PERFORMANCE, LEVERAGE AND RISK: AN EARNINGS ANALYSIS

AMONG U.S., U.K., AND JAPANESE BANKS

by

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Abstract

Foreign-owned banks have aggressively entered into the U.S. markets by strategically seizing opportunities neglected by U.S. commercial banks such as trade financing. Opportunities seized by international banks have enabled those commercial banks' performance to make them more competitive and given them a competitive edge in the financial markets (Williams & Liao, 2008). A quantitative methodology was performed utilizing performance, leverage and risk measurements to determine earnings differences among U.S., U.K. and Japanese commercial banks. The population selected for this study included large insured commercial banks with assets greater than $300 million for the period of 2006 through 2009. Data utilized in the selection of the population was extracted from the following databases as well as the population's websites in order to generate valid and reliable results: The Federal Reserve Bank, Federal Deposit Insurance Corporation, Security and Exchange Commission and Uniform Bank Performance Reports. The findings of this study illustrated how external and internal forces influenced earnings differences among U.S., U.K., and Japanese banks. The findings also illustrated the relationship among the variables selected for analyses. Future research is recommended for a more in-depth analysis of earnings and performance.

Dedication

This dissertation is dedicated to my two best friends, my parents, Elder W.E. Crum and Mrs. Marie Crum, without whom this moment would not be possible. My parents have always believed in education and that knowledge not only empowers the beholder but also allows them to look beyond their situations and circumstances and see what can be. My parents remembered when Afro-Americans did not have the freedom to go to school and they did not want us to take the educational opportunities we were afforded for granted. They taught us to follow our dreams and never ever give up no matter how surmountable the challenges. My parents would say, "How can you lead where you have never gone, how can you show if you do not know and how can you go forward if you do not know from whence you have come."

My parents, with the help of the Lord, have been the vital elements in my success. My dad was the first African-American on our school board. He earned the respect of so many people of different ethnicities because he was caring, honest, fair and a man of integrity. Although my dad is deceased, so many things that he said to me have been such an inspiration to me on this journey and they continue to impact my life every day.

My mom is a phenomenal woman. She is not only wise, smart, talented and beautiful but also a praying woman, who loves, supports and encourages her children. My mom's robustness and wisdom have been the underpinning in the achievement of this milestone in my life. When I wanted to quit during this journey, mom would say, "Honey, you can make. Just dig a little deeper and push yourself just a little further because your goal is just around the corner. The Lord did not bring you this far to leave you now." Mom, thank you. "You are important to me. I need you to survive."

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I would like to thank my committee members, Dr. Perry Haan and Dr. Mary Dereshiwsky for their encouragement, patience and excellent advice. Both committee members are very knowledgeable in the dissertation process and what fundamentals comprise a great proposal and dissertation. The meticulous and articulate advice you gave me during the dissertation phase of my program helped to make this dream possible.

I am so blessed to be a part of such a unique family who believes in encouraging each other to think big and pursue his/her goals and dreams no matter how challenging. I would like to thank my family for their prayers, love and support throughout this doctoral process. My family believes and decrees that all things are possible with God. This achievement is a testimony to that decree.

I would also like to thank Capella University for the use of copyrighted articles and other resources utilized for this research.

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CHAPTER 1. INTRODUCTION

Introduction to the Problem

According to the U.S. Federal Reserve Bank, from the third quarter in 1999 to the third quarter in 2009, the number of commercial banks in the U.S. declined from 8,540 to 6,815. The decline in commercial banks is due largely to consolidation, acquisitions and bank failures (Termos, 2005). Even though the number of commercial banks has declined, foreign banks continue their strategic geographic focus to acquire ownership of the assets of U.S. companies. Naaborg and Lensink (2008) said, "A bank is foreign-owned if at least 50% of its stock was owned by foreign investors" (p. 545).

Foreign banks' integration and saturation into the U.S.' financial system have made a significant impact on the U.S. economy (Jesswein, 2008). Acquisitions and branch offices, as well as foreign shares abroad, are some of the techniques utilized by foreign banks to enter into and increase their market position and profitability in the U.S. The rapid expansion of foreign banks in the U.S. markets has given U.S. based (domestic) bank managers more of an immediate reason to be concerned (Jesswein, 2008; Khoury & Pal, 2000; "U.S. Assets Abroad", 2008).

Foreign Organizational Structure

Foreign banks' expansion strategies into the U.S. financial markets consisted of a banking structure with different available organizational forms such as branches (de novo, a Latin term for new), representative offices, agencies, affiliates and/or subsidiaries, investment companies, the Edge Act and the International Banking Facility. Foreign banks were also permitted by the Federal Reserve Bank to conduct nonbank activities through holding companies

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after deregulation in 1994 even though U.S. banks were not permitted to engage in nonbanking activities until after July 1978 ("Foreign Banking Offices", 2010; Khoury & Pal, 2000).

As foreign banks and affiliates/subsidiaries continue to grow through cross-border transactions, mergers, acquisitions and failures of domestic banks, the U.S. banking system will feel the impact. An assessment of earnings can help to explain how the use of funds can enable some international banks to profit more than banks in the U.S.

The purpose of this study was to investigate the performance of large U.S. based (domestic) and foreign owned banks doing business in the U.S. This study not only focused on performance differences but also the financial leverage and risk of these firms. SPSS software was utilized to measure performance enablers and other variables that influence earnings.

Background of the Study

Historical Perspective

Due to changes in the U.S. banking system's regulations and policies, the banking structure has changed. According to Termos (2005), there have been numerous commercial banks that have failed largely due to financial distress since the Great Depression. The Glass-Steagall Act, a regulatory act, impacted commercial banks as well as the Douglas Amendment Act of 1956 which made it illegal for commercial banks to open branch offices in specific states.

Later in 1994, deregulation helped to influence the repeal of the Douglas Amendment Act of 1956. Consolidation of commercial banks, due to the branch regulations act, helped to bring stability to the banking sector. The two deregulation acts that passed legislation included (a) the Riegle Neal Interstate Banking and Branch Efficiency Act of 1994 which opened the door for the geographical expansion of branch offices in different states for banks and holding companies. Holding companies, which were allowed to own and utilize banks in other states as a means of

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getting around the branch regulations, own 90% of all commercial banks; and (b) the Gramm-Leach-Bliley Financial Services Modernization Act of 1999 which allowed financial holding companies to offer a diversification of banking, investment and insurance services globally (Termos, 2005).

Banks serve as a catalyst among the government, secondary credit markets and consumers in the distribution of financial services to meet consumer needs and add economic value to the company. The products and services that the corporation provides to consumers are its core products generated through the enhancement of its core competencies and capabilities. Core products help to improve management's ability to exceed consumer expectations through the value derived from their usage. In an interview with Leavy and Moitra (2006), Prahalad said, "Firms create value unilaterally and that value resides in their products and services. Experience is unique to an individual and firms need to create variation of personalized experience for customers" (pp. 4-9). It is important for management to be knowledgeable of all aspects of finance in order to make good decisions that will have a positive impact on the current and future profitability of the organization as well as meet the needs of consumers. Management must understand the risk involved with each decision and the potential impact their decisions have on the organization (Wei-Shong & Kuo-Chung, 2006).

Indicators of Financial Health and Soundness

Management's decisions and allocation of resources influence the overall performance of banks. In addition to variables such as return on equity and return on assets that indicate the profitability of firms, there are also other indicators that regulators, competitors and potential investors analyze to determine the financial health and soundness of commercial banks. According to the Federal Deposit Insurance Corporation (FDIC)'s database CAMELS, some

other indicators of financial soundness include capital adequacy, level of past due (nonperforming) loans, credit risk, and financial leverage ("CAMEL", 2009).

The soundness and stability of commercial banks can be influenced negatively by management's decisions that are driven by selfish motives rather than shareholders' interest and what is best for the organization. Management's performance can be influenced by numerous factors such as interest rate changes, executive compensation and option plans, corporate governance and ownership structure as well as regulatory compliance (Al-Abbas, 2009); Becker & Wise, 2008; Strategy & Organization, 2003; Wahl, 2008). Management's decisions not only affect earnings but also influence management dilemmas.

Statement of the Problem

The problems addressed in this study are management dilemmas. Profitability and competitive advantage of both domestic and foreign-owned banks are influenced by performance, leverage and risk which can be analyzed by the interaction among the profit margin, total asset turnover and the equity multiplier as well as other performance and risk measurements. The accounting results from the analysis of performance and risk measurements as well as assessing other drivers of performance can illustrate the profitability, leverage and risk of domestic and foreign-owned commercial banks.

Previous studies have made contributions to the body of knowledge in the area of earnings. There have been studies illustrating how management's earnings aggressiveness, which is comprised of less transparency, accountability and quality of accounting, influence earnings. The Jones Model, a logistical analytical instrument and the earnings opacity model by Bhattacharya et al., 2001 was utilized to monitor management's earnings aggressiveness (Riahi-Belkaoui & AlNajjar, 2006; Su, 2005); and the relationship between earnings and profitability

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was analyzed by the utilization of different models such as DEA (data envelopment analysis) and a mean reversion analysis to monitor operational efficiency, price/earnings influence on future earning and ratio analyses to monitor returns such as return on assets and return on investments (Al-Tamimi & Loothah, 2006; Bhargava & Malhotra, 2006; Karr, 2005). The previously mentioned studies did not investigate how leverage and risk influence earnings.

Naaborg and Lensink's (2008) research study focused on the relationship between foreign ownership and performance by analyzing the impact net interest revenue, gross domestic product and the level of foreign entrance have on performance; however, they did not include leverage and risk as a essential variables that influence earnings. Other research studies investigated performance by analyzing variables of profitability, asset quality, and capital adequacy as well as other financial ratios (Christian, Moffitt, & Suberly, 2008; Hall, 2009); however, they did not investigate the relationship between leverage and earnings.

Understanding the influence of leverage and risk on earnings can provide a lucid perspective of the banks' ability to generate income and allocate resources effectively to maximize profit while minimizing risk exposure. Analyzing the relationship among leverage, risk, performance and earnings gives an approximate account of management's activities, earnings sensitivity and the company's competitive edge. According to Jesswein (2008), foreign banks' integration and saturation into the United States' financial system have made a significant impact on the U.S. economy; therefore, knowledge of competitors' strengths and abilities is essential for future competitive advantage and opportunities.

Purpose of the Study

This study will focus on comparing the performance, leverage and risk of U.S. based banks and foreign owned banks doing business in the U.S. Various factors can influence

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earnings such as management's decision regarding the use of funds; new regulatory policies such as Sarbanes Oxley Act of 2002 or International Financial Reporting Standards (IFRS) versus Generally Accepted Accounting Standards (GAAP); executive compensation plans; ownership structure and the restructure of corporate governance by adding more independent directors. This study is being conducted to contribute to the body of knowledge a more in-depth understanding of factors that influence earnings differences among the U.S., U.K. and Japanese banks. From a manager's perspective, understanding what factors influence profit, leverage and risk from this study can enable managers to implement strategies that foster profit, growth and stability while minimize cost.

Rationale

From a bank management's perspective, identification of products, such as nonperforming assets and charge-offs, that could be toxic to the performance of the company and influence the quality of the portfolio as well as increase risk exposure could not only influence management to review their balance sheet and income statement more closely but also minimize the funding of risky products and investments.

Previous studies have illustrated how the rapid expansion of foreign owned banks in the U.S. financial market has made a great impact on the economy. From an investor's perspective, knowledge from this study illustrating the use of funds as well as profitability of foreign-owned banks' in comparison to U.S. based banks' could give investors who are skeptical about investing in foreign banks the tools needed to make an informed investment decision.

From a researcher's perspective, the identification of key factors that influence earnings from this study could influence future strategies and research techniques. Researchers could be influenced to view the uniqueness of earnings and earnings ability to influence all aspects of a

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business from corporate governance and core business activities to expected returns as well as its ability to attract potential investors. This study is an extension of the work of Naaborg and Lensink (2008), Hall (2009) and Christian, Moffitt and Suberly (2008).

Naaborg and Lensink (2008) investigated performance among Central and Eastern Europe and Central Asian banks by focusing on foreign and domestic ownership and profitability. For their study, they observed 244 banks for the period of 1988 to 2001 and focused on variables such as net interest income, profit before taxes, return on equity and return on asset. They found that there was a negative relationship between ownership and performance. According to Naaborg and Lensink (2008), an increase in foreign ownership leads to lower profits, cost and earnings. Christian, Moffitt and Suberly (2008) evaluated the performance of national commercial banks with an industrial characteristic code of 6021. They selected 22 financial ratios from the Sheshunoff and the FDIC quarterly reports that focused on asset quality, size and growth, capital adequacy and other categories. They found that evaluating components of earnings yielded the best indicators of future earnings. They also found that capital adequacy along with asset quality provided information regarding the firm's ability to meet future losses and maximize returns. Hall (2009) investigated the performance of Japanese banks for the year of 2003 by focusing on profitability, asset quality, and capital adequacy. He found that lowering the level of non-performing loans increased asset quality, profitability and helped to minimize risk. In regards to capital adequacy, he also found that even though capital quality improved the banks' exposure to credit risk, non-performing loans remained a concern. This study differentiates from prior studies by focusing on a population that includes only large commercial banks from the U.S., U.K. and Japan with assets of over $300 million. This study also differentiates from prior studies by focusing on the performance of U.S. based banks and

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foreign-owned banks (U.K. and Japan) doing business in the U.S. as well as the relationship among performance, leverage and risk measurements such as return on asset, return on equity and earnings per share in relation to earnings.

Research Questions

External and internal factors can influence earnings. Previous studies revealed that factors such as management's performance, strategy and use of funds influenced not only earnings differences among commercial banks but also performance. The research question being addressed in this study asks whether there is a relationship between earnings and performance among U.S., U.K., and Japanese banks.

Variables selected for analysis represent a combination of performance, leverage and risk components to address specific focal points of this study. Christian, Moffitt and Suberly (2008) and Naaborg and Lensink (2008) used return on equity, return on assets, capital adequacy, charge-offs and long term debt for credit risk, as well as performing and nonperforming assets to analyze performance. Hall (2009) utilized variables such as net interest income, profit before taxes, return on equity and return on asset to analyze Japanese banks' performance. This study, which is an extension of their work, will also use return on equity to analyze performance among competitors as well as return on assets to illustrate management's performance in the utilization of resources in regards to generating earnings. This study will analyze nonperforming assets along with charge-offs, long term debt and loan grade as contributors of risk to banks' portfolios. This study will also utilize certain components of earnings for analysis such as EPS, which is based on net earnings and gives shareholders an indication of the income they can earn by investing in a company; net interest margin, the difference between interest income and interest expense, contributes to the analysis of risk. This study will also utilize total assets and total

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liabilities to illustrate how quickly banks can meet their current obligations as well as capital ratios to illustrate capital sufficiency which can influence risk. Additional research questions generated from this study for analysis include:

RQ1: How does the performance based on ROE and ROA of U.S. banks compare to U.K. and Japan's?

RQ2: How does the financial soundness of U.S. banks based on their EPS compare the U.K. and Japan's?

RQ3: How does U.S. banks' capital adequacy (well capitalized) position based on their Tier 1 capital, risk based capital and leverage compare to the U.K. and Japan's?

RQ4: How does a change in the interest rate of U.S. banks impact performance and sensitivity based on the net interest margin compare to the U.K. and Japan's?

RQ5: How does the credit risk based on nonperforming assets and charge-offs that impact performance of U.S. banks compare to the U.K. and Japan's?

RQ6: How does the liquidity position based on total assets and total liability of U.S. banks compare to the U.K. and Japan's?

RQ7: How does the credit quality based on long term assets and credit grade of U.S. banks compare to the U.K. and Japan's?

Hypotheses

The objective of this study is to evaluate earnings differences among the U.S., U.K. and Japanese banks utilizing various measurement techniques for analysis. Specific hypotheses have been developed for analysis based on the proposed relationships mentioned above.

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Ho1: There is not a significant difference in the ROE of U.S., U.K. and Japanese banks.

Ha1: There is a significant difference in the ROE of U.S., U.K. and Japanese banks.

Ho2: There is not a significant difference in the ROA of U.S., U.K. and Japanese banks.

Ha2: There is a significant difference in the ROA of U.S., U.K. and Japanese banks.

Ho3: There is not a significant difference in the leverage of U.S., U.K. and Japanese banks.

Ha3: There is a significant difference in the leverage of U.S., U.K. and Japanese banks.

Ho4: There is not a significant difference in the well capitalized (capital capacity) position of U.S., U.K. and Japanese banks.

Ha4: There is a significant difference in the well capitalized (capital capacity) position of U.S., U.K. and Japanese banks.

