human capital (HCROI), loans to assets (TLTA), and salaries and employee benefits (SEB).

The study found a significant correlation between WaMu's human capital return on investment and return on average profitability. This correlation supports the idea that the situation in which WaMu's 14 full-time employees supervised 34,000 third-party brokers led to WaMu's demise (U.S. Senate, 2011). Human expertise as a function of knowledge, experience, and problem solving (Swanson & Holton, 2008) was reduced to "compensation incentives that

rewarded loan personnel for issuing a large volume of higher risk loans, valuing speed and volume over loan quality." (U.S. Senate, 2011, p. 49)

The researcher found a relationship between SPG's compensation and benefits, which together with total loans to assets, correlated with a return on average asset performance.

This study provided explanations and ideas for future research that could be explored to understand additional factors that may predict or anticipate bank failure. Employee productivity performance was found to have predictive significance for WaMu's quarterly profitability. On the other hand, loans to assets and compensation were found to have predictive significance for the SPG's quarterly profitability.

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APPENDIX A: IRB FORM

From: Swiss,Evelyn Evelyn.Swiss@ColoState.EDU

Subject: RE: IRB Approval for my Dissertation

Date: July 8, 2015 at 3:19 PM☐

To: Bojan Ljubenko kengurb@gmail.com, RICRO IRB ricro_irb@Mail.Colostate.edu

Cc: Chermack,Thomas Thomas.Chermack@ColoState.EDU

Hi Dr. Chermack and Bojan,

Thank you for submitting your interesting research proposal to the IRB. It's an unusual data-set you are working with, and before contacting you, I ran your exempt application past our IRB chair for confirmation. Both of us agree that while this is certainly research under the regulatory guidelines, your research questions do not appear to meet the "about whom" part of the regulatory definition of "human subjects," and your research would not be under the IRB's purview.

Attached please find a "not human subjects" memo from the IRB. Please don't hesitate to contact me with any questions regarding this determination.

All my best,

Evelyn

Evelyn A. Swiss, BA, CIP |Senior IRB Coordinator | Research Integrity and Compliance Review Office | Colorado State University | email: evelyn.swiss@colostate.edu | Phone: (970) 491-1381 | Fax: (970) 491-2293 | Website: hLp://ricro.colostate.edu/ Online protocol-submission system: hLps://csu.keyusa.net | TwiLer: @colostate_ricro

Please reference your protocol number in the subject line, thank you.

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