The Brazilian Banking Sector and
the Effects of Bank Privatization: 1980-2012

A thesis presented to
The faculty of
The Center for International Studies of Ohio University

In partial fulfillment
of the requirements for the degree
Master of Arts

Leigh A. Oczkowski

May 2014

© 2014 Leigh A. Oczkowski. All Rights Reserved.

This thesis titled
The Brazilian Banking Sector and
the Effects of Bank Privatization: 1980-2012

by
LEIGH A. OCZKOWSKI

has been approved for
the Center for International Studies by

Andrew J. Fodor
Associate Professor of Finance

Mariana Dantas
Director, Latin American Studies

Lorna Jean Edmonds
Vice Provost for Global Affairs

ABSTRACT

OCZKOWSKI, LEIGH A., M.A., May 2014, Latin American Studies

The Brazilian Banking Sector and the Effects of Bank Privatization: 1980-2012

Director of Thesis: Andrew J. Fodor

The Brazilian economy is one of the fastest growing economies in the world and is currently the sixth largest. A contributing factor to recent growth is the reconstruction of the economy specifically privatization of the banking sector during the 1980s. My analysis will examine the effects of privatization of the banking system on the Brazilian economy and present hypotheses regarding future options and outcomes for Brazil's banks and economy. This study seeks to judge the effects of banking system changes on the Brazilian economy from the early 1980s through 2012. In the end, I will show that privatization appears to be too drastic for the Brazilian situation. However, after some time the economy eventually adjusted proving that changes in the banking sector occurred too quickly and resulting in extreme ups and downs in the market.

ACKNOWLEDGMENTS

I would like to acknowledge with enormous appreciation the assistance of my advisor, Dr. Andrew Fodor, with whom I share the credit of my work. This work would not have been completed to this degree without his help. His guidance, patience, support, and care were extremely important to me during this process of my work.

It was also a pleasure to have the assistance of Professor Roberto Duncan. His experience in macroeconomics has been a great aid in developing my research. I wish to thank my Professor Brad Jokish for his patience and help. It was an honor to be his student and work with him. I would also like to thank both Dr. Arthur Hughes and Dr. Mariana Dantas for overseeing my process of this work for the past two years.

The support of my parents, Richard and Jane Oczkowski, was necessary in the completion of my work. Their encouragement and immense assistance in my decisions has always been important to me. They have always supported me through whatever I have done and I am lucky to call them my parents. To all my friends in Athens especially Trevor Gartenhaus who has always believed in me and supported me through this challenging time as a student. I could not have done it without him.

TABLE OF CONTENTS

	Page
Abstract	3
Acknowledgments.....	4
List of Tables	6
List of Figures	7
Chapter 1: Introduction	8
1.1 Introduction to the Chapter	8
1.2 Research Objectives.....	10
1.3 Contribution	10
Chapter 2: Literature Review	12
2.1 Rationale for the Review	12
2.2 Historical Perspective	14
2.2.1 History of Banking before Military Leadership: 1889-1964	15
2.2.2 Brazilian Banking during the Military Leadership: 1964-1985.....	18
2.2.3 The Government's Role Post Military: The Economic Policies of Cardoso and Lula	23
2.3 The Restructuring Process of Brazilian Banks	33
2.4 The View of the Future	36
2.5 Summary of the Literature:Gap in Literature	40
Chapter 3: Data and Methodology	43
3.1 Data	43
3.2 Methodology	45
3.3 Expectations	51
Chapter 4: Empirical Results	53
4.1 Economic Variables Analysis	53
4.2 Banking Variables Analysis.....	54
4.3 Tables.....	56
Chapter 5: Conclusion	61
5.1 Suggestions for Further Research	63
References.....	64