Ho5: There is not a significant difference in the sensitivity of U.S., U.K. and Japanese banks to changes in the interest rates.

Ha5: There is a significant difference in the sensitivity of U.S., U.K. and Japanese banks to changes in the interest rates.

Ho6: There is not a significant difference in the credit risk of U.S., U.K. and Japanese banks.

Ha6: There is a significant difference in the credit risk of U.S., U.K. and Japanese banks.

Significance of the Study

The significance of this exploratory study is to exhibit a different perspective regarding earnings differences between domestic and foreign-owned commercial banks. Even though the scope of this study is limited, all financial institutions can benefit from a greater understanding of earnings management and the utilization of resources by competitors that influence greater performance and leverage while minimizing bank failures. The scope is limited to large insured commercial banks with assets over $300 million which represented 22% of all insured institutions and 73% of total assets based December 2009 statistics. The scope is also limited to data from 2006, 2007, 2008 and 2009 which will be analyzed independently as well as collectively for domestic institutions and foreign-owned institutions whose ownership by other institutions is 50% or greater. Regulatory compliance is essential for all insured banks.

Through this study, financial institutions will become more knowledgeable of regulatory requirements for capital capacity based on Tier I capital, risk based capital and leverage capital in order to meet obligations and lower risk exposure. Knowledge of capital requirements will benefit those uninsured institutions that are looking to become insured or institutions that are looking to expand through mergers and acquisitions.

This study will enhance financial institutions and investors' awareness of the influence financial leverage based on EBIT and EPS have on performance and risk exposure. Because earnings influence returns, knowledge of a company's financial leverage enable investors to gain insight into that company's utilization of resources, ability to maximize profit, stability and risk exposure. Knowledge regarding risk exposure could influence management's strategies to minimize the bank's exposure to risk. For example, management's awareness regarding the default ratio of high risk variable rate loans.

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An increase in exploratory data regarding the assessment of earnings as it relates to earnings differences for commercial banks will help bank management to make better and more informed decisions to benefit the company and its shareholders as well as give managers insight into factors that contribute to the activities that increase and decrease earnings.

Assumptions and Limitations

This research is based on secondary data from application systems on the Federal Reserve Bank, Security and Exchange Commission, Federal Deposit Insurance Corporation, Uniform Bank Performance Report and company's websites.

The assumptions of this study include (a) the integrity of the data has been preserved, (b) the sample is a true representation of the population, (c) the variables selected for analysis are measureable and will accurately address the research questions, (d) the results generated are relevant to bank management, and (e) this study will influence future earnings analysis and performance models.

The limitations of this study are based on the sample of the population being limited to only large insured commercial banks in the U.S., U.K. and Japan with asset over $300 million and (a) data availability, (b) the variables utilized for this study does not measure performance sufficiently, (c) the time period selected for analysis is too short to illustrate an accurate trend or pattern, (d) the knowledge generated from this study may not be applicable to banks based in other countries because of the difference in international and domestic financial reporting and (e) results of study may not be relevant to companies that are not large banks.

Conceptual Framework

The conceptual framework consists of the events that will be discussed in this study. Different factors affect earnings such as management's decisions and environmental forces.

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Statistically, this study analyzes large commercial banks' performance in the U.S., U.K. and Japan with assets over $300 million by utilizing different measurement techniques.

Figure 1 below, illustrating the relationship in earnings differences, will be analyzed in greater detail in order to answer the research question. Different factors influence earnings or the bottom line in commercial banks. Sometimes management's decisions influence earnings. For example, extending loans to high risk consumers to increase loan growth and profit can also increase the amount of nonperforming assets and charge-offs; or profit could be generated through the use of funds invested in foreign assets. This study will analyze the overall performance of commercial banks in the U.S., U.K and Japan.
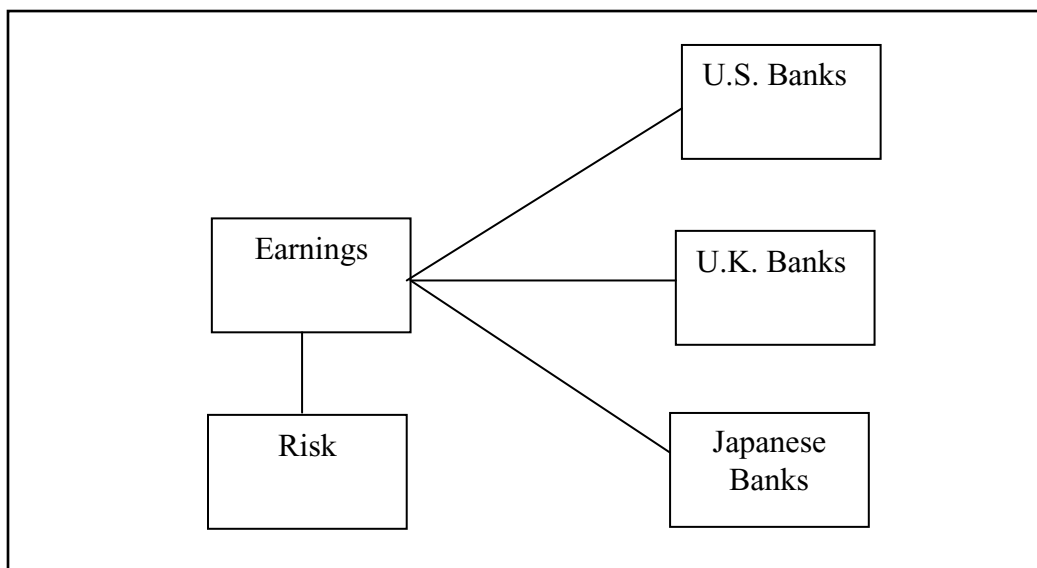
Figure 1. Earnings Assessment Relationship

According Naaborg and Lensink (2008), Hall (2009) and Christian, Moffitt and Suberly (2008), performance of commercial banks can be analyzed through the use of different measures that focus on asset quality, capital adequacy and profitability. This study will analyze some of the variables of asset quality, capital adequacy and profitability as well as other performance

measurements to see what impact they have on earnings and the overall performance of commercial banks among competitors.

Definition of Terms

Return on Assets. Return on assets, also known as ROA, is calculated by dividing net earnings (net income) by the average of total assets (Ahmad, Ariff & Skully, 2008; Al-Tamimi & Lootah, 2006; Burns, Sale & Stephan, 2008; Milbourn & Haight, 2005).

Return on Equity. Return on equity, also known as ROE, is total average assets divided by common equity or when measuring finance leverage based on debt, ROE is net income (net earnings) divided by common equity (Alam & Brown, 2006; Burns, Sale, & Stephan, 2008). Equity (also known as capital) is the funds that are initially paid into a business. ROE is a profitability ratio that is commonly utilized to measure performance (De Wet & Du Toit, 2007).

Net interest margin. Net interest margin (NIM) is the difference among total interest earned (interest income) on assets and total interest paid (interest expense) on liabilities and capital (Christian, Moffitt & Suberly, 2008).

Loan Loss Reserves. Loan loss reserves are deferred funds valued as a percentage of total loans to cover estimated losses from potential loan defaults (Christian, Moffitt & Suberly, 2008).

Exchange Rate. The exchange rate is the price, influence by the interest rate and the inflationary rate, for converting one currency to another (Sturm & Williams, 2009).

Interest Rate Risk. Interest rate risk is the uncertainty associated with products sensitive to changes in the interest rate, such as an interest-bearing asset (DePrince & Morris, 2007).

Price/Earnings Ratio. Price earnings ratio measures the market price per share of common equity of a company's stock by dividing the market price by earnings per share. It also

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access the over and under valuation of stock (Barker & Imam, 2008; Bhargava & Mulhotra, 2006).

Market/Book Value Ratio. Market/book value ratio is the dollar value an investor is willing to pay for stock. It is the market value divided by the book value per share (Abuzayed, Molyneux & Al-Fayoumi, 2009).

Profit Margin. The residual after expenses are deducted from revenue (Milbourn & Haight, 2005).

Pro Forma Statement. "The idea is to present the net profit figure as if certain events leading to 'unusual' items had not occurred" (Andersson & Hellman, 2007, p. 278).

FFVA. Full Fair Value Accounting is the option to account for all financial instruments at market value.   Anagnostopoulos and Buckland (2007) said, "According to FASB (the Financial Account Standards Board), fair value is the amount at which an asset (liability) could be bought (incurred) or sold (settled) in a current transaction between two willing parties, that is, other than in a forced or liquidation sale" (p. 362).

Operations. Allocating resources successfully in generating a stream of income as well as efficient business management (Rao & Tiwari, 2008).

Liquidity. Bank resources readily available to meet business obligations (Rao, & Tiwari, 2008).

Corporate governance. Corporate governance of a corporation consists of the board of directors, top management executives as well as other officers of the corporation. The board of directors is made up of a group of individuals, insider and outsider directors, who address issues

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such as strategic decisions, organizational performance and management performance (Al-Abbas, 2009).

Organization of the Remainder of the Study

The remainder of this dissertation is divided into a four chapter format. Chapter 2 is the literature review of this study. The literature review is a comprehensive review of relevant research material comprised of the assessment of earnings. Chapter 2 is separated into the following areas of relevance (a) operational performance, (b) statement of earnings analysis, (c) earnings and ratio analysis, (d) earnings management (e) analysts' forecast and earnings, (f) earnings and risk management, and (g) earnings and competition among banks. Chapter 3 details the methodology of this study. Chapter 3 will discuss in detail the data analyzed such as the population and sample selected, application systems utilized, measurement instruments applied, research procedure as well as the validity of the study. Chapter 4 consists of the data collected and analyzed along with results and interpretation of the analysis. Chapter 5 provides an overview of this study and the results from the analysis as well as the conclusion and recommendations for future research.

CHAPTER 2. LITERATURE REVIEW

Introduction

As more banks continue to fail, the necessity for more transparency of earnings is essential to the banking industry. According to the FDIC Stats at a Glance, the number of banks that are in trouble total 415 and as of October 2009, 124 banks have failed.   Because earnings impact earnings per share and the stock price, evaluating earnings management and all factors that impact earnings such as operational performance can help to prevent or minimize the number of banks that fail due to the mismanagement of funds. How well a bank manages its earnings, expenses and operating efficiency will impact the overall health of the firm. There have been numerous studies on earnings that revealed relations among earnings, earnings management and analysts' forecast (Alam & Brown, 2006; Chen & Thomas, 2006; "Statistics at a Glance", 2009; LaGore & McCombs, 2009; Yasuda, Okuda & Konishi, 2004). Prior studies utilized measurement techniques such as ratio analysis and other measurement techniques to assess earnings and all elements that impact earnings.

The continuation of this literature review is separated into the following sections: Section 1, prior research on operational performance is discussed regarding the functionality of bank operations; Section 2, prior research on the statement of earnings is discussed in relations to the implementation of new standards and their impact on earnings; Section 3, earnings and ratio analysis is discussed, from data gather from prior research, concerning the utilization of different ratios in analyzing earnings, earnings per share, capital and the stock price; Section 4, prior research on earnings management is discussed regarding the impact management's activities and decisions have on earnings; Section 5, prior research on analysts' forecast, earnings and management is discussed regarding the influence analysts' forecast have on earnings which can

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impact the stock price as well as management's ability to influence analysts' forecast; Section 6, prior research on earnings and risk management is discussed in regards to both inherent risk and business risk due largely to management's activities and decisions; and Section 7, prior research on competition among banks is discussed in regards to the strategies, use of funds and geographic expansion of domestic and foreign commercial banks. A measurement of assessing earnings is to dissect operational performance.

Operational Performance

Operational performance consists of a business' core activities which are utilized to generate income as well as growth opportunities. Banks' operational performance involves the value chain of specific lines of business. For example, wealth management, asset/liability management, financial and accounting management, operations and technology and risk management. Those specific lines of business can be broken down to lower levels of specific job functions. Based on the functionality of each area, bank operations should not only add value to consumers but also increase the quality of products and services, profitability and shareholder's value while minimizing risk exposure. The previously mentioned scenario is not always that simple to accomplish. However, comprehending the perspective of operational performance from this study will enable potential investors to look closer at a bank's financial reports before investing in or purchasing its stock. Banks offer numerous services to meet consumer needs (Alexander & Hixon, 2008; Ho, 2006; Karr, 2005; Rao & Tiwari, 2009; Tektas, Ozkan-Gunay & Gunay, 2005)

Banks provide different financial services to consumers through products and services such as a checking accounts and loans to consumers and businesses. Banks also borrow money for capital projects or other initiatives as well as invest in other institutions. In the midst of all

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the services banks provide, risk becomes an inherent part of business operations. Risk inherent

in commercial banks include (a) inefficiency of operations which can threaten profitability, (b)

default of loans which is a form of credit risk, (c) management's aggressiveness to increase

operating performance or profitability could manipulate earnings, and (d) the value of assets and

liabilities could be influenced by interest rate changes which are the driving force behind interest

rate risk (Jonas & King, 2008; Tektas, Ozkan-Gunay & Gunay, 2005; Termos, 2005; Verma and

Jackson 2007). The following studies contribute to the discussion of operational performance of

banks:

Ho (2006) studied the evaluation of bank performance utilizing the Grays Relation

Analysis (hereafter known as GRA) and its ability to measure relations average elements. He

wanted to perform an exploratory study to see if the GRA was a comparable alternative to

financial statement analysis in the evaluation of a company's operating performance. For the

analysis of the study, Ho (2006) utilized 38 financial ratios, commonly used in business industry,

from three commercial banks to determine the performance of the each bank. The results

indicated that the GRA was a better indicator of operational performance than financial

statement analysis especially when data is uncertain or incomplete. Karr (2005) agrees with Ho

(2006) in theory that the commonly used financial statement analysis such as return on equity

(also known as ROE) has outlived its usefulness in analyzing a company's performance. Karr

(2005) investigated bank performance measurements and believes that a new measurement

instrument is needed to provide a clearer picture of a bank's true health and economic status.

The studies by Ho (2006) and Karr (2005) contribute to the assessment of earnings by illustrating

alternative measurement instruments that will enhance results generated from performance

analysis. Different components can influence performance.

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Hall (2009) evaluated Japanese banks from 1990 to 2006. He gives an overview of the performance improvement of Japanese banks after several years of low performance due to the "asset price bursting" (p.16). Hall also analyzed the large amount of nonperforming loans Japanese banks carried on their books. For his study, Hall (2009) focused on asset quality, capital adequacy and profitability as well as risk utilizing balance sheet data. Hall (2009) also utilized different variables such as EPS and interest rates in his study. He found that as the level of non-performing loans decreased, profit and asset quality increased. He also found that even though capital adequacy increased, non-performing loans and credit risk remained a concern. Drivers of performance can have a positive or negative impact on earnings.

Naaborg and Lensink (2008) investigated 22 countries in Central and Eastern Europe and Central Asia to determine if the type of ownership (foreign or domestic) influenced performance. For their study, they utilized 244 banks' data from Bankscope's database for the period of 2001 to 2002. The focus of their study was on asset quality, capital adequacy and profitability. They utilized different variables that influenced net interest margin, profit before taxes and overhead costs. They found a negative relationship between foreign ownership and bank performance. As the level of foreign ownership increased, bank performance decreased as well as net interest margin and profit. A company's performance can also be analyzed through the utilization of the income statement.

Statement of Earnings (Income Statement) Analysis

The income statement is one of many measurement instruments used to analyze a bank's performance, leverage and profitability. The income statement is utilized by businesses, creditors and investors in order to become more knowledgeable about a company's wellness and

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the anticipated future cash flows as well as make informed decisions regarding investments (Dennis, 2006; Roth, n.d; Tarca, Brown, Hancock, Woodliff, & Bradbury, 2007; Wagner, n.d).

The income statement, also known as the Statement of Earnings, illustrates a bank's operating performance at a period in time. Bank's performance depicts how well the company is doing through the allocation of its resources as well as management decision-making. The performance of the bank can impact its market position and earnings per share. For example, if earnings per share is high, that could indicate that the bank is sound and profitable, however, if earnings per share is low, a problem could exist. The income statement enhances management's understanding of the relationship among earnings components (Roth, n.d; Wagner, n.d).

The major components of an income statement include (a) interest income (also known as operating revenue) which is earned interest on short-term investment products such as savings, certificate of deposits and money market accounts. Interest income also include interest and fees that borrowers are charged by banks for loans, available for sale and held to maturity investment securities as well as other liquid accounts such as trading accounts; (b) interest expense (also known as operating expenses) include fees paid on borrowed money or interest on deposits with other institutions. Interest expense also include the cost to the company to sell goods and routine expenses in the normal course of business; (c) net interest income (also known as operating income) is the amount of interest earned less the amount of interest paid; (d) provisions for loan losses is an estimated percentage of future loan defaults entered on the income statement as an expense in the pretax calculation. For example, if banks anticipate making more high risk loans, management will increase the amount of provisions for loan loss on the income statement; (e) noninterest income include bank charges for providing services to consumers such as service charges on deposits. Noninterest income also include fee income such as credit card fees and

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asset management fees; (f) noninterest expenses include expenses such as salaries and benefits, net occupancy, professional services and mergers and integration; and net income (loss) (also known as net earnings) is the bottom line indicating how well resources are managed (Roth, n.d; Tarca, Brown, Hancock, Woodliff & Bradbury, 2007; Wagner, n.d). There are several studies that contribute to understanding the importance of performance data contained within the income statement.

Echstein, Markelevich and Reinstein (2008) studied the Statement of Financial Reporting No. 133 (hereafter known as IFAS) impact on the income statement as it applies to derivatives. According to Echstein et al. (2008, p. 133), "The standard defines derivatives as either assets or liabilities that should be reported at fair value." The changes occurring as a result of implementing derivatives at fair value are considered gains or losses depending on their usage. The source of data collected for this study was Compustat Industrial database.

Using the Compustat Industrial database, Echstein et al. (2008) selected income statements for the fiscal year ending June 2000 for 255 firms reporting a cumulative effect of accounting change in principle. The measurement instruments used for this study were market adjustment returns and the cumulative abnormal returns. These measurement instruments captured market reaction of earnings announcements. They used income from operations, total assets and stockholder's equity to analyze the impact of the cumulative effect of change. IFAS 133 influenced earnings recognition.

They discussed how prior to the implementation of IFAS 133, derivative adjustments could be deferred but since the adoption of IFAS 133, earnings are impacted immediately. They also discussed how FASB and IFASB issued IFAS 133 to ensure consistency and transparency in recording financial instruments. They found that there was a direct relationship between

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earnings surprises and IFSA 133 because of the impact the cumulative effect of change had on abnormal returns instead of the returns being influenced by earnings per share. They found that return on assets and return on equity along with other comprehensive income decreased.

Triana (2007) investigated the impact IFAS 133 and IAS 39, new standards, would have on earnings for both corporations and non-financial institutions. He illustrated how market-to-market reporting (fair value) will increase company risk on the balance sheet and income statement items because of the increased volatility in earnings due largely to an increase in market volatility. He also noted how the new accounting standards will expose some dishonest activities in an attempt to account for undervalued securities. Although there are risks involved with increased market volatility, the payout for some investors is heavily based on the shift of the curve to higher volatility. Investors need reliable and timely information.

Riahi-Belkaoui and AlNajjar (2006) studied the lack of information derived from a firm's earnings report regarding the firm's true economic value. They performed a study internationally on the lack of information which they called "earning opacity" (p. 189). They sampled 34 countries, including the U.S., from the period of 1985 to 1998 utilizing different independent variables such as earnings aggressiveness and management's motivation to illustrate those variable relationships to earning opacity. Depending on the variable utilized, Riahi-Belkaoui and AlNajjar (2006) found that positive and negative relationships existed for each country in the study for the elements of social, economic and accounting order. This study contributes to the timeliness and usefulness of information.

Although the income statement is a valuable measurement instrument in analyzing earnings, the income statement is not the only factor to be considered. There are other elements in the evaluation of earnings to be considered such as ratio analysis.

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Earnings and Ratio Analysis

Using ratios in the assessment of earnings can help to define trends or patterns of performance for management or potential investors (Christian, Moffitt, & Suberly, 2008). In order to analyze consistency and growth opportunities along with the strengths and weaknesses of company earnings, a prior trend analysis would be helpful in analyzing future predictions as well as other earnings components measurements. For this study, we will look at the trend analysis more in-depth.

Trend Analysis

Liquidity and earnings. Liquidity ratio illustrates a company's ability to convert short term assets into cash to meet its current obligations. Liquidity ratios include:

Current ratio – which measures a company's current assets to its current liabilities

$$\text{Current ratio} = \frac{\text{Current Assets}}{\text{Current liabilities}}$$

Quick or acid-test ratio - is calculated by taking inventory out of current assets and dividing the remainder by current liabilities.

$$\text{Quick or Acid Test Ratio} = \frac{\text{Current assets - Inventories}}{\text{Current liabilities}}$$

When current liabilities are larger than current assets, the liquidity ratio will decrease which could indicate a problem for the company's creditors. To determine the liquidity position of a company, the liquidity ratio results should be compared to other companies' analysis within the same industry. An analysis of cash to total assets can also give an indication of a decline in liquidity position. The assessment of performance involves not only understanding the liquidity

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position of firms but also understanding their leverage position. (Bocker & Hillebrand, 2009; Kim, 2008; Milbourn & Haight, 2005; Roma, 2006; "Financial Ratios", n.d.)

Financial leverage and earnings. There are times when commercial banks have to borrow money to fund projects, raise capital or other initiatives. When a commercial bank use debt instead of equity to finance its activities and operations, financial leverage is being utilized in anticipation of an increase in interest earned on investments. Financial leverage should also increase capital and shareholders' wealth as well as the bank's ability to pay off its debt. However, the more debt banks incur increases banks and creditors' risk exposure as well as influence banks future borrowing ability. Financial leverage is the ability of firms to borrow debt to finance operations and the ability of firms to cover their debt. A high debt ratio (total liabilities/total assets) or debt to equity ratio (total liabilities/equity) can have a negative impact on earnings and earnings per share. Risk is inherent with financial leverage (Dennis, 2006; Whitehead, 2009; "Financial Leverage", n.d.)

Financial leverage can increase shareholders' risk exposure. Management utilization of more debt than equity can also increase returns. Because more investors are risk adverse (prefer less risk), management must find a way to increase shareholders' wealth and profit maximization while minimizing risk exposure. From an income statement perspective, financial leverage includes banks having a sufficient amount of sustainable earnings to be able to cover their debts (Nishiyama, 2007; Tektas, Ozkan-Gunay, & Gunay, 2005; Verma, & Jackson, 2008; "Financial Leverage", n.d.). Profitability is essential for business operations.

Profitability ratios and earnings. Profitability ratios consist of ratios that measure bank operations as a result of assessing management's performance. Profitability ratios include: (a) profit margin on sales which is calculated by dividing sales into net income; (b) operating profit

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margin which is earnings before interest and taxes/net sales; (c) return on total assets (ROA) is net income divided by total assets and (d) return on equity (ROE) is net income divided by common equity. Profitability of a firm that is traded on the stock exchange will be impacted by the fluctuation in the market value ratios (Burns, Sale & Stephan, 2008; Debasish, & Shil, 2009; Dennis, 2006; Milbourn, & Haight, 2005; "Financial Ratios", n.d.).

Market value ratios and earnings. Market value/book value is how much an investor is willing to invest in a company's stock per dollar.

Abuzayed, Mollyneux and Fayoumi (2009) investigated the difference between the book value and market value of 15 Jordanian banks for the period of 1993 to 2004. The focus of their study was on the relevance of earning and earnings components to the difference between the book value and market value. As measurement tools, they used DEA and OLS as well as other risk techniques to analyze different earnings components and efficiency. They found that earnings and earnings components along with cost and bank operating efficiency are essential factors in understanding the difference between book and market value. Price/earnings ratio is also a valuable instrument in understanding performance.

Price/earnings ratio measures the market price per share of common stock in relations to the amount shareholders will pay for each share of stock. It is calculated by dividing earnings per share into the market price of the stock.

Bhargava and Malhotra (2006) discussed the relationship among price earnings ratios, future earnings and prices of world markets utilizing 20 years of monthly data from the Global Financial database for the period of 1980 to 2000. They utilized four indexes in their study as well as based their methodology on the mean reversion analysis and the economic theory. The results of Bhargava and Malhotra's (2006) study revealed an inverse relationship among

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price/earnings, future earnings and stock prices. A change in earnings per share will impact the price/earnings ratio.

Earnings per share. Earnings per share (EPS) is the earned interest on common stock by shareholders and reported on the income statement. EPS tells a lot about the strength of a company. A trend analysis of EPS will tell how stable the company has been, how well resources are being managed, product marketability and market position. There are two approaches to EPS (a) basic (simple) and (b) complex (diluted). Basic EPS is calculated by dividing net income – preferred dividends by the weighted average number of common shares. The weighted average number of common shares is calculated by taking shares of common equity and multiplying those shares by the length of time those shares were held. Thus EPS is simple if it only accounts for common equity. EPS is complex if it includes diluted earning which is a part of capital structure. Diluted EPS encompass all securities that have a remote chance of being exercised or converted ("Earnings Per Share", n.d.; "Financial Ratios", n.d.). Several studies have been performed to investigate the relationship between earnings and ratios.

Christian, Moffitt and Suberly (2008) evaluated 22 financial variables related to asset quality, capital adequacy and profitability from 1998 to 2000. The focus of their study was to examine variables along with earnings that could indicate future returns. They found that earnings along with capital adequacy and changes in total assets gave the best indications of future profit. They also found that analyzing Tier I core capital was the best variable to utilize in the determination of capital adequacy. This study is being extended by focusing the sample on specific countries. This study will also utilize leverage ratio and Tier I risk based capital and Tier I capital for analyzing capital adequacy as well as other performance measurements.

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Ahmad, Ariff and Skully (2008) studied the elements of capital regulations and factors that influenced bank capital ratios by utilizing data from a previous study for the period of 1995 to 2002. The focus of this study is an in-depth analysis into the relationship among capital regulation, capital ratios, and management decision-making. They analyzed the bank's risk management as another measurement in analyzing components that influence capital ratios. Also, in the analysis of capital ratios, they used non-performing loans as a measurement of risk. Ahmad et al. (2008) discussed how bank managers are engaged in withholding generated capital while minimizing risky activities. They found that earnings had a great impact on capital ratios as oppose to the actual bank's profitability. They also found that bank managers reduce reserves to sway favorable estimates which increased the cost of capital and risky activities. The results of their study indicated that there is a relationship between capital and bank risk as well as capital ratios and earnings and that a low debt-to-equity ratio implies a reduction in risk. The control of capital can have a positive or negative impact on firms.

Vithessonthi and Tongurai (2009) discussed capital control and the affect it has on the exchange rate, stabilization and profitability of the 19 firms sampled from the Thialand stock exchange SETSMART database over a 14-day period from December 4th to December 18th. In the assessment of capital control, Vithessonthi and Tongurai (2009) discussed the link between capital control and abnormal returns. They discussed how the pros and cons of capital control affect firms and how capital control has a negative impact on smaller firms. They also noted how capital control has a positive impact on a firm's overall rate of return, which includes the stock price. Controlling capital can impact risk exposure.

Vithessonthi and Tongurai (2009) argued that if capital flows can be controlled, the risk can be minimized. They discussed how capital control impacts the cost of capital to invest in

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foreign firms. The results of their study indicated an inverse reaction among stock announcement day, shareholder's wealth, exchange rate control and stock performance. Market volatility is influenced by numerous factors that impact demand for a company's products and services. Because market volatility can influence profitability, managing earnings is essential for business survival.

Earnings Management

Managing earnings is one of the most important functions of a business. Managing earnings involves generating income, allocating resources to fund various operations, covering obligations, and reserving funds for future cash flows as well as making earnings forecasts about future expectations. Managing earnings also involves profit maximization and increasing shareholders' value. Management has an obligation as well as a fiduciary duty to the shareholders, stakeholders and the organization overall. "The goal of the company has to shift from owning resources to have a command over resources through collaboration" (Phahalad & Reamaswamy, 2004, p. 2).   Many corporations are using shareholder value as a better measure of corporate performance and strategic management effectiveness. Management (agent) has a fiduciary relationship with the shareholders. The fiduciary relationship of management and the shareholders include the duty of loyalty. Management has a duty to act in a way that avoids any conflict of interest and act in the best interest of the shareholders. Management should make decisions and implement strategies that are right for the organizational mission, goals and objectives, and shareholders' value.

In an effort to maximize profit, managers can become aggressive in their decisions and activities. Management's aggressiveness to increase profit is not always because of the

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maximization of shareholders' value (Cahan, Liu, & Sun, 2008). Management's motives can be driven by incentives, for example, Tyco International and HealthSouth's scandals.

According to All business (2003), the federal government discovered that HealthSouth executives reported about $2.9 billion in fraudulent and improper accounting. The government indicted several former HealthSouth executives in connection with the fraud. Also, according to USA Today (2005), the federal government indicted Tyco International CEO, L. Dennis Korlowski and CFO, Mark Swartz on enterprise corruption. Charges for Korlowski and Swartz included stealing from and defrauding the company. Other charges for top executives included filing false records and compensation. Both executives were found guilty. Caldwell, Hayes, Bernal and Bernal (2008) discussed how managers should put the needs of the corporation, shareholders and employees before their own interest.

Management's selfless act will help to ensure the longevity and success of the corporations as well as an increase in profitability and shareholders' wealth. Manager should utilize rationality in their decision making process. Sadler-Smith and Shefy (2004) said, "Being rational entails the acquisition of knowledge through the power of conscious reasoning and deliberative analytical thought" (p. 77). Prior scandals, such as the ones previously mentioned and Enron, have prompted regulatory agencies to implement strict compliance regulations.

Because of the increase in unethical practices by top management involving fraud and misappropriation of funds as well as other unethical behavior, the Security and Exchange Commission established the Sarbanes-Oxley Act 0f 2002 to reduce accounting irregularities (Krishnan & Visvanathan, 2007). The Sarbanes-Oxley Act of 2002 (SOX) requires corporations to perform reviews for accounting operations as well as other departments within organizations.

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The SEC's (Security and Exchange Commission) implementation of SOX was soon followed by initiatives from other accounting boards.

In addition to the establishment of SOX, recent scandals, such as HealthSouth and Tyco International, influenced the Financial Accounting Standards Board (FASB) and the International Financial Accounting Standards Board (IFASB) to issue accounting standards requiring listed companies to record certain instruments at fair value as well as requiring more transparency and disclosure in the notes of the financial statements. One of the objectives for FASB and IFASB issuing new accounting standards is to minimize and discourage unethical management activities (Anagnostopoulos & Buckland, 2007; Epstein, 2009; Homoille, 2009; Triana, 2007). One technique that can be utilized to assist in monitoring earnings management as well as the health of banks is the assessment of earnings. There are several studies that contribute to the discussion regarding earnings management.

Al-Abbas (2009) investigated corporate governance and its influence on earnings management. For this study, he sampled the financial reports of 78 companies listed on the Saudi joint stock exchange for the period of 2005 to 2007. He used abnormal accruals to measure earnings management and a regression analysis was used to measure corporate governance variables. He discussed how the audit committee's independence influenced corporate governance and the quality of decision-making by management. The results revealed that although corporate governance variables influenced earnings management as well as management's behavior, the institute ownership had a negative relationship with abnormal accruals. Earnings management also involves risk exposure to the firm.

Yasuda, Okuda and Konishi (2004) evaluated the relationship between bank risk and earnings management. For their study, they used 78 Japanese regional banks' stock price data

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for the period of 1990 to 1999. The focus of their study was on the stock market and accruals. According to Yasuda et al (2004), accruals are the adjustments made to account for the gap between true earnings and operating cash flow. They hypothesized that there is no relationship between accruals and bank risk and that investors do not evaluate bank financial data closely. Based on the news media in Japan, they found that earnings surprises are prevalent in Japanese banks. According to the news, some banks manipulated investors by inflating earnings. The results of their study revealed that investors do not thoroughly evaluate earnings reports and accruals are not related to bank risk. Earnings management can involve management's attempt to meet or beat earnings expectations.

Athanasakou, Strong and Walker (2009) studied earnings management in firms from the U.K. for the period of 1993 to 2005. In 2005, the European Union required all listed companies to adopt the international financial reporting standards (hereafter known as IFRS). Athanasakou et al. (2009) wanted their study to include the period before and after the adoption of IFRS for comparative purposes. For their study, they surveyed investment professionals and financial managers. The focus of their study was to what extent managers actively strive to meet analyst expectation.

They discussed how earnings surprises manifest in a positive or negative manner depending on management's activities to meet or exceed analysts' forecasts. They also analyzed the inflation of accruals through recategorization of recurring and non-recurring events. They used the Jones Model, a logistics application to measure abnormal accruals and return on assets for performance. They found that there is no relationship between non-recurring items and operating performance, however, small non-recurring measurements revealed a direct

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relationship with future operating performance. They also found that it is unlikely that Japanese firms will engage in activities in order to meet analyst expectations.