LIST OF TABLES

	Page
Table 1: Table of History of Brazil Banking Prior to 1980	23
Table 2: Table of President Cardoso and Lula's Economic Policies	30
Table 3: Univariate Results Panel A.....	84
Table 4: Univariate Results Panel B	85
Table 5: Regression Analysis, PPG, With Period 2, 3, 4 Dummy Variables	86
Table 6: Regression Analysis, Domestic Credit, With Period 2, 3, 4 Dummy Variables	87
Table 7: Regression Analysis, PPG, With Period 3 Dummy Variable	88
Table 8: Regression Analysis, Domestic Credit, With Period 3 Dummy Variables	89

LIST OF FIGURES

	Page
Figure 1: Graph of Unemployment, Total, (% of Total Labor Force).....	76
Figure 2: Graph of Gross Domestic Savings (% of GDP)	77
Figure 3: Graph of Gross Fixed Capital Formation (current US \$).....	78
Figure 4: Graph of GDP (current US \$).....	79
Figure 5: Graph of PPG commercial banks (DOD, current US \$)	80
Figure 6: Graph of Total Reserves (% of total external debt).....	81
Figure 7: Graph of Domestic Credit Provided by Banking Sector (% of GDP)	82
Figure 8: Graph of External Debt Stocks (% of exports of goods, services and primary income)	83

CHAPTER 1: INTRODUCTION

1.1 Introduction to the Chapter

When analyzing the strength and efficiency of an economy, the banking system in place is of extreme importance. Banks play the critical role of facilitating the flow of funds in an economy by allowing efficient saving and borrowing. In developed economies, banks provide credit to nearly all companies. A sound banking system can be a catalyst for growth in developed and developing countries but can also hinder economic growth if not managed properly. In examining banking in developing regions of the world, a common thread is economic restructuring due to changes in government. Since the 1980s, the privatization paradigm has been occurring in many parts of the world especially many countries in Latin America. In the case of Brazil, the banking system has frequently experienced significant structural changes.

The increased success of the Brazilian economy has spurred intrigue into the effects of privatization on the banking system. Due to the relevance of banking in the growth of the Brazilian economy, economists, bankers, and political scientists have used Brazil as a case for study of bank privatization. Despite being the fifth largest country in the world in terms of land mass and population, the Brazilian economy has a volatile past and is still less stable than the economies of many other large countries. The Brazilian economy has faced multiple boom-bust cycles throughout its history. Around 1981, a financial crisis known as the “Lost Decade” began. During this time, a significant decline in industrial production occurred in Latin America and economic growth was low. High debt levels coupled with the weak economy resulted in large-scale printing of

currency that led to a period of hyperinflation. Later financial reconstruction allowed for privatization of Brazilian banks and resulted in an increase in the number of banks.

Around 2004, successes of restructuring programs became evident in Brazil with increased participation in international financial markets and general improvements in banking system efficiency. This increase in stability allowed for partnerships with foreign financial groups and a more stable macroeconomic environment. The restructured relationship between state and public owned banks resulted in decreasing and stable interest rates and increased profitability in the Brazilian banking system.

The economy of Brazil has received less attention while continuing to grow since the strong global economic recovery following the 2008 financial crisis. With the increasing size of the middle class population and improved living conditions across most of Brazil, the banking sector has experience continuous growth in core business following 2008. This has prompted Brazilian banks to expand their networks in other developing countries such as China and India. As a developing country, Brazil has emerged as a leading economy in Latin America and the world. Brazil will host the 2016 Olympics Games and the 2014 World Cup Tournament. It is welcoming the world like no other time in its history.

In this paper, I further explore the history of the Brazilian banking sector and economy. I will examine the relationship between banking and economic variables analyzing the effect of privatization on the economy.

1.2 Research Objectives

Economists, bankers, and political scientists have extensively studied the causes and effects of the 1980s reconstruction. Little work has been done however regarding the future of the Brazilian banking system. I propose an in-depth study of the effects of the privatization of the banking system on the Brazilian economy and present hypotheses regarding future options and outcomes for Brazil's banks and economy. These hypotheses are based upon quantitative examination of Brazilian privatization and how reorganization of banks affected the economy both during and after the privatization. The following research ideas and questions are explored:

1. How did the banking system and economy in Brazil improve as a result of 1980s reconstruction plans?
2. Were changes resulting from the 1980s reconstruction plans implemented too quickly?
3. Can Brazil further increase national GDP and wealth with the current system of a moderate free market and inward-oriented economy?