Su (2005) investigated whether earnings management or forecast guidance was utilized by firms to manage earnings in an attempt to meet or beat analysts' forecast. Su (2005) used discretionary accruals to measure earnings management. Although other literature suggested that forecast guidance was utilized, Su (2005) found that earnings management was used to exceed earnings expectation by analysts. The Jones Model was used along with a performance model to monitor earnings management for the period of 1993 to 2002 with 10, 227 observances. The I/B/E/S and Compustat database was utilized. The results showed how management's aggressiveness to meet or beat analysts' forecast constantly changed with each quarter-end.

Krishnan and Visvanathan (2007) investigated the demise of Arthur Anderson's accounting firm. They studied the clients of Anderson from 1996 to 2000. They used earning management, earnings manipulation and persistence as predictors of earnings. They found that Arthur Anderson had more clients who embraced earnings management compared to other auditing firms. Depending on demand, a company's earnings will be impacted along with earnings per share. One such factor that can influence market volatility is an analyst's forecast.

Analyst' Forecast, Earnings and Management

Analysts' forecasts influence a firm's market position because investors place a great deal of confidence in the fact that a consensus forecast is reliable. However, as some studies have illustrated, the information that analyst utilize for forecasting is given to them by management. Thus, the analysts' forecast could be biased or manipulated by management in an attempt to influence a positive estimate.

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Bhat, Hope, and Kang (2006) evaluated the relationship among corporate governance, transparency and analyst forecast. For this study, Bhat et al. (2006) selected 21 non-US firms from the period of 1992 to 2002 using the companies' 10K or 20F annual reports. They noted how governance transparency impacts management's behavior, shareholders' value, equity and cost of capital. They also noted how transparency influenced analysts' forecast accuracy because more transparency influences quality. Bhat et al. (2006) discussed how earnings management is influenced by the independence of the audit committee. The results of their study revealed a relationship between analysts' forecast accuracy and governance transparency.

Chiang (2005) gives an overview of analyst forecasting and how those forecasts are related to or influenced by corporate transparency. For this study, Chiang (2005) selected 221 technology companies from Taiwan during the period of 2000 to 2002. According to Chiang (2005), prior research implies that analysts' forecast are biased. However, he noted that analysts make a forecast based on information supplied by corporate management.

Chiang (2005) also noted that information quality is essential to analyst forecast accuracy. He tested relations to operations performance utilizing the multiple regression analysis. According to Chiang (2005), more disclosure tends to minimize bias which has a positive impact on accuracy. The results of the study revealed there is an adverse relationship between analyst bias and corporate transparency and an inverse relationship between disclosure and forecast accuracy. Earnings quality influence analysts' forecast.

Barker and Imam (2008) discussed how the quality of earnings impact analysts' predictions and forecasts. They discussed how analysts' perceptions affect the overall stock prices. They also discussed how earnings quality is essential in analysts' forecast. Barker & Imam (2008) noted how analysts use both accounting and non-accounting information in the

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analysis and how accounting based information is weighted more heavily than non-accounting in analysts' overall perception. Earnings management is a key element in the analysis of earning and analyst' forecast.

In their analysis, Barker and Imam (2008) performed 35 interviews with analysts from 10 top investment banks listed on the Extel Survey. Also in this analysis, they used the price earnings ratio which is a measurement technique. The results of this study revealed that both accounting based and non-accounting based data impacts analysts' forecast regarding earnings quality and how analysts tend to be bias toward companies with economic incentives. Analyst bias can taint their forecast as well as the reliability of the forecast.

Becchetti, Hasan, Santoro and Anandarajan (2007) analyzed analysts' forecasting bias. This study utilized the S & P 500 Index to sample 309 listed stocks for the period of January 1995 to December 2001. In this study, they give an overview of analyst bias and factors that contribute to analysts' forecast and the relationship that exist among analyst forecast, stock price, and risk. Becchetti et al. (2007) discussed how incentives or selfish motives of the analyst influence them to make an optimistic forecast. They also discussed how the client can influence analyst to forecast optimistic evidence even though the results could have a negative effect on equity and the stock price when the actual results are revealed. One key element that analysts depend on to make a forecast is a pro forma statement.

Andersson and Hellman (2007) analyzed pro forma statements and their relations to analysts' forecasts. For this experimental study, 36 financial analysts were given earnings reports. One set of analysts were given both a pro forma statement and a GAAP earnings report and the other set of analysts were given just an earnings report based on GAAP. According to Andersson and Hellman (2007), companies using pro forma statements influence the company's

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earnings per share (EPS) through manipulation because specific items are excluded from calculations within the report.

According to Andersson and Hellman (2007), pro forma statements are less complex than regular GAAP required financial statements and easier for analysts to understand the numbers in order to make more precise and accurate forecasts. They noted how analysts, who were given a pro forma report, make a more positive forecast which influence an upward curve trend in the numbers than analyst forecast dependent only on GAAP required financial statement disclosure. Investors rely more on pro forma statements than GAAP financial statements.

Andersson and Hellman (2007) noted that because analysts rely on information supplied from management, management's aggressive behavior could increase risk exposure. The result of this study revealed that analysts rely on pro forma statements to make predictions. This study also revealed that an inverse relationship exists between analysts' forecasts and pro forma statements. Pro forma statements lead to higher and more positive analysts' forecast which suggest that analysts' forecast could be biased and management can successfully manipulate earnings and analysts' forecasts.

Jung (2005) gives an in-depth analysis of analysts' earnings forecast predictions limitation. He noted that analysts' predictions are influenced by the amount of experience an analyst has. He also discussed how some analysts are limited based on their "herding behavior" because they are concerned with their careers. He also noted that analysts' forecast are limited because of their inefficiency regarding the relevance of prior information. He also noted analysts' lack of understanding information in order to make an accurate forecast. Jung (2005) study revealed how analysts' forecast can be influenced to be optimistic based on incentives and their relationship with management. Jung (2005) discussed how management who tries to meet

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or beat analyst forecast will sometimes manipulate accruals and reserves for future earnings expectation. Risk is inherent in any business but there are some actions by management that can expose the firm to more risk. Management must make decisions that will minimize risk exposure and benefit the company as well as shareholder's value.

<center>**Earnings and Risk Management**</center>

In order to know how to prevent or minimize risk impact on banks, management need to identify what types of risk are associated with their actions and also determine what types of risks, other than those associated or inherent with the business, have the potential of developing during the implementation of new initiatives or strategies. By understanding industry standards and regulations, the management team is able to implement actions to protect assets from risk that might occur as a result of decisions or actions by management (Lanz, 2007). Management should not only identify risk associated with the business and their actions but they should also measure that risk and any potential risk subject to occur (Axson & Hackett, 2006; Daniels & Ramirez, 2008; Ghorbel & Trabelsi, 2009; Nakada, 2005).

By offering differentiations of products to a broader range of consumers, which included millions of people, management could increase its revenue stream, increase production, customer base, and competitive advantage as well as maintain its competitive edge while minimizing risk. Bocker and Hillebrand (2009) investigated risk management by evaluating the efficiency of capital in financial institutions and found that diversification is essential for banks in an attempt to reduce risk exposure while decreasing the cost of capital which has a positive effect on shareholders' wealth. There is always some risk involved in decision making but managers must assess the risk to make sure that the company will not be greatly affected by it. There are inherent risks associated with starting or expanding a business. With the proper planning, risk

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can be identified, analyzed, monitored, controlled and minimized. There are several studies that evaluate risk management and types of risk in banks and other business industry.

Kemme, Schoors and Vennet (2008) discussed the transformation of banks from credit-oriented to market-oriented systems. For this study, Kemme et al. (2008) selected certain banking sectors for analysis from 46 banks and 13 countries from 1994 to 2005.   They noted how the goal of financial institutions is to decrease risk while increasing stability and performance. They discussed how new entrants by foreign entities have aided in the increase of regulatory compliance. They also discussed the relationship among capital, reserves, and risk as well as how a decrease in provision for reserves will increase risk-taking by management. The results of their study revealed that the cost of capital has an inverse relationship to risk and if there is adequate capital available, risk can be managed.

Alexander and Hixon (2005) studied risk initiatives for financial institutions in light of regulatory compliance and increased transparency disclosure. For this study, Alexander & Hixon (2005) used a survey by Accenture and they interviewed executives from 63 large banks. They illustrated how to implement Basel II compliance which addresses credit, market and operational risk as well as how Basel II helped banks manage risk that is tied to performance.

Alexander and Hixon (2005) also noted how some processes are obsolete in light of the new accounting initiatives and these new initiatives also increased risk management. The results of this study indicated that the alignment of risk initiatives and finance will help bank operations to run more efficiently and increase data quality while minimizing cost. Bank operations have gone through reorganizations and transformation over the years as well as an increase in the establishment of risk management policies and procedures.

Interest Rate Risk, Earnings and Profitability

It is essential for banks to establish and maintain sound policies and measurements of interest rate risk. It is the bank's responsibility to monitor its products and activities that could enhance risk exposure. According to Gharanfari, Rogers and Sarmas (2006), the Federal Reserve will change the interest rate based on the monetary policy. Periodically, the Federal Reserve Bank will change the interest rate for various reasons, for example, the economic outlook, consumer demand or to stabilize the credit markets. The change in the interest rates trickles down to banks which incorporate the changes into their lending practices and products. Depending on the products, banks have at their discretion the ability to reprice their products using the new interest rates at different intervals. For example, the banks can reprice their products on a daily, monthly, quarterly, or annual basis. Banks' repricing frequencies are tied to changes in the interest rates (DePrince & Morris, 2007; Ennis & Keister, 2008).

As mentioned previously, banks can be sensitive to changes in the interest rates because of their lending practices and products. The impact of interest rate changes (rise or fall) on banks' products can influence changes in earnings and the economic value of their assets or liabilities. A bank is liability sensitive when the changes in the interest rates influence changes in its liabilities more than its assets indicating an impact to interest income more than to interest (or operating) expense. If a bank is liability sensitive and the interest rates rise, equity and earnings will decrease. The opposite is true when interest rate fall. A bank is asset sensitive when changes in the interest rates influence changes in its assets more than its liabilities indicating an impact to interest expense more than to income. If a bank is asset sensitive and the interest rates rise, equity and earnings will increase (DePrince & Morris, 2007; Ennis & Keister, 2008; Tektas, Gunnay & Gunnay, 2005). The opposite is true if the interest rates fall. Different

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tools can be utilized to measure interest rate sensitivity. Several studies contributing to the discussion of interest rate risk and measurement of interest rate risk include:

Ghazanfari, Rogers, and Sarmas (2006) studied interest rates implemented by the Federal Reserve and the impact rate changes have on bank stock. Ghazanfari et al. (2006) also discussed the balance sheet and the implementation of different strategies to reduce risk exposure such as hedging derivatives. To analyze those strategies, they used four types of financial ratios in their analysis of management strategies. They found that changes in the interest rates has an inverse relationship to bank stock whether positive or negative because of the impact interest rates have on net interest margin and valuation.

Verma and Jackson (2007) studied interest rate influence on bank stocks. They extended the Exponential Generalized Aggressive Conditionally Hertersedestic which studied the short and long term interest rates and portfolios of 70 commercial U.S. banks for the period of April 1986 to January 1997. They used a multivariate analysis to measure the relationship between interest rates and bank stocks. The results of their study revealed a relationship between asymmetric short-term and long-term interest rates and bank stock. They also found that interest rate risk impact stock returns.

Tektas, Gunnay and Gunnay, (2005) evaluated asset liability management (ALM) in the banking structure for the period of 1999 to 2000. They said, "Asset liability management is the assessment and management of endogenous financial, operations, business and exogenous risks" (p. 135). For their analysis, they analyzed two banks' annual reports and interviewed bank executives in order to analyze the liquidity and capital adequacy of these companies. The focus of their study was to investigate the sensitivity of banks, in times of crises, as a result of

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management's decision-making. They noted how different ALM strategies were developed in response to managerial banking decisions regarding risk.

They argued how banks have to make compromises between returns and risk and how it is essential that banks develop policies that can identify risk. They discussed how interest rate risk is comprised of (a) market risk which involves external factors; (b) credit risk which is the chance that nonperforming by consumers will cause a default in credit to occur; (c) operational risk which result from management's decisions; and (d) liquidity risk which is the probability that firms will not have adequate liquid resources to cover current obligations. The results of their study revealed that liquidity and capital adequacy decreased due to the percentage of securities they could not sell in the secondary markets by risk takers.

Nishiyama (2007) performed a study to see to what extent all banks are risk adverse. For this study, they sampled fed funds rates and six month certificate of deposit rates from six cities. They gathered the data from bank rate.com website. To explain the difference in sensitivity between certificate of deposit and MMDAs, they used an intertemporal bank model, Monti-Klein. They noted that prior studies showed that banks are slightly liability sensitive. They found that banks are risk averse based on their relative risk adverse coefficient.

DePrince and Morris (2007) investigated comparative profitability of intermediation based on assets for 100 big and small banks for the period of 1992-2005. For this study, they focused on interest rates and net interest margin. As previously mentioned, they believed that banks exposed themselves to interest rate risk because of the products they offered and the financing of those products. They used different measurement applications such as the Bureau of Economic Analysis and the Federal Deposit Insurance Corporation's (FDIC) websites to collect data. Utilizing the data collected, they performed yield curve analysis to test the

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relationship between interest rates and net interest margin as well as the yield spreads. The results of their study revealed an inverse relationship between net interest margin and interest rates. For example, because the net interest margin was based on the size of the assets, interest rate changes influenced a change in net interest margin.

Ghorbeland and Trabesi (2009) studied value-at-risk (hereafter known as VaR) for the period of November 2001to September 2007. For this study, they used different indexes, such as DAX with 2541 observations. To perform the analysis, they used a combination of variables including a bivariate value copula model, a univariate ARMA Garch model and a multivariate model. The focus of their study was to measure portfolio risk in bank more efficiently. They found that the bivariate model was more flexible and accurate in estimating portfolio risk than the univariate or multivariate models. Firm profitability can be influenced by competition between banks.

Earnings and Competition between Banks

As previously mentioned, competition between commercial banks has lead to an increase in profitability, productivity and efficiency. Jonas and King (2008) noted how bank efficiency indicates the appropriate utilization of resources and the ability to meet challenges derived from market volatility while controlling cost. Competition has also influenced commercial banks to increase return on equity, reduce non-performing assets, cut staffing and other redundant business activities as well as diversify their products and services through mergers and acquisitions in order to increase profitability (Jesswein, 2008; Jonas & King, 2008; William & Liao, 2008).

Polster, (2004) investigated the differences in European banks' profitability and earnings from foreign shares. For the period of 2000 to 2004, he studied the differences among

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profitability, foreign shares and earnings structure among 25 of the largest European institutions. He also compared European banks' earnings and foreign shares to U.S. banks'. He found that European banks generated around 40% of their earnings from abroad and how the focus of European banks have been on geographic expansion. He also found that differences in profitability depended on strategies utilized for foreign operations. He found that there is no linear relationship between profitability (ROE) and earnings from foreign shares.

Roma (2006) performed a study on the common factors between European banks and U.S. banks' stock returns. For this study, he sampled 27 European banks listed on the main market exchange for the period of 1999 to 2003. He wanted to understand the attributes as well as the risk associated with investing in bank stocks. He attempted to link different aspects of the balance sheet to stock behavior in order to help explain the risk exposure of the stock. He looked at some common factors between the U.S. and European banks. Roma (2006) found that large U.S.' banks which have a reasonable amount of non-interest income, a low interest margin and product diversification are the safest banks to acquire stocks. For European banks, he found that diversification is a good strategy and makes the company less risky for investment purposes.

Jonas and King (2008) investigated bank efficiency in relation to the monetary policy for the period of 1983 to 2005. For this study, they used call reports from the Federal Reserve website and used total assets and bank size as variables. They discussed how new initiatives were implemented to increase profitability because profits began to decline after numerous failures and consolidations of U.S. commercial banks. They noted how competition among banks influenced productivity and efficiency which impacts profitability. They found that efficient banks utilize their resources more carefully than inefficient banks and are better able to decrease their risky loan activity and minimize risk during times of rising interest rates.

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Williams and Liao (2008) studied the cross-border transactions of 73 banks for the period of 1998 to 2005 regarding abnormal returns. Their focus was on the mergers and acquisitions of listed banks in emerging markets that resulted in international bank ownership. Their sample included banks from Latin America, Central and Eastern Europe, Asia and the U.S. To measure abnormal returns, they used a regression analysis with institution, economic and profitability as variables. They also considered the ownership interest of the acquired banks. They found that international cross-border activity have a negative and positive impact on abnormal returns for both the targeted and acquiring banks as well as a decrease in value. They also found that risk perception influence profitability expectations.

Jesswein (2008) investigated the banks role in international trade financing letters of credit. For this study, he used company call reports. His sample included companies with assets of $10 billion for the period of 2002 to -2006. Jesswein (2008) defines foreign banks as "United State branches and agencies of foreign banks, including those that are state chartered and any U.S. commercial banks with a minimum foreign ownership of 25%" (p. 17). He noted how foreign banks filled the financing gap that U.S.' banks neglected. He discussed how the opportunities for foreign banks in trade financing occurred because companies in the U.S. could not get the financial backing they needed from U.S.' banks and those banks were forced to turn to foreign banks. For example, foreign banks provide the majority of trade financing in the U.S.

He discussed the impact that foreign banks have made on the U.S.' economy and how foreign banks have become a significant source of financing for businesses across the country. He also discussed how foreign banks setup different types of organization forms which have helped to establish them as major competitors for U.S.' banks while increasing their profitability, customer base, market share and value.

Jalbert, Stewart and Moritz (2006) investigated differences in stock pricing. They focused on stock market efficiency through cross-border activities involving cross listed securities between the U.S. and Stockhom's Stock Exchanges. They studied pricing errors of cross listed shares between stock exchanges for the period of 1998 to 2004. They utilized the Stockhom's website and Yahoo's website was used to gather data for foreign countries and U.S.' firms. The Pacific Exchange Rate website was used for the exchange rate. Causality was considered in explaining the impact stock markets in one state such as New York had on a foreign market. They found that some price differences were due to timing differences of different markets and other price differences were due to miscalculated errors.

DeBondt (2008) investigated the factors that determine the price of stock. For this study, he used the Thompson Financial Database. He compared different countries to find relationships of factors in pricing stock for the period of 1978 to 2005. He tested the validity of the pricing module which encompasses the present value module. He found that earnings and risk-free premiums are definite determinants of stock pricing.

Conclusion

This chapter comprises reviews in the areas of performance, leverage, and risk utilizing different variables and assumptions such as Polster (2004) who investigated the differences in European banks' profitability and earnings from foreign shares to the U.S. For the period of 2000 to 2004, he studied the difference between profitability, foreign shares and earnings structure between 25 of the largest European institutions. He found that there is no linear relationship between profitability (ROE) and earnings; Al-Tamimi and Lootah (2006) evaluated bank performance utilizing different measuring instruments such as the performance evaluation, DEA model, operational and profitability efficiency and financial ratios to give an all-inclusive

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perspective. They sampled 15 national banks' branches during the period of 1999 to 2003 focusing on the relationship between operational and profitability efficiency. They found that there is no direct relationship between profitability and operational efficiency; however, Christian, Moffitt and Suberly, (2008) evaluated 22 financial variables related to asset quality, capital adequacy and profitability from 1998 to 2000. They found that earnings along with capital adequacy and changes in total assets gave the best results of present and future performance.

Tektas, Gunnay and Gunnay (2005) evaluated asset liability management (ALM) in the banking structure for the period of 1999 to 2000. The focus of their study was the relationship between bank sensitivity and management's decision-making. They found that risk is inherent in business; for example, (a) market, (b) credit, (c) operational, and (d) liquidity; however, (DePrince and Morris, 2007; Whitehead, 2009) argue that although there are some risks inherent in business, banks are exposed to more risk because of management's decisions such as lending practices. DePrince and Morris (2007) investigated comparative profitability of intermediation based on assets for 100 big and small banks for the period of 1992 to 2005. They focused on the relationship among assets, interest rates and net interest margin. The results of their study revealed an inverse relationship between net interest margin and interest rates. For example, interest rate changes influenced changes in assets and also net interest margin. Whitehead (2009) gives an overview of banks' ability to lower the cost of capital and risk exposure by balancing the allocation of funds between debt and equity projects at the cost of increased wealth. Whitehead (2009) discussed how the balance between debt which increased liquidity in the credit market and equity which enabled a larger allocation of risk exposure within the portfolio could increase credit risk and make private credit markets more enticing to bank due to

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higher returns incentives. Although inconsistent opinions are a part of this study, similar opinions are evident as well.

Reviews that are similar to this study include Hall (2009) who evaluated the performance of Japanese banks from 1990 to 2006. He focused on asset quality, capital adequacy, profitability and risk utilizing balance sheet data. He found that as the level of non-performing loans decreased, profit and asset quality increased; Naaborg and Lensink (2008) investigated 22 countries in Central and Eastern Europe and Central Asia to determine if the type of ownership (foreign or domestic) influence performance. The focus of their study was on asset quality, capital adequacy and profitability. They utilized different variables that influenced net interest margin, profit before taxes and overhead costs. They found that a negative relationship exist between foreign ownership and bank performance. As the level of foreign ownership increase, bank performance decrease as well as net interest margin and profit.

Some recommendation from reviews include creating a decision making model like gross programming that would measure the sensitivity of balance sheets components to risk exposure (Tektas, Gunnay & Gunnay, 2005); changing the level of capital could help influence risk exposure (DePrince & Morris, 2007); investigating the performance of foreign bank and whether the institutional quality, time, information asymmetry or competitive advantage influence lower performance and profit (Naaborg and Lensink, 2008); and utilizing the DEA (data envelopment analysis) model go give a more all-inclusive perspective in measure performance instead of financial ratios (Al-Tamimi & Lootah, 2006).

Previous studies have illustrated how internal and external environmental forces can impact the earnings of commercial banks. Some gaps from previous reviews that this study attempts to address include: (a) the assumption that interest rates sensitivity of net interest

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margin is different between institutions of different countries (DePrince & Morris, 2007); (b) the influence of the level of debt on credit quality, credit risk and performance (Whitehead, 2009); (c) the utilization of ROE and ROA as performance measures instead of operational efficiency components such as operational income and expense along with employee's salaries (Al-Tamimi & Lootah, 2006); (d) employ the U.S. and U.K in addition to Japan in the sample as well as asset size as a selection criteria instead of asset quality (Hall, 2009) and (e) extend the sample to include the U.S. and Japan as well as use variables of credit risk instead overhead costs to analyze performance (Naaborg & Lensink, 2008).

Managing earnings affect the overall operations and profitability of organizations. An assessment of earnings, earnings components and all events that impact earnings should be performed to enhance management's knowledge regarding domestic and foreign competitors and to eliminate any occurrences or activities that undermine the credibility and quality of earnings.

CHAPTER 3. METHODOLOGY

Cross-border transactions have enabled competition among commercial banks to increase. The increased competition, due largely to rapid expansion by foreign banks, has raised some concerns among banks in the U.S.

Restatement of the Problem

The problems addressed in this study are management dilemmas. Profitability and competitive advantage of both domestic and foreign banks are influenced by performance, leverage and risk, which can be analyzed by the interaction among the profit margin, total asset turnover and the equity multiplier as well as other performance and risk measurements. The accounting results from the analysis of performance and risk measurements as well as assessing other drivers of performance can illustrate the profitability, leverage and risk of domestic and foreign commercial banks.

Previous studies have made contributions to the body of knowledge in the area of earnings. There have been studies illustrating how management's earnings aggressiveness, which is comprised of less transparency, accountability and quality of accounting, influence earnings. The Jones Model, a logistical analytical instrument and the earnings opacity model by Bhattacharya et al., 2001 was utilized to monitor management's earnings aggressiveness (Riahi-Belkaoui & AlNajjar, 2006; Su, 2005); and the relationship between earnings and profitability was analyzed by the utilization of different models such as DEA (data envelopment analysis) and a mean reversion analysis to monitor operational efficiency, price/earnings influence on future earning and ratio analyses to monitor returns such as return on assets and return on investments (Al-Tamimi & Loothah, 2006; Bhargava & Malhotra, 2006; Karr, 2005). The previously mentioned studies did not investigate how leverage and risk influence earnings.

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Naaborg and Lensink's (2008) research study focused on the relationship between foreign ownership and performance by analyzing the impact net interest revenue, gross domestic product and the level of foreign entrance have on performance; however, they did not include leverage and risk as an essential variable that influence earnings. Other research studies investigated performance by analyzing variables of profitability, asset quality, and capital adequacy as well as other financial ratios (Christian, Moffitt, & Suberly, 2008; Hall, 2009); however, they did not investigate the relationship between leverage and earnings.

Understanding the influence of leverage and risk on earnings can provide a lucid perspective of the banks' ability to generate income and allocate resources effectively to maximize profit while minimizing risk exposure. Analyzing the relationship among leverage, risk, performance and earnings gives an approximate account of management's activities, earnings sensitivity and the company's competitive edge. According to Jesswein (2008), foreign banks' integration and saturation into the United States' financial system have made a significant impact on the U.S. economy; therefore, knowledge of competitors' strengths and abilities is essential for future competitive advantage and opportunities.

This study is being conducted to contribute to the body of knowledge a more in-depth understanding of factors that influence earnings differences among the U.S., U.K. and Japanese banks. From a manager's perspective, understanding what factors influence profit, leverage and risk from this study can enable managers to implement strategies that foster growth, stability and minimize cost. This study will focus on comparing the performance, leverage and risk of U.S. based banks and foreign owned banks doing business in the U.S.

Research Questions

External and internal factors can influence earnings. Previous studies revealed that factors such as management's performance, strategy and use of funds influenced not only earnings differences among commercial banks but also performance. The research question being addressed in this study asks whether there is a relationship between earnings and performance among the U.S., U.K., and Japanese banks.

Variables selected for analysis represent a combination of performance, leverage and risk components to address specific focal points of this study. Christian, Moffitt and Suberly (2008) and Naaborg and Lensink (2008) used return on equity, return on assets, capital adequacy, charge-offs and long term debt for credit risk, as well as performing and nonperforming assets to analyze performance. Hall (2009) used variables such as net interest income, profit before taxes, return on equity and return on asset to analyze Japanese banks' performance. This study, an extension of their work, will utilize certain components of earnings for analysis such as EPS, which is based on net earnings and gives shareholders an indication of the income they can earn by investing in a company; net interest margin, the difference between interest income and interest expense, contributes to the analysis of risk. This study will also utilize total assets and total liabilities to illustrate how quickly banks can meet their current obligations as well as capital ratios to illustrate capital sufficiency which can influence risk. Additional research questions generated from this study for analysis include:

RQ1: How does the performance based on ROE and ROA of U.S. banks compare to the U.K. and Japan's?

RQ2: How does the financial soundness of U.S. banks based on their EPS compare the U.K. and Japan's?

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RQ3: How does U.S. banks' capital adequacy (well capitalized) position based on their Tier 1 capital, risk based capital and leverage compare to the U.K. and Japan's?

RQ4: How does a change in the interest rate impact performance and sensitivity based on the net interest margin?

RQ5: How does the credit risk impact performance of U.S. banks compare to the U.K. and Japan's?

RQ6: How does the liquidity position based on total assets and total liability of U.S. banks compare to the U.K. and Japan's?

RQ7: How does the credit quality based on long term assets and credit grade of U.S. banks compare to the U.K. and Japan's?

Hypotheses

The objective of this study is to evaluate earnings differences among the U.S., U.K. and Japanese banks utilizing various measurement techniques for analysis. Specific hypotheses have been developed for analysis based on the proposed relationships mentioned above.

Ho1: There is not a significant difference in the ROE of U.S., U.K. and Japanese banks.

Ha1: There is a significant difference in the ROE of U.S., U.K. and Japanese banks.

Ho2: There is not a significant difference in the ROA of U.S., U.K. and Japanese banks.

Ha2: There is a significant difference in the ROA of U.S., U.K. and Japanese banks.

Ho3: There is not a significant difference in the leverage of U.S., U.K. and Japanese banks.

Ha3: There is a significant difference in the leverage of U.S., U.K. and Japanese banks.

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Ho4: There is not a significant difference in the well capitalized position of U.S., U.K. and Japanese banks.

Ha4: There is a significant difference in the well capitalized position of U.S., U.K. and Japanese banks.

Ho5: There is not a significant difference in the sensitivity of U.S., U.K. and Japanese banks to interest rate changes.

Ha5: There is a significant difference in the sensitivity of U.S., U.K. and Japanese banks to interest rate changes.

Ho6: There is not a significant difference in the credit risk of U.S., U.K. and Japanese banks.

Ha6: There is a significant difference in the credit risk of U.S., U.K. and Japanese banks.

Research Design

This is a theory-driven exploratory study because it may influence future research into the relationship between earnings and the components that influence earnings differences such as management decisions. Also, this study will encourage research regarding the impact events have on earnings, earnings per share and stock price. The purpose of this research is to analyze the performance, leverage and risk of large insured commercial banks in the U.S., U. K. and Japan and the drivers of those variables in relations to their influence on earnings. This longitudinal study will utilize secondary data for the period of 2006 to 2009 collected from different data sources. The data collected for 2006, 2007, 2008 and 2009 will be analyzed independently as well as collectively and will be utilized in the selection of the sample.

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Population and Sample

The population for this study includes large insured commercial banks from the U.S., U.K. and Japan which are listed on the stock exchange whose total assets are worth between $300 million and $100 billion and foreign ownership of the U.K. and Japanese banks is 50% or greater. The U.S. and U.K. have been utilized in previous studies as competitors or selected as the only country of focus in the study. Hall (2009) investigated banks in Japan and this is an extension of his study. The sample for this study has a credit rating from A to BBB from Moody, Fitch or Standard & Poors credit rating agencies. The sample is selected based on the probability sampling method.

Sampling Method

For this study, the stratified random sampling, a probability sampling method, is used because of the availability of the data and the specific criteria of selected participants. The selection criteria of the population for each country include large insured commercial banks with assets between $300 million to $100 billion and foreign ownership of the U.K. and Japanese banks is 50% or greater for the period of 2006 to 2009. Once the population has been selected based on the criteria above, each year (2006, 2007, 2008, and 2009) will be analyzed independently as well as collectively and the sample will be selected based on other criteria such as credit rating and capital adequacy. The data utilized for the selection of the sample will be the annual reports and the call reports from company websites as well as the SEC's website. A list of large commercial banks with assets greater than $300 million and percentage of foreign ownership will also be utilized from the Federal Reserve Bank and the FDIC's websites in the selection of the population. Examining specific criterion such as Tier 1 Capital and Tier 1 Leverage ratio, the annual reports of the population will be used to select the sample to be tested.

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Along with the design and sampling method, the setting of the research is vital to the validity and reliability of the data.

Setting

The type of research and measurement techniques will dictate the setting of the study. Because the majority of the data for this study is secondary data, the setting for this study is considered a controlled environment because only certain people such as managers of financial reporting departments have access to upload data into the databases. The data utilized in this study will be downloaded from the Federal Reserve Bank, SEC and the FDIC's databases as well as company websites because commercial banks file quarterly and annual reports with regulatory agencies in order to remain in compliance.

Source of Information

The data utilized in this study will be downloaded from the Federal Reserve, SEC and the FDIC's databases as well as the company's websites. The list of large banks with assets over $300 million used to select the population and the interest rates will be downloaded from the Federal Reserve Bank and the FDIC's databases. The call reports will be downloaded from the FDIC's website. Some companies only retain current annual reports on their websites. Archive annual reports will be downloaded from the SEC's website.

Data Collection

The SEC is a regulatory agency that requires banks to comply with their policies and procedures as well as file annual financial data. Each company's financial data is made available to the public on the SEC's website and the company's website. To obtain data regarding the population's financial performance, the annual report is a valuable tool to utilize. The annual report contains forward-looking as well as historical information. Two of the most valuable

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statements contained within the annual report include the balance sheet and income statement because those statements contain information that is instrumental in determining the profitability of commercial banks (Dennis, 2006; Melumad & Nissim, 2008).

The balance sheet contains information regarding the company's investments (assets) as well as the cost of its obligations (liabilities) and the owner's capital. The income statement contains information regarding the allocation of resources. The income statement associates the bank's revenue and its expenses in arriving at net income (Dennis, 2006; Melumad & Nissim, 2008).

Call reports filed by banks illustrating the financial conditions and results of operations in compliance with GAAP and regulatory agencies are located on the Federal Reserve Bank's website. The FDIC's website also contain banks statistic which include the amount of deposits, reserves, net income as well as other valuable data for analysis such as the Uniform Bank Performance Report (UBPR)

Data Analysis

The SEC, Federal Reserve Bank and FDIC's databases will be utilized as well as company websites for this study to gather data for analysis. Data gathered from these websites as well as company websites include the annual reports and the consolidated reports of condition and income (call report). From the data gathered, analysis will be performed utilizing information from the balance sheets and income statements that is vital to the validity and integrity of the results generated. Elected financial and profitability ratios, such as return-on-equity, return-on-assets, and efficiency ratios, utilizing information mentioned above can be found in the annual reports.

Balance sheet information to be analyzed include total assets and total liabilities for liquidity position as stated in RQ6; nonperforming assets and charge-offs for credit risk as stated in Ha6; and long term assets and credit grade for credit quality stated in RQ7. Income statement information to be utilized include net earnings for revenue comparison as stated in RQ8; net interest margin (interest income – interest expense) for interest rate risk or sensitivity analysis based on interest rate changes as stated in Ho5 and Ha5; and earnings per share and EBIT for financial leverage analysis as stated in Ho3 and Ha3. To analyze capital adequacy as stated Ho4 and Ha4, Tier I capital, risk based and leverage ratios can be found on the annual reports and call reports. To analyze performance based on profitability ratios ROE and ROA as stated in Ho1, Ha1, Ho2 and Ha2, the annual reports will be utilized.

Table 1. Research Hypotheses

Hypotheses	Dependent Variable	Independent Variable	Test Analysis
Ho1	ROE	Net Earnings	Anova
Ha1	ROE	Net Earnings	Anova
Ho2	ROA	Net Earnings	Anova
Ha2	ROA	Net Earnings	Anova
Ho3	Financial Leverage	EPS/EBIT	Anova
Ha3	Financial Leverage	EPS/EBIT	Anova
Ho4	Well Capitalized (capital adequacy)	Tier I Capital Tier I Risk Based Leverage Capital	Anova
Ha4	Well Capitalized (capital adequacy)	Tier I Capital Tier I Risk Based Leverage Capital	Anova
Ho5	Net Int Margin	Interest Rates	Anova
Ha5	Net Int Margin	Interest Rates	Anova
Ho6	Credit Risk	Nonperforming Assets Charge-Offs	Anova
Ha6	Credit Risk	Nonperforming Assets Charge-Offs	Anova

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Descriptive Analysis

The initial steps for the analysis of financial performance of the banks selected for testing involve the generation of a descriptive statistics table utilizing SPSS software. The descriptive statistics table gives a summary of the mean and standard deviation for the sample from the data collected.

The mean is a statistical measure that represents the population. The mean is the average measure which is calculated by adding all values of a variable and dividing the sum of that variable by the number of observations in that case. The standard deviation is calculated based on the mean. The standard deviation is the square root measurement of distance between the mean and the observed data values. Any changes in the mean can impact the standard deviation measure (Norušis, 2006). Results generated from data analysis must be valid and reliable.

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Validity and Reliability

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Validity of the results of the test involves the verification of tools utilized to test the data or participants measured as designed (Cooper & Schindler, 2006). The results of the test will be tainted if the tools used do not perform as expected. According to Cooper and Schindler (2006), there are three classifications of validity: (a) content validity – involves the reasonableness with which investigative questions are measured; (b) criterion-related-validity – involves the accuracy of the measurement tool regarding future expected results; and (c) construct validity – looks at not only the tool chosen to perform the test but also the elements or concepts that underpin the functionality of the tool. A measurement tool should be both valid and reliable.

According to Cooper and Schindler (2006), reliability is the extent the measurement tools are consistent in performance. There are three characteristics of reliability: (a) stability – consist of multiple measures performing the same within a specified timeframe since the elements of each test are the same; (b) equivalence – involves measuring test results for comparability and consistency based on different aspects of the design changes such as a sample; and (c) internal consistency – the results of the tests are sectioned and analyzed for correlation and similarity. Regardless of the research, there are ethical factors to be considered involving different aspects of the research.

Ethical Considerations

Cooper and Schindler (2006) said, "Ethics are norms and standards of behavior that guide moral choices about our behavior and our relationships with others" (p. 116). Ethical standards are at the core of research practices, whether implemented or not. Researchers are held accountable for their decisions that would intentionally or unintentionally put participants at risk.

If participants are utilized in the research study, researchers should be upfront with participants regarding all aspects of the research study being conducted. Being forward with information about the study would give prospective researchers some aid during or after the study and it would also give participants a greater understanding about the goals and expected findings of the study as well as the opportunity to make their own choice whether or not to participate in the study.

Participants will not be utilized in this study. Secondary public data is being utilized in this study from the Federal Reserve Bank, FDIC, Security and Exchange Commission, Uniform Bank Performance Report and company websites; therefore, data integrity is the only ethical consideration. Because this study will utilize secondary data, the authenticity of the data could

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be called into question. However, the Federal Reserve Bank, FDIC, Security and Exchange Commission and Uniform Bank Performance Report's websites are maintained and monitored by the federal government. Since the government application systems are made available to the public as well as the international community, internal control procedures should have been taken to ensure the authenticity and reliability of the data. Data integrity is a necessary element in research because the data extract will be utilized for testing and the results could be tainted or unreliable. The results of the data analyzed for this study is in Chapter 4.

CHAPTER 4. RESULTS

The purpose of this comparative study was to evaluate earnings differences among U.S., U.K., and Japanese commercial banks by conducting statistical testing of the hypotheses. Variables selected for testing represented a combination of performance, leverage and risk components to address specific focal points of this study. A research question which addressed the liquidity position among U.S., U.K. and Japanese banks was analyzed in addition to the hypotheses tested because liquidity can impact business operations overall.

Liquidity is tied to performance and risk exposure. Governments in every country are responsibility for setting regulatory requirements. A high liquidity ratio indicates not only a highly liquid position which enables banks to meet their current obligation but also a decrease in risk exposure (Kim, 2008; Tetkas, Gunay, & Gunay, 2005). The following numerical codes were assigned to each country: (1) U.S., (2) U.K., and (3) Japan. The liquidity position of U.S. banks in comparison to U.K. and Japanese banks' is illustrated in Table 2 and Table 3.

Table 2. *Descriptive analysis of Liquidity position among U.S., U.K., and Japanese banks*

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
1	24	89.9725	32.39349	6.61229	76.2939	103.6511	47.43	156.03
2	26	22.9596	32.63415	6.40008	9.7784	36.1408	.00	108.37
3	24	106.7346	70.77628	14.44715	76.8484	136.6208	32.71	363.96
Total	74	71.8638	60.27433	7,00675	57.8994	85.8282	.00	363.96

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Table 3. *Analysis of Variance findings of Liquidity position*

Item		Sum of Squares	df	Mean Square	F	Sig.
Liquidity Position	Between Groups	99235.618	2	49617.809	21.226	.000
	Within Groups	165973.0	71	2337.647		
	Total	265208.6	73			

The results of the one-way ANOVA for analyzing liquidity indicated that there is a significant difference in the liquidity position among the U.S., U.K. and Japanese banks. The F statistic = 21.226 and the observed significance level (p value) = .000 which is < 0.05 significance level. A more in-depth analysis of liquidity revealed that U.S. commercial banks were more liquid than their competitors in 2006. However, for the period of 2007 through 2009, Japanese banks were more liquid than U.S. and U.K. commercial banks. Japanese banks' liquidity position continued to steadily increase from 2007 through 2009. Additionally, a post hoc test was performed to analyze the mean difference between groups. The U.K. group (.000) was found to be significantly difference from U.S. (.000) and Japanese (.000) groups. Hypotheses developed for analysis were based on the proposed relationships among variables of performance, leverage and risk:

Ho1: There is not a significant difference in the ROE of U.S., U.K. and Japanese banks.

Ha1: There is a significant difference in the ROE of U.S., U.K. and Japanese banks.

Ho2: There is not a significant difference in the ROA of U.S., U.K. and Japanese banks.

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Ha2: There is a significant difference in the ROA of U.S., U.K. and Japanese banks.

Ho3: There is not a significant difference in the leverage of U.S., U.K. and Japanese

banks.

Ha3: There is a significant difference in the leverage of U.S., U.K. and Japanese banks.

Ho4: There is not a significant difference in the well capitalized (capital capacity)

position of U.S., U.K. and Japanese banks.

Ha4: There is a significant difference in the well capitalized (capital capacity) position of

U.S., U.K. and Japanese banks.

Ho5: There is not a significant difference in the sensitivity of U.S., U.K. and Japanese

banks to changes in the interest rates.

Ha5: There is a significant difference in the sensitivity of U.S., U.K. and Japanese banks

to changes in the interest rates.

Ho6: There is not a significant difference in the credit risk of U.S., U.K. and Japanese

banks.

Ha6: There is a significant difference in the credit risk of U.S., U.K. and Japanese banks.

Data Collection and Data Analysis

Data relevant to this study was extracted from the Federal Reserve Bank, FDIC, SEC,

UBPR, IMF and company's websites. Reports listing large commercial banks with assets over

$300 million were housed on the Federal Reserve Bank's website. Because commercial banks

are required to file quarterly regulatory reports with the Federal Reserve Bank, each bank

observed within the scope of this study had four quarterly reports analyzed for each year. Each

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quarterly report consisted of different elements of company data such as bank name, city and state, number of branch offices and percentage of foreign ownership. The examination of each quarterly report also revealed the merger of several U.K. commercial banks into the Royal Bank of Scotland in September 2007. Each quarterly report was analyzed to determine the (1) number of foreign owned banks, (2) percent of foreign ownership and (3) selection of domestic banks.

The percentage of foreign ownership data was utilized in the selection of foreign-owned commercial banks from the U.K. and Japan that were 50 percent foreign-owned based on the scope of this study. After all the foreign-owned banks were identified based on the criteria within the scope, further analyses were performed to determine the country of ownership by searching each bank's website. After the U.K. and Japanese banks' country of ownership were determined, an excel spreadsheet was created for each country listing each bank that met the sample selection criteria. Different tabs were created in each excel spreadsheet based on the variables from the hypotheses. Financial data was extracted from the FDIC, UBPR, SEC and company's websites based on variables from the hypotheses.

Hypothesis Testing and Results

Hypothesis 1

Hypothesis 1 of this study stated there is no significant difference in the ROE of U.S., U.K., and Japanese banks. ROE is a performance indicator of profit maximization for shareholders (De Wet & Du Toit, 2007). ROE was the dependent variable and earnings the independent variable. All banks' ROE for 2006, 2007, 2008, and 2009 were summed and averaged per year as well as cumulatively for comparison. The following numerical codes were assigned to each country: (1) U.S., (2) U.K., and (3) Japan. A one-way ANOVA was used to test the hypothesis.

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The results of the one-way ANOVA for Hypothesis 1 indicate no significant difference in the ROE among the U.S., U.K. and Japanese banks; therefore, the null hypothesis cannot be rejected. The F statistic = 1.443 and the observed significance level (p value) = .243 which is > 0.05 significance level. The results are illustrated in Table 4 and Table 5. A more in-depth look at earnings revealed that for the period of 2006 through 2009, U.S. commercial banks were more profitable which resulted in a higher average ROE than U.K. and Japanese banks even though 2008 and 2009 generated low earnings and returns for all three countries. Cumulative analysis also revealed that U.S. commercial banks were more profitable than U.K and Japanese banks based on a high ROE. Additionally, a post hoc test was performed to analyze the mean difference between groups. There was no significant difference found between groups.

Table 4. *Descriptive analysis between ROE and Earnings*

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
1	24	11.2279	6.81297	1.39069	8.3511	14.1048	-4.01	21.60
2	26	6.6746	16.32109	3.20083	.0824	13.2668	-19.37	68.45
3	24	6.2988	7.38241	1.50693	3.1814	9.4161	-8.18	24.67
Total	74	8.0295	11.31472	1.31531	5.4081	10.6509	-19.37	68.45

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Table 5. *Analysis of Variance findings between ROE and Earnings*

Item		Sum of Squares	Df	Mean Square	F	Sig.
ROE						
	Between Groups	365.137	2	182.569	1.443	.243
	Within Groups	8980.531	71	126.486		
	Total	9345.669	73			

Hypothesis 2

Hypothesis 2 of this study stated there is no significant difference in the ROA of U.S., U.K., and Japanese banks. ROA is also a performance indicator of profit maximization for shareholders. ROA illustrate a company's utilization of and ability to allocate its resources to generate a profit (Ahmad, Ariff & Skully, 2008; Al-Tamimi & Lootah, 2006; Burns, Sale & Stephan, 2008; Milbourn & Haight, 2005). All banks' ROA for 2006, 2007, 2008, and 2009 were summed and averaged per year as well as cumulatively for comparison.

The results of the one-way ANOVA for Hypothesis 2 indicated no significant difference in the ROA among the U.S., U.K. and Japanese banks; therefore, the null hypothesis cannot be rejected. The F statistic = 1.288 and the observed significance level (p value) = .282 which is > 0.05 significance level. The results are illustrated in Table 6 and Table 7. Even though the earnings for U.S. commercial banks illustrated a profit which resulted in a higher average ROE in comparison to U.K. and Japanese banks, ROA analysis revealed that U.K. banks outperformed the U.S. and Japanese banks in the utilization and allocation of their resources. Additionally, a post hoc test was performed to analyze the mean difference between groups. There was no

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significant difference found between groups. The following numerical codes were assigned to each country: (1) U.S., (2) U.K., and (3) Japan. A one-way ANOVA was used to test the ROA hypothesis.

Table 6. *Descriptive analysis between ROA and Earnings*

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
1	24	.9888	.64206	.13106	.7176	1.2599	-.31	2.10
2	26	3.4088	10.02589	1.96624	-.6407	7.4584	-2.33	11.63
3	24	1.1325	1.42661	.29121	.5301	1.7349	-1.48	3.90
Total	74	1.8857	6.03925	.70205	.4865	3.2849	-2.33	44.63

Table 7. *Analysis of Variance findings between ROA and Earning*

Item		Sum of Squares	Df	Mean Square	F	Sig.
ROA						
	Between Groups	93.243	2	46.622	1.288	.282
	Within Groups	2569.255	71	36.187		
	Total	2662.498	73			

Hypothesis 3

Hypothesis 3 stated there is no significant difference in the leverage of U.S., U.K., and Japanese banks. A company's leverage ratio illustrates its utilization of debt to equity which

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influences its risk exposure and returns. A high leverage ratio indicates an increase usage of debt relative to equity, increase of risk exposure and a higher expect return. All banks' leverage for 2006, 2007, 2008, and 2009 were summed and averaged per year for comparison. Because several U.K. and Japanese banks were subsidiaries instead of holding companies, earnings per share data for those companies were not available for utilization in this test. The following numerical codes were assigned to each country: (1) U.S., (2) U.K., and (3) Japan. A one-way ANOVA was used to test the leverage variable.

The results of the one-way ANOVA for Hypothesis 3 indicated no significant difference in leverage among the U.S., U.K. and Japanese banks; therefore, the null hypothesis cannot be rejected. The F statistic = .716 and the observed significance level (p value) = .492 which is > 0.05 significance level. The results are illustrated in Table 8 and Table 9. A more in-depth analysis of leverage in regards to the level of debt compared to equity revealed that the U.S. commercial banks debt-to-equity ratio was higher than U.K and Japanese banks'. Additionally, a post hoc test was performed to analyze the mean difference between groups. There was no significant difference found between groups.

Table 8. *Descriptive analysis between EBIT and EPS*

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
1	24	1.2696	7.74119	1.58016	-1.9992	4.5384	-11.90	27.91
2	36	.0011	.00622	.00104	-.0010	.0032	.00	.03
3	24	.1721	1.36486	.27860	-.4042	.7484	-3.47	4.54
Total	84	.4124	4.17430	.45545	-.4935	1.3183	-11.90	27.91

Table 9. *Analysis of Variance findings between EBIT and EPS*

Item		Sum of Squares	Df	Mean Square	F	Sig.
Leverage						
	Between Groups	25.110	2	12.555	.716	.492
	Within Groups	1421.145	81	17.545		
	Total	1446.255	83			

Hypothesis 4

Hypothesis 4 stated there is no significant difference in the well capitalized position of U.S., U.K, and Japanese banks. A well capitalized position, within the FDIC's criteria illustrated in Table 12, consists of a Tier I risk-based capital, leverage and total risk-based capital. The FDIC established risk categories for insured financial institutions, such as Risk Category I, which consist of well capitalized institutions. Within the risk categories, the FDIC established capital ratios, such as leverage, tier 1 risk-based capital and total risk-based capital, which represents the required percentage of capital insured financial institutions are required to maintain or exceed in order to cover any present or potential future losses ("Capital Requirements", 2011). The FDIC is a government agency that houses deposits of financial institutions as well as other financial data. The FDIC's website is maintained and monitored by the federal government. All banks' well capitalized positions for 2006, 2007, 2008, and 2009 were summed and averaged per year as well as cumulatively for comparison. The following numerical codes were assigned to each country: (1) U.S., (2) U.K., and (3) Japan. A one-way ANOVA was used to test the well capitalized variables.

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The results of the one-way ANOVA for Hypothesis 4 indicated a significant difference in leverage, Tier 1 and total risked based capital among the U.S., U.K. and Japanese banks; therefore, the null hypothesis can be rejected. Leverage F statistic = 8.027 and the observed significance level (p value) = .001 which is < 0.05 significance level. Tier 1 F statistic = 9.657 and the observed significance level (p value) = .000 which is < 0.05 significance level. Total Risked Based F statistic = 8.638 and the observed significance level (p value) = .000 which is < 0.05 significance level. The results are illustrated in Table 10 and Table 11.

A more in-depth analysis of well capitalized or capital capacity of the sample for the period of 2006 through 2009 revealed that in 2007 the U.K. commercial banks which merged into the Royal Bank of Scotland were the only individual banks whose capital capacity fell below the FDIC required level of capital for commercial banks. Also for the period of 2006 through 2009, Japanese banks' capital position outperformed U.S. and U.K. banks'. Cumulative analysis generated the same results as the yearly results which indicated that Japanese banks had more than enough capital to cover any present and future losses due to risk exposure. Additionally, a post hoc test was performed to analyze the mean difference between groups. There was a significant difference found between U.S. and Japanese groups in regards to leverage (.001), tier 1 (.002) and total risk based capital (.003).

Table 10. Descriptive analysis among Leverage, Tier 1 and Total Risk Based Capital

Item		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
Leverage	1	24	6.4679	.55777	.11386	6.2324	6.7034	5.85	8.30
	2	26	15.5927	17.69689	3.47065	8.4448	22.7406	3.07	62.97
	3	24	21.4117	13.54269	2.76439	15.6931	27.1302	8.13	57.18
	Total	74	14.5205	14.22944	1.65414	11.2238	17.8172	3.07	62.97
Tier 1	1	24	8.5479	1.63417	.33357	7.8579	9.2380	6.52	14.39
	2	26	20.8227	23.87757	4.68278	11.1783	30.4671	4.11	75.33
	3	24	45.6563	46.09712	9.40954	26.1911	65.1214	8.21	150.05
	Total	74	24.8958	33.18234	3.85737	17.2081	32.5835	4.11	150.05
Total Risk Based	1	24	12.0425	1.51180	.30859	11.4041	12.6809	10.61	17.04
	2	26	22.4996	23.02850	4.51626	13.1982	31.8010	5.27	75.33
	3	24	46.3504	45.61091	9.31029	27.0906	65.6102	10.47	150.05
	Total	74	26.8435	32.27436	3.75182	19.3662	34.3209	5.27	150.05

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Table 11. Analysis of Variance findings among Tier 1, Leverage and Total Risk Based Capital

Item		Sum of Squares	Df	Mean Square	F	Sig.
Leverage						
	Between Groups	2725.864	2	1362.932	8.027	.001
	Within Groups	12054.958	71	169.788		
	Total	14780.822	73			
Tier 1						
	Between Groups	17189.335	2	8594.668	9.657	.000
	Within Groups	63188.612	71	889.980		
	Total	80377.947	73			
Total RB						
	Between Groups	14880.748	2	7440.374	8.638	.000
	Within Groups	61158.542	71	861.388		
	Total	76039.290	73			

Table 12. FDIC Well Capitalized (capital sufficiency) regulatory requirements

Well Capitalized	Tier 1 Leverage Ratio	5.0
	Tier 1 Risk-Based Ratio	6.0
	Total Risk-Based Ratio	10.0

Hypothesis 5

Hypothesis 5 stated that there is no significant difference in the sensitivity of U.S., U.K, and Japanese banks based on the changes in interest rates. The net interest margin is the difference between the interest income and interest expense. Based on changes in the interest income and/or interest expense due to changes in the interest rates, the net interest margin can swing due to a company's sensitivity (Christian, Moffitt & Suberly, 2008). All banks' net interest margin for 2006, 2007, 2008, and 2009 were summed and averaged per year as well as cumulatively for comparison. The following numerical codes were assigned to each country: (1) U.S., (2) U.K., and (3) Japan. A one-way ANOVA was used to test the net interest margin hypothesis.

The results of the one-way ANOVA for Hypothesis 5 indicated no significant difference in sensitivity among the U.S., U.K. and Japanese banks; therefore, the null hypothesis cannot be rejected. F statistic = 3.856 and the observed significance level (p value) = .026 which is > 0.05 significance level. The results are illustrated in Table 13 and Table 14. A more in-depth analysis revealed an inverse relationship. As the annual interest rate increased for the period of 2006 through 2009, the net interest margin decreased for U.S. and U.K. commercial banks. However, in 2007, as the annual interest rate increased, Japanese banks' net interest margin also increased. Additionally, a post hoc test was performed to analyze the mean difference between groups. There was no significant difference found between groups.

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Table 13. *Descriptive analysis of Net Interest Margin*

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
1	24	3.0692	.94522	.19294	2.6700	3.4683	1.75	4.84
2	26	4.1000	3.11972	.61183	2.8399	5.3601	1.25	11.62
3	24	2.5017	1.31989	.26942	1.9443	3.0590	.38	6.21
Total	74	3.2473	2.14841	.24975	2.7496	3.7450	.38	11.62

Table 14. Analysis of Variance findings for Net Interest Margin

Item		Sum of Squares	Df	Mean Square	F	Sig.
Net Int Margin	Between Groups	33.009	2	16.505	3.856	.026
	Within Groups	303.933	71	4.281		
	Total	336.943	73			

Hypothesis 6

Hypothesis 6 stated there is no significant difference in the credit risk of U.S., U.K, and Japanese banks. The credit risk based on non-performing assets to charge-offs indicate a company's risk exposure due to consumer default of loans or other type of loans companies invest in (Tektas, Gunnay & Gunnay, 2005). An increase in the credit exposure indicates a need for an increase in provisions for loans losses in order to cover any losses that might occur. The results are illustrated in Table 15 and Table 16. All banks' credit risk for 2006, 2007, 2008, and

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2009 were summed and averaged per year as well as cumulatively for comparison. The following numerical codes were assigned to each country: (1) U.S., (2) U.K., and (3) Japan. A one-way ANOVA was used to test credit risk hypothesis. .

The results of the one-way ANOVA for Hypothesis 6 indicated no significant difference in the credit risk among the U.S., U.K. and Japanese banks; therefore, the null hypothesis cannot be rejected. The F statistic = 1.2220 and the observed significance level (p value) = .301 which is > 0.05 significance level. An in-depth analysis revealed that Japan had the lowest percentage of credit risk in 2006 through 2009 as well as cumulatively in comparison to its competitors. The U.S. banks had the largest percentage of credit risk in 2006 through 2009 and cumulatively. Additionally, a post hoc test was performed to analyze the mean difference between groups. There was no significant difference found between groups.

Table 15. *Descriptive between Nonperforming and Charge-Offs*

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
1	24	.9692	.93185	.19021	.5757	1.3627	.02	3.60
2	26	1.2065	1.92994	.37849	.4270	1.9861	.00	8.17
3	24	.5679	1.27343	.25994	.0302	1.1056	-.14	5.67
Total	74	.9224	1.45975	.16969	.5842	1.2606	-.14	8.17

Table 16. *Analysis of Variance findings between Nonperforming and Charge-offs*

Item		Sum of Squares	df	Mean Square	F	Sig.
Credit Risk	Between Groups	5.167	2	2.584	1.2220	.301
	Within Groups	150.386	71	2.118		
	Total	155.553	73			

Conclusion

The Anova statistical testing of the hypotheses which consisted of performance, leverage and risk variables illustrated earnings differences among U.S., U.K. and Japanese banks. The results of this study also illustrated how factors other than earnings could influence performance. For instance, although U.S. commercial banks generated higher earnings and returns on equity or profitability based on equity in comparison to their counterparties in Hypothesis 1, U.K. commercial banks maintained their competitive edge through the utilization and allocation of resources yielding higher returns on assets in Hypothesis 2. ROA is influenced by leverage.

Hypothesis 3 illustrated that there was no significant leverage difference among the U.S., U.K. and Japanese banks; however, the debt-to-equity ratio revealed that a significant difference existed. A high debt-to-equity ratio decrease financial leverage and increase risk exposure. From a debt-to-equity perspective, U.S. commercial banks had a higher debt ratio than their counterparties which indicates a lower ROA and an increase in risk as noted in Hypothesis 2 and 6.

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Hypothesis 4 revealed that the well capitalized position or capital capacity of Japanese banks outperformed their counterparties by having a sufficient amount of capital to cover any losses both present and future. The capitalized position of Japanese banks coincides with the findings of the liquidity research question which illustrated that Japanese banks were more liquid than U.S. and U.K. banks in their ability to take care of their current obligation. In both findings, Japanese banks had the ability to reduce their risk exposure.

According to Tektas, Gunnay and Gunnay (2005), risk is inherent in business and banks are sensitive to changes in the interest rate. Findings from Hypothesis 5 of this study regarding net interest margin revealed the existence of an inverse relationship and that the countries represented in this study are sensitive to interest rate changes. During 2006 through 2009, as the annual interest rate increased, the net interest margin of the sample decreased. However, in 2007, Japanese banks' net interest margin increased as the interest rate increased.

According to the results of Hypothesis 6 regarding credit risk, Japanese banks had the lowest credit risk in comparison to U.S. and U.K. banks' during the period of 2006 through 2009. The credit risk findings for Japanese banks' are interrelated to the findings in Hypothesis 4 regarding the well capitalized position of Japanese banks in comparison to their counterparties. Japanese banks were found to be well capitalized or have the capital capacity to cover any present and future losses which reduce risk exposure. Additionally, a post hoc test was performed on each hypothesis. The only significant difference found between groups was in regards to liquidity and well capitalized position (capital capacity).

This study has not only illustrated earnings differences among U.S., U.K. and Japanese commercial banks but also the interrelation among variables. This study has also illustrated that earnings along with other variables can give a clearer and more in-depth perspective of the

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relationship among variables. The relationship among performance, leverage and risk has also been illustrated in the hypotheses tested in this study; for instance, during 2006 through 2009 U.S. banks had a higher ROE, credit risk and debt ratio in comparison to U.K. and Japanese banks but U.K. banks' ROA was higher than U.S. banks.

CHAPTER 5. DISCUSSION, RESULTS, RECOMMENDATIONS

This study explored earnings differences among U.S., U.K and Japanese commercial banks. The exploration of this study was undertaken to fill in gaps from previous studies regarding earnings by utilizing variables of performance, leverage and risk. Investigating the dilemma faced by U.S. banks' to remain not only profitable but also a competitive advantage among their competitors was a consideration of this study. The variables of the hypotheses selected for analyses were based on the focus of the research regarding earnings, performance, leverage and risk. The hypotheses tested in this study included:

Ho1: There is not a significant difference in the ROE of U.S., U.K. and Japanese banks.

Ha1: There is a significant difference in the ROE of U.S., U.K. and Japanese banks.

Ho2: There is not a significant difference in the ROA of U.S., U.K. and Japanese banks.

Ha2: There is a significant difference in the ROA of U.S., U.K. and Japanese banks.

Ho3: There is not a significant difference in the leverage of U.S., U.K. and Japanese banks.

Ha3: There is a significant difference in the leverage of U.S., U.K. and Japanese banks.

Ho4: There is not a significant difference in the well capitalized (capital capacity) position of U.S., U.K. and Japanese banks.

Ha4: There is a significant difference in the well capitalized (capital capacity) position of U.S., U.K. and Japanese banks.

Ho5: There is not a significant difference in the sensitivity of U.S., U.K. and Japanese

banks to changes in the interest rates.

Ha5: There is a significant difference in the sensitivity of U.S., U.K. and Japanese banks

to changes in the interest rates.

Ho6: There is not a significant difference in the credit risk of U.S., U.K. and Japanese

banks.

Ha6: There is a significant difference in the credit risk of U.S., U.K. and Japanese banks.

Conceptual Framework and Results

The conceptual framework of this study analyzed earnings differences among large commercial banks from the U.S., U.K and Japan with assets over $300 million influenced by different factors such as the utilization of resources and environmental forces. Key variables of performance, leverage and risk along with liquidity were utilized for analyses based on the focus of this study. Within the conceptual framework, ANOVAs were performed on the hypotheses and the liquidity research question. Further analyses were also performed on leverage utilizing the debt ratio. The results generated from the statistical analyses of the hypotheses revealed how external and internal forces can influence earnings as well as a relationship among the variables selected for analyses illustrated in Figure 2.
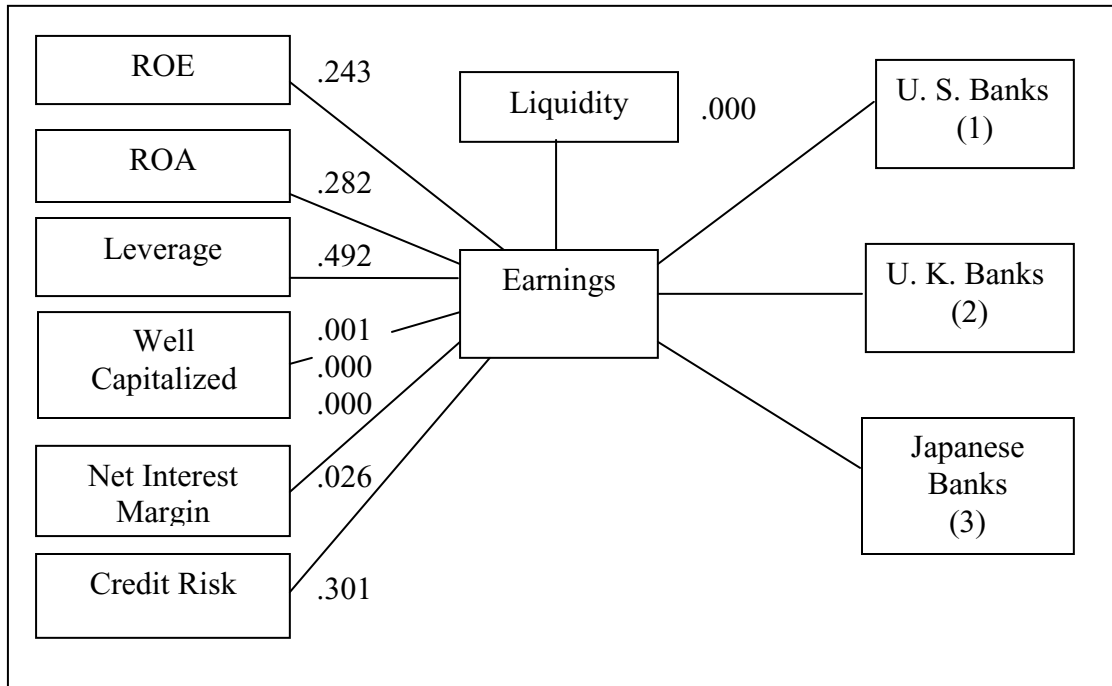
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Figure 2. Conceptual framework with significance

Conclusion

This study provided findings of earnings differences among U.S., U.K, and Japanese banks by focusing on three areas: (1) performance, (2) leverage, and (3) risk. The hypotheses and the research question analyzed in this study were based on the focus of the study. The ANOVA statistical testing was a viable measuring tool and essential in obtaining the objectives of this study in the analyses of differences.

Performance

Liquidity

Liquidity is a company's ability to meet its current obligations with cash generated from the liquidation of its short term assets. Liquidity is calculated by dividing total assets by total liabilities. A company with a high liquidity ratio is not only capable of meeting its current obligations and reducing its risk exposure but also maintaining and increasing its competitive

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position (Bocker & Hillebrand, 2009; Kim, 2008; Milbourn & Haight, 2005; Roma, 2006; Tetkas, Gunay, & Gunay, 2005; "Financial Ratios", n.d.).

The ANOVA results of the liquidity research question indicated a significant difference among U.S., U.K. and Japanese banks. The observed significance level (p value) = .000 which is < 0.05 significance level. Except for 2006, Japanese banks were found to be more liquid than U.S. and U.K. banks from 2007 through 2009. These findings indicated that Japanese commercial banks had enough convertible short term assets to cover their current obligations which enabled them to reduce their risk exposure and maintain a competitive advantage over U.S. and U.K. banks. Performance metrics also included ROE and ROA.

ROE and ROA

ROE is a performance indicator of profit maximization for shareholders (De Wet & Du Toit, 2007). ROA is also a performance indicator that illustrates a company's utilization of and ability to allocate its resources to generate a profit (Ahmad, Ariff & Skully, 2008; Al-Tamimi & Lootah, 2006; Burns, Sale & Stephan, 2008; Milbourn & Haight, 2005). ROE and ROA results revealed no significant difference among U.S., U.K. and Japanese banks; therefore, the null hypotheses were not rejected. The observed significance level (p value) was .243 and .282, respectfully. In-depth analyses illustrated how U.S. commercial banks generated a higher income and ROE during 2006 through 2009 but U.K. banks generated a more profitable ROA through the management, utilization and allocation of their resources during the same period.

<div align="center">Leverage</div>

Leverage is a company's utilization of debt verses equity to fund projects. Leverage can also increase a company's competitive edge, investment returns as well as increase risk exposure.. Leverage results did not reveal any significant difference among U.S, U.K. and

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Japanese banks. The observed significance level (p value) was .492 which is >.05 significance level; therefore, the null hypothesis was not rejected. Because data for several banks from the U.K and Japan was not available for analysis, the debt ratio which is also another method for analyzing leverage was examined to give more insight regarding the sample's leverage positions. An in-depth analysis of the debt ratio indicated that U.S. commercial banks had the highest debt ratio compared to U.K and Japanese banks'. The high debt ratio of U.S. commercial banks indicates a high leverage position which influences high returns and an increase in risk as illustrated in the results from the return on equity and credit risk hypotheses. Japanese banks were found to have the lowest debt ratio. A well capitalized position is essential in order to cover any potential loss.

Risk

Well Capitalized

A well capitalized position represents the sufficient amount of capital required by the FDIC for insured institutions to maintain to cover any potential loss. A well capitalized position can also decrease risk exposure. The results for a well capitalize position among U.S, U.K and Japanese banks indicated a significant difference in leverage, tier 1 and total risked based capital. The observed significance level (p value) for each variable was less than the .05 significance level. Leverage had a $p =.000$, tier I had a $p =.001$ and total risk based capital had a $p =.000$; therefore, the null hypotheses were rejected. A more in-depth analysis illustrated that Japanese commercial banks were better capitalized than their counterparties which enabled them to have the lowest credit risk. Banks' sensitivity to changes in the interest rate influences net interest margin.

Net Interest Margin

The net interest margin is the difference between the interest income and interest expense. The net interest margin can swing due to a company's sensitivity to changes in the interest rates (Christian, Moffitt & Suberly, 2008). The interest rate margin analysis revealed no significant difference in sensitivity among the U.S., U.K. and Japanese banks; therefore, the null hypothesis was not rejected. The observed significance level (p value) = .026 which is > 0.05 significance level. As the annual interest rate increased during the period of 2006 through 2009, the net interest margin decreased for U.S. and U.K. commercial banks. However, in 2007, as the annual interest rate increased, Japanese banks' net interest margin also increased. The results indicated an inverse relationship which is similar to the conclusion reached by DePrince and Morris (2007) in their investigation of interest rates and net interest margin as it related to profitability.

Credit Risk

Credit risk is the risk that consumers will default on loans or other type of investment products. Credit risk analysis indicated no significant difference among the U.S., U.K. and Japanese banks; therefore, the null hypothesis was not rejected. The observed significance level (p value) = .301 which is > 0.05 significance level. An in-depth analysis revealed that Japan had the lowest percentage of credit risk from 2006 through 2008 and U.S. banks had the largest percentage. U.S. commercial banks' high percentage of credit risk is related to their high returns on equity and high leverage position as illustrated in hypotheses 1 and 3 of this study.

This study investigated earnings differences among U.S., U.K and Japanese banks utilizing performance, leverage and risk variables. The results of this study revealed not only how external and internal forces can influence earnings and performance but also a relationship

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among variables. For example: (a) an increase in earnings influenced a high return on equity; (b) a high leverage position or debt ratio also influenced a high return on equity and an increase in risk exposure; and (c) a well capitalized position to cover any current and future potential loss influenced a decrease in credit risk. Additionally, a post hoc test was performed on each hypothesis. The only significant difference found between groups was in regards to liquidity and well capitalized position (capital capacity).

This study also attempted to addressed some gaps from previous studies such as: (a) the assumption that interest rate sensitivity of net interest margin was different among institutions of different countries (DePrince & Morris, 2007); (b) the utilization of ROE and ROA as performance measures instead of operational efficiency components such as operational income and expense (Al-Tamimi & Lootah, 2006); and (c) extend the sample to include the U.S. and Japan as well as utilize credit risk variables instead overhead costs to analyze performance (Naaborg & Lensink, 2008). The findings of this study did not reveal any significant difference in the sensitivity of the net interest margin among different countries. The utilization of credit risk in this study illustrated not only how credit risk influenced performance but also the relationship among credit risk, capital capacity and leverage.

The findings of this study revealed that external and internal forces influenced earnings differences among U.S., U.K. and Japanese commercial banks. For example, management's decisions regarding the utilization and allocation of resources influenced performance, revenue growth and returns. The findings of this study also illustrated the interrelation among variables and their influence on performance and earnings. Overall, the findings of this study revealed that U.S. commercial banks were more profitable in regards to revenue growth, return on equity and leverage than U.K. and Japanese banks; U.K. commercial banks managed their resources better

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than U.S. and Japanese banks; and Japanese banks were well capitalized more than U.S. and U.K banks which influenced a decrease in their credit risk. Based on the findings of this study regarding earnings and components that influence earnings as well as the interrelation among variables, future research regarding earnings analysis is recommended. As with any research, limitations of the study should be explored.

Limitations of this Study

Data Availability

During 2007, several U.K. commercial banks merged into the Royal Bank of Scotland. Because of the mergers that occurred, data for those commercial banks were unavailable because the financial data of the subsidiary was merged into the financial data of the holding company (parent company). In addition to the mergers, some banks included in the sample were subsidiaries instead of holding companies and some of the data for those subsidiaries were also unavailable.

Representation of the Population

Another limitation of this study was the representation of the population. The scope of this study was limited to insured large commercial banks with assets over $300 million. However, a better representation of the population could have been selected by including uninsured large commercial banks with comparable assets. The inclusion of uninsured large commercial banks in this study could have influenced the results of the analyses as well as the overall performance findings among U.S., U.K. and Japanese commercial banks.

Study Relevance

The relevance of this study could also be considered a limitation to small commercial banks because the scope of this study included only large insured commercial banks. Even

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though some knowledge generated from this research would be beneficial to all banks, the focus of this study was centered on the actions and decision-making of the management of large insured commercial banks with asset size over $300 million.

Also, the relevance of this study might not be beneficial to other foreign countries not a part of this study. There are different compliance regulations as well as financial reporting criteria for different countries. Some requirements by regulatory agencies for U.S. domestic banks and foreign-owned commercial banks doing business in the U.S. might not be the same for commercial banks operating other foreign countries.

Percentage of Foreign Ownership

The foreign ownership percentage in this study was limited to 50% or greater. The limitation of the percentage of ownership eliminated other foreign-owned commercial banks doing business in the U.S. that could have been more comparable in asset size and earnings to the large U.S. commercial banks selected for analysis. Also the limitation of foreign-ownership percentage helped to influence the results of performance among competitors by limiting the selected sample.

Recommendations

Future Research

Future research could extend this study by examining earnings and performance measurements as a cross-sectional study focusing on one particular point in time. It is possible that by focusing on a particular point in time instead of a trend over time a better representation of the sample could be selected. Also, examining a point in time could have a positive impact on data analysis by minimizing data limitation.

Future research could also extend this study by limiting the sample to include only holding companies (parents). Knowledge regarding earnings and performance at the parent's level could help management gain a better understanding of their competitive position based on comparable industry peer groups. Management could also gain a better insight into the impact their decisions and actions have on their subsidiaries. Also because holding companies (parents) report combined financial data, certain information at the subsidiaries or affiliates' level is unavailable.

Findings from this study revealed a relationship between earnings and debt but did not analyze how much debt resulted in negative earnings. This study could also be extended by adding other research questions focused on analyzing the relationship between earnings and debt. Because earnings influence returns, understanding at what point the level of debt influence a decrease in leverage and negative earnings will help management to be more knowledgeable regarding their investment decisions into risky assets as well as how much capital and provisions to maintain to cover potential losses.

This study could be extended by focusing on small commercial banks instead of large insured commercial banks. Small commercial banks could benefit from the knowledge gained through analyzing earnings and performance. Management could gain insight on how their decisions regarding the allocation and utilization of resources can influence profitability. Small commercial banks could also acquire knowledge regarding capital regulatory requirements in order to remain in compliance with regulatory agencies.

Another area in which this study could be extended is to compare earnings difference and performance among domestic commercial banks and foreign-owned commercial banks operating outside the U.S. An investigation of those competitors could generate interesting

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findings by focusing on internal forces like earnings management and management's aggressiveness which can influence earnings, returns, leverage and risk. Knowledge regarding operating outside the U.S. would be beneficial to those commercial banks that want to expand geographically or become involved in joint ventures.

An extension of this study could also be performed by investigating earnings and performance among U.S., U.K. and Japanese banks by focusing on their compliance regulatory structure such as the IFRS (International Financial Reporting Standards) and GAAP. An analysis focusing on their regulatory structure can help domestic banks to understand what changes will be implemented when the IFRS becomes the mandatory accounting guideline for domestic commercial banks as well as the challenges that could arise. Knowledge from this study could also be beneficial to both international and domestic banks because some regulations as well as laws that govern U.S. domestic banks do not apply to all international banks operating outside the U.S.

This study could also be extended by examining earnings differences based on efficiency. Comparing the efficiency ratio of each country can help domestic and foreign-owned banks' management to understand the influence their decisions have on the overall operational efficiency of the firms and how the efficiency of operations influence performance. For potential investors, understanding how efficient banks are operating can impact their investment decisions.

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APPENDIX A. SAMPLE CONSOLIDATED ASSETS

Insured U.S. - Chartered Commercial Bank that have Consolidated Assets of $300 million or more

Bank Name	Bank ID	% Fwn Own	2006	2007	2008	2009	Cum Avg Total
J P Morgan Chase	852218		4,591,196	5,049,778	6,300,521	6,649,714	5,647,802
Bank of America	480228		4,646,909	5,079,676	5,513,485	5,810,235	5,262,576
Citibank	476810		3,362,530	4,694,829	4,954,995	4,657,076	4,417,360
Wells Fargo	451965		1,631,139	1,740,878	2,044,024	2,248,259	1,916,075
U.S. Bank	504713		855,189	899,587	1,017,644	1,055,291	956,928
Bank of NY Mellon	541101		358,720	419,961	672,267	522,823	526,692
Total U.S. Banks			15,477,698	17,886,716	20,504,944	21,078,407	18,727,434
Barclays BK	2980209	100	47,636	24,267	38,222	48,679	39,701
HSBC BK NV	2129008	64	8,933	7,556	7,159	7,475	7,781
HSBC BK USA	413208	100	659,958	703,965	728,941	672,175	691,260
RBS Citizens BK	3303298	100	67,981	295,270	525,207	492,549	345,252
Charter BK	897273	100	182,262	92,331	0.00	0.00	68,648
Citizens BK	3041983	100	6,578	3,110	0.00	0.00	2,422
Citizens BK RI	1000409	100	55,431	29,091	0.00	0.00	21,131
RBS Nat BK	3295928	80	2,019	1,022	0.00	0.00	760
Citizens BK of MA	14409	100	142,478	70,873	0.00	0.00	53,338
Total U.K. Banks			1,173,276	1,227,485	1,299,529	1,220,878	1,230,292
Union BK of CA	212465	62	201,345	215,413	249,809	304,738	242,826
Sumitomo BK	925411	100	2,002	3,034	2,954	3,422	2,853
Mizuho Corp of CA	742560	100	2,825	3,015	2,100	1,223	2,291
Manufacturers BK	930965	100	6,887	7,658	8,279	7,703	7,632
Mizuho Corp of USA	229913	100	12,950	12,074	13,775	11,914	12,678
BK of Tokyo	968605	100	17,371	16,147	16,999	16,341	16,715
Total Japan Banks			243,380	257,341	293,916	345,341	284,995

Source: Federal Reserve Bank (2011)

APPENDIX B. ANOVA CUMULATIVE ANALYSIS

Table B1. Cumulative *ANOVA between ROE and Earnings*

Item		Sum of Squares	Df	Mean Square	F	Sig.
ROECum						
	Between Groups	152.757	2	76.379	1.195	.326
	Within Groups	1150.937	18	63.941		
	Total	1303.694	20			

Hypothesis 1 of this study stated there is no significant difference in the ROE of U.S., U.K., and Japanese banks. The results of the cumulative one-way ANOVA for Hypothesis 1 indicate no significant difference in the ROE among the U.S., U.K. and Japanese banks; therefore, the null hypothesis cannot be rejected. The F statistic = 1.195 and the observed significance level (p value) = .326 which is > 0.05 significance level. The results are illustrated in Table B1.

Table B2. Cumulative *ANOVA between ROA and earnings*

Item		Sum of Squares	Df	Mean Square	F	Sig.
ROACum						
	Between Groups	9.689	2	4.845	.228	.799
	Within Groups	382.757	18	21.264		
	Total	392.446	20			

Hypothesis 2 of this study stated there is no significant difference in the ROA of U.S., U.K., and Japanese banks. The results of the cumulative one-way ANOVA for Hypothesis 2 indicated no significant difference in the ROA among the U.S., U.K. and Japanese banks; therefore, the null hypothesis cannot be rejected. The F statistic = .228 and the observed significance level (p value) = .799 which is > 0.05 significance level. The results are illustrated in Table B2.

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Table B3. Cumulative *ANOVA between leverage and earnings*

Item		Sum of Squares	Df	Mean Square	F	Sig.
Leverage						
	Between Groups	6.267	2	3.134	.551	.586
	Within Groups	102.380	18	5.688		
	Total	108.647	20			

Hypothesis 3 stated there is no significant difference in the leverage of U.S., U.K., and Japanese banks. The results of the cumulative one-way ANOVA for Hypothesis 3 indicated no significant difference in leverage among the U.S., U.K. and Japanese banks; therefore, the null hypothesis cannot be rejected. The F statistic = .551 and the observed significance level (p value) = .586 which is > 0.05 significance level. The results are illustrated in Table B3.

Table B4. Cumulative ANOVA among tier 1, leverage and total risk based capital

Item		Sum of Squares	Df	Mean Square	F	Sig.
Leverage						
	Between Groups	4878.985	2	2439.493	2.866	.083
	Within Groups	15321.589	18	851.199		
	Total	20200.575	20			
Tier 1						
	Between Groups	726.547	2	363.273	2.419	.117
	Within Groups	2702.751	18	150.153		
	Total	3429.297	20			
Total RB						
	Between Groups	4429.592	2	2214.796	2.680	.096
	Within Groups	14876.502	18	826.472		
	Total	19306.092	20			

Hypothesis 4 stated there is no significant difference in the well capitalized position of U.S., U.K, and Japanese banks. The results of the cumulative one-way ANOVA for Hypothesis 4 indicated no significant difference in leverage, Tier 1 and total risked based capital among the U.S., U.K. and Japanese banks; therefore, the null hypothesis cannot be rejected. Leverage F statistic = 2.866 and the observed significance level (p value) = .083 which is > 0.05 significance level. Tier 1 F statistic = 2.419 and the observed significance level (p value) = .117 which is >

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0.05 significance level. Total Risked Based F statistic = 2.680 and the observed significance

level (p value) = .096 which is > 0.05 significance level. The results are illustrated in Table B4.

Table B5. Cumulative *ANOVA between net interest margin and earnings*

Item		Sum of Squares	Df	Mean Square	F	Sig.
NIMCum						
	Between Groups	1.123	2	.561	.112	.895
	Within Groups	90.369	18	5.021		
	Total	91.492	20			

Hypothesis 5 stated that there is no significant difference in the sensitivity of U.S., U.K, and Japanese banks based on the changes in interest rates. The results of the cumulative one-way ANOVA for Hypothesis 5 indicated no significant difference in sensitivity among the U.S., U.K. and Japanese banks; therefore, the null hypothesis cannot be rejected. F statistic = .112 and the observed significance level (p value) = .895 which is > 0.05 significance level. The results are illustrated in Table B5.

Table B6. Cumulative *ANOVA between credit risk and earnings*

Item		Sum of Squares	Df	Mean Square	F	Sig.
Credit Risk Cum	Between Groups	.569	2	.264	.211	.812
	Within Groups	22.559	18	1.253		
	Total	23.088	20			

Hypothesis 6 stated there is no significant difference in the credit risk of U.S., U.K, and Japanese banks. The results are illustrated in Table B6. The results of the cumulative one-way ANOVA for Hypothesis 6 indicated no significant difference in the credit risk among the U.S., U.K. and Japanese banks; therefore, the null hypothesis cannot be rejected. The F statistic = .211 and the observed significance level (p value) = .812 which is > 0.05 significance level.