1.3 Contribution

My analysis of the Brazilian banking sector is innovative because it brings an analysis of privatization together with a link between banking health and the economic growth. Most of the works by other researchers who study the Brazilian banking sector have only examined the changes in the system and how the privatization affected the banking sector. My study will show results of overall economic changes made during the privatization of the banks. I will illustrate a basic introduction to the Brazilian banking

sector, describe the changes made during privatization, and then analyze the relationship between banking and economic changes during privatization, using particular economic and bank health variables. This will make clearer the effect of privatization on the economic growth of Brazil.

I also believe that my research can provide important and valuable insights regarding the current Brazilian economic situation. Due to the falling global appetite for commodities such as oil, copper, iron ore and other resources, it is necessary that Brazil adapt to retain their standing in the global economy. With lack of regional development across the country and an out of date inherited welfare system, Brazil could soon be facing increased economic difficulties if they do not address these pressing issues. Brazil must acknowledge the policies of Presidents Cardoso and Lula but cannot rely on this stabilization plan indefinitely. By examining the relationship between economic growth and privatization in banks, I will demonstrate if this process became either a short-term fix or a long-term solution to the economic health of Brazil. The effects of the privatization will show how the country should prepare to implement policies that will continue to open up the economy providing for more financial risks in the market. They must implement aggressive economic policies in order to grow at the rate of other developing peer countries.

CHAPTER 2: LITERATURE REVIEW

2.1 Rationale for the Review

When analyzing the economy of a country, the banking system is one of the most important aspects of this analysis. Brazil has witnessed numerous changes in its economy such as the critical era of the 1980s or otherwise known as the “Lost Decade”. During this period, hyperinflation hit the Brazilian economy and greatly affected the banking system. The banking system was becoming weak due to institutional problems and changes needed to occur to create more efficiency in the system. To recover from this period, restructuring of the Brazilian banks took place changing the system from a majority of state owned banks to the privatization of the banking system. Brazil began to tighten bank regulations, which included the government taking over private banks and weaker state-owned banks closing or foreign investors taking them over (Hanson 2012, 1).

The country’s banks strengthened the economy and made it more “resistant to fluctuations in local and international markets” (Hanson 2012, 1-2). Restructuring of the banks affected many of the regions in the country and changed the role of regional development in those areas. The role of banks had to change in order to achieve economic growth. They needed to reach out towards the local manufacturing sector and to the local customers that provided the goods for the “customer demand economy” (Alessi 2013, 1-2). Today, the banks are developing programs that provide services to smaller customers in order to reach all of the country and all levels of society.

As Brazil introduced changes to their economy, they became a stronger force in the international market. Brazil appeared to recover more quickly from the worldwide financial crisis in 2008 due to strong industrial and agricultural exports (Hanson 2012, 1-2). Brazil's economic rise has led the country to pursue more influence on the international scale and increase cooperation with other developing countries with similar goals. Even the selection of Brazil as host of the 2014 World Cup and 2016 Olympics has put the country in the international spotlight as the government accelerates its economic development in preparation for these events. However, Brazil still faces many challenges in their economy specifically the slowdown of the economy, lack of governmental economic growth policies, and even fighting social and economic inequality within the population. Brazil is struggling with finding policies that have short-term growth as well as policies that could change direction for long-term growth (Alessi 2013, 1).

After reviewing the restructuring process of the Brazilian banking system, it is unclear if the changes were positive or negative in general according to the scholars in my research. The goal of this chapter is to show that there is a benefit in the banking system to privatize. When evaluating the restructuring process, there will be a few areas I focus on in order to make a fair analysis of the effect of the changes made in the banking sector. The literature review is guided by the following questions: 1) How has the history of the banking sector of Brazil affected the reorganization of the banks? 2) What were the general restructuring methods implied during privatization? 3) What have the experts said about these changes? Were they effective in the Brazilian banking

market? 4) How have banks become stable after the privatization? 5) After the privatization, what do the changes mean for the future of Brazil's banks and economy? These areas include the government's role in the restructuring, the process of the restructuring, the after effects of the privatization of banks on the market, and the future of the Brazilian banking sector. I will examine the process of the Brazilian banking changes and analyze whether opening up an economy can be successful and beneficial for a country short-term and long-term.

2.2 Historical Perspective

The goal of this section is to provide background information on the history of banking in Brazil. The discussion will show how the banking sector evolved in Brazil and what changes occurred over various periods of time. The section is guided by the following questions: 1) How did Brazil arrive at the creation of the first bank in Brazil and what was the bank climate during the 1930s? 2) How did the military regimes affect the organization of the banks in Brazil? 3) How did the economic policies of Presidents Cardoso and Lula affect the Brazilian banks and how did these policies explain the economic situation in Brazil today? The answers to these questions will clarify why privatization occurred in the Brazilian banks and what past economic climates led to the future banking reorganization.

This section provides the reasons for privatization and shows the impact of the economic downturn. The time periods reveal that the system of the past decades has influenced the foundation for the banking system of today. These methods became the basis for the modern Brazilian society during the early twentieth century. In addition,

some of the problems that the market faced in the 1980s were due to the set up of the banking system and economic policies of the past. The historical process started many decades ago and defined the banking system later on in Brazilian history.

2.2.1 History of Banking before Military Leadership: 1889-1964

Authors Gail Triner and Carolina Miccolis Anwar delve into the history of the banking sector of Brazil. Each author gives a unique perspective to this study because of their various backgrounds. They will reveal the significance of the beginning of the banking sector as well as the neoliberal agenda that Brazil followed long before the implementation of privatization. Their studies will show the importance of historical events on the later future of Brazil's banks.

The history of the banking industry dates back to the First Republic (1889-1930), a critical time in Brazil when there was an establishment of a new political and economic system. During this defining period in history, the First Republic mandated reforms in which the Brazilian political system went from a monarchy to a republic and created the banking system, a new institution in the country (Triner 2000, 15). Banking in Brazil began with banks focusing on commercial and government interests as opposed to domestic interests (Triner 2000, 24-25). In the 1860s, British banks established various banks in Brazil creating a great link between the New World and European foreign interests. From 1860-1878, British commercial banks served as a key player in Brazil's presence in global networks in which the country's economy linked coffee trade and the financing with currency value. Monetary policy became the focus of banking during the First Republic but also a link between public finance and public sectors (Triner 2000, 26).

Another pivotal moment in the history of Brazilian banks was in 1889 with the establishment of Credito Real de Minas Gerais, the first state bank of Brazil. Along with the bank, the government created a financial plan that would allow for a stronger financial strategy (Anwar 2007, 5). By creating this plan, the government hoped to stimulate economic growth in the region but it resulted in a short period of economic boom from 1889-1892 followed by a market bust with high inflation (Anwar 2007, 5). Many of the banks invested their efforts into giving loans to non-honorable enterprises in order to avoid the possibility of bankruptcy (Anwar 2007, 5). This resulted in the merger into one bank known as the Banco de Republica.

During the period from 1889-1898, the banking system struggled due to the inexperience of the system (Triner 2000, 187). Because of this struggle, a period of financial chaos resulted followed by a period of financial reconstruction that continued until 1906. One important point to remember is that the end of the First Republic represented a new opportunity for the market economy but it also showed how there was increased conflict between the regions in Brazil and the nation as a whole (Triner 2000, 176). This tension between the two continues to be evident all through the history of Brazilian banking especially when dealing with the inequalities of certain regions in the 1980s.

After the end of the First Republic in 1930, the Great Depression began to hit Latin America. Exports from Latin America decreased because the United States and Europe stopped buying the products. There was a continued decline in industrial production in Latin America as well as low economic growth. At this time, Brazil

needed money to pay back programs coming out of ISI (Import Substitution Industrialization). Components of ISI included creating state-owned enterprises, state subsidies to companies, and “cheap policies” such as cheap electricity, food policy, and transportation. GDP (Gross Domestic Product) grew almost everywhere in Latin America and the majority of their economies flourished in the region. However, Latin America needed money to pay for ISI because there was no immediate return from the policies. Around 1981, the financial crisis that began the “Lost Decade” occurred. Latin American countries became in debt. For example in 1975, the Latin American debt was at \$75 billion and it continued in 1983 with \$315 billion. As they owed more money, the economy tanked. Currency continued to be printed that led to a great period of hyperinflation. In addition, no foreign investors wanted to invest during hyperinflation periods.

The regime of Getulio Vargas ruled Brazil during the 1930s at which time the economy became centralized and state dominated (Triner 2000, 187). This centralization of the banks was one outcome that continued later on in history. The Banco de Republica, also known today as the Banco do Brasil, became the main institution that managed the economy in Brazil. After 1930, the banks of Brazil became highly industrialized. However, as soon as Vargas took power the economy saw budget deficits, high inflation levels, and insufficient supply of capital to attend to the demand of the Brazilian economy (Anwar 2007, 5). This resulted in a major economic restructuring or neo-liberalism, which allowed for an open economy. The restructuring of the banks in Brazil was part of this neo-liberal agenda.

Around 1956, there was an effort to increase economic growth by using different policies. These policies mandated by the government hoped to increase spending in the country and increase production to the Brazilian economy (Anwar 2007, 8). To accomplish this, they would infuse more money into the market but this plan only led to high inflation (Anwar 2007, 8). Many of these policies resulted in hyperinflation and depleted growth in Latin America as a whole.

2.2.2 Brazilian Banking during the Military Leadership: 1964-1985

The economy during the military regime in Brazil had significant effects on the banking sector. Many scholars such as Carolina Miccolis Anwar, Luiz De Paula, Francisco Luna and Herbert Klein, Werner Baer and Nader Nazmi each delve into these economic policies and analyze their effect on the banks of Brazil. The authors show how the changes made during this time period had the most impact on the reasons why policymakers privatized the Brazilian banks.

In 1964, the military leadership of Brazil overthrew the Republic and assumed control of the government. Once the military overthrew the Republic, the Brazilian military regimes faced many economic problems. Problems such as a budget deficit, high inflation levels, and insufficient supply of capital hit the Brazilian economy hard (Anwar 2007, 8). An economic plan implemented immediately fought inflation and sought to industrialize the country. During this point in history, the Brazilian government established financial reforms similar to those in North America that would reverse the situation. The private financial system that resulted relied on self-financing, public credit, and foreign capital (De Paula 2011, 869). Financial reforms began to be

implemented to fight inflation and to industrialize the country. The reason for the industrialization of the country was to reduce credit, to control wages and money supply, and to open the economy to foreign capital (Anwar 2007, 8-9). At this time, the banks became a more private financial system, which relied on self-financing, public credit, and foreign capital (De Paula 2011, 869). State owned banks along with a credit-based monetary system would remain in the banking system until the beginning of the 1980s.

In order to achieve the reform goal, restructuring of the banking system needed to occur. Around 1964-1967, the creation of the Central Bank of Brazil and the National Monetary Council (CMN) took place helping to foster the improvement of financial institutions and instruments which previously was the responsibility of the Bank of Brazil (Anwar 2007, 9). At the time, President Castello Branco created the Central Bank of Brazil (Banco Central do Brasil) as well as the creation of the National Housing Bank (Banco Nacional da Habitação) or the housing financial system founded to invest in housing and infrastructure construction (Anwar 2007, 9). These banks demanded a national system of forced savings, which led to inflation. The regime of Branco put the economy in a state headed for recession. The reforms of the 1960's helped economic growth but only in short-term ways because without long-term finance capital the possibility to develop the country's economy was limited (Anwar 2007, 10-11).

During the early 1970s, commercial banks established by the federal and state government appeared in almost every state of Brazil (Anwar 2007, 11). The reason the state began creating commercial banks was to assist in the expansion of the country. Due to the government use of funds in monetary reserve and attempt to boost economic

growth, an increasing inflation resulted (Anwar 2007, 11). An increase of banks occurred due to this high inflation environment.

Meanwhile, Brazil entered the twenty-first century with an economy that had a strong process of industrialization through substitution of imports and the exportation of coffee (Luna and Klein 2006, 37). This period of economic growth would be short lived and only last until the 1970s. By 1973, the country entered a period of increased national debt as well as experiencing the first petroleum crisis shock (Luna and Klein 2006, 12). In the banking system, the government encouraged the development of public banks in order to establish Brazil in the international market. The Brazilian leadership created state banks with the express purpose of aiding the country's development. In addition, they substituted for private banks' absence in the labor sector (Anwar 2007, 12). The criticism of this period was that the economy focused on an income based economy, which provided economic growth for a short period but this led to further unequal distribution of income in the Brazilian society (Luna and Klein 2006, 45). There was a lack of private domestic banks in the banking system. State owned banks as well as the credit-based system would remain in the banking system until the beginning of the 1980s. Mounting external debt allowed for more economic problems to surface in the following decade of the 1980s.

The debt crisis of the 1980s, which affected most countries in the Latin American region, was a period of high inflation and slow economic growth in Brazil. The International Monetary Fund (IMF) helped many Latin American countries restructure their economic policies in order to alleviate their economic problems. The main feature

of the IMF program was to raise the *real* exchange rate, reduce private consumption, and increase tax rates (Baer 1995, 103). Brazil did have relations with the IMF but they were not always in agreement. The tough relationship between Brazil and the IMF shows the difficulties involved in adapting the orthodox technique of the IMF to a developing economy (Baer 1995, 103). Brazil ended up sending seven letters of intent to the IMF because the country was not happy with the IMF's handling of Brazil's economic performance. Brazil was a typical example of the limits of the IMF's approach because many of the external accounts improved in an impressive way. The Brazilian experience shows how the priority given to external accounts became the important source of internal disequilibrium in the country (Baer 1995, 104). Many economists have criticisms of the IMF adjustment programs but there were some successes for Brazil. The negotiations between the IMF and Brazil overshadowed the increasing trade balance that Brazil was achieving (Baer 1995, 103).

This story was not much different in the Brazilian banking sector. Many of the banks in the country over extended themselves by forcing the government to make loans to avoid debt (Baer and Nazmi 2000, 2). In addition, two of the largest banks in Brazil merged into Banco de Republica (later named Banco do Brasil) (Baer and Nazmi 2000, 3). Financial reconstruction allowed for the Brazilian banking industry to privatize the banks in Brazil, increase the number of banks in the country, and enhance regional development.

These various periods of the banking history illustrated below in Figure 1 show a strong relationship between the private and public sector. The use of state owned

banking has allowed for the state and the Banco do Brasil to have a great influence on the economy. The tension between the federal government and the individual states in banking developed into a strong economic force especially when examining how each side influenced the development of the country (Triner 2000, 94). Reviewing the difficulties of the past indicates that there are various similarities between those times and the 1980s. Many of the past policies in the banking system mimic the issues that occurred during this era.

Table 1. History of Banking in Brazil: Prior to 1980

History of Banking in Brazil Prior to 1980	
Period	Economic / Banking Event
1860s	British Banks Established in Brazil
1889	Establishment of 1st State Bank of Brazil Credito Real GDE Minas Gerais
1889-1892	Short Period of Economic Boom Followed by High Inflation
1898-1906	Period of Financial Reconstruction
1889-1930	Establishment of a New Political and Economic System Creation of Banking System
1930	End of First Republic State Administered Economy
1946-1967	Banks Become Privately Held Financial System
1956	Increased Spending and Increased Production Policies lead to High Inflation
1970-1975	Brazil and other Latin American Countries relied on ISI
1980s	Period of Debt and Hyperinflation "Lost Decade"

2.2.3 The Government's Role Post Military: The Economic Policies of Cardoso and Lula

Many scholars such as Susan Purcell, Riordan Roett, Werner Baer, Nader Nazmi, Francisco Luna and Herbert Klein, and Luiz DePaula examine the importance of the economic policies of President Cardoso and reasons why he implemented them at the

time he did. Other scholars such as Ted Goertzel, Mauricio Font, Anthony Spanakos, Guy Burton, Sean Williams, Marcela De Paiva Abreu, and Rogério Weneck explore the presidency of Lula and reasons why he continued the privatizing policies of Cardoso. All these authors illustrate how important these economic policies were to the future of Brazilian banking.

President Franco appointed Fernando Henrique Cardoso to the post of finance minister in 1993 and directed him to develop a new stabilization plan (Williams 2011, 5). The past policies revealed that the economic policies implemented under the prior military regimes showed that they did not foster growth and were not conducive to change. In addition, the past reforms were unsuccessful because they did not stop the hyperinflation and failed to eliminate its foreign debt. Purcell and Roett argue that the realities of the political environment influence economic reform (Purcell and Roett 1997, 16). Cardoso presented a plan named the “Immediate Action Plan” or the “Real Plan” that would allow for a tightening of tax collection as well as solving the financial relationship with the state governments. The priority was to decrease inflation, downsize the public sector, and attract direct foreign investment (Purcell and Roett 1997, 16-17). The plan occurred in three stages in order to create efficiency. The first stage in December 1993 allowed for various measures such as an increase in taxes, a more flexible form of financial management, and a reduction in the percentage of financial transfers by the central government (Luna and Klein 2006, 50). Cardoso wanted to be sure that there was a fiscal balance before the introduction of the plan. The second stage introduced monetary reform with an indexed currency. A new currency called the

Unidade Real de Valor (URV) went into circulation along with the old currency of the *cruzeiro* (Luna & Klein 2006, 23). The currency of the URV ultimately then became a new currency called the *real*. The third and final stage allowed for the adjustment to all of the prices in the economy and the synchronization of prices. This opened up the economy by following the principle of free trade and a free market (Purcell and Roett 1997, 37). The purpose of the plan was to provide for an increase in economic activity in Brazil as well as an increased government involvement in the economic sector. This plan unlike many of the stabilization efforts before succeeded at eliminating inflation and gained stability through its exchange structure. Cardoso's experience as a finance minister allowed him to gain the necessary background, skills, and understanding of the Brazilian economy and banking system that would aid him in making wise and informed decisions later as president.

The stabilization plan also included banking reform. A successful reform of the banking system helped the country succeed in this time of financial hardship. The Brazilian government did not want to rely on such a limited banking system so they decided to focus on a deposit insurance system (Baer and Nazmi 2000, 12). A deposit insurance system meant that the private banks formed and financed a temporary deposit insurance system until they could put the federal deposit insurance system or Credit Guarantee Fund (FGC) in place (Baer and Nazmi 2000, 12-13). The increased credit demand helped the banks during the early part of the 1990s but caused many problems for the future. There was success by the Brazilian government in defending the *real* but it also meant that there would be a significant economic delay (Baer and Nazmi 2000, 7).

In general, the implementation of the “Real Plan” and the stabilization reforms exposed the inefficiencies in both state and private banks.

When newly elected President Cardoso came into office, his main plan was to give the state more control over the financial sector including the privatization of the banking system. Cardoso’s foreign policy constituted internalizing and absorbing liberal changes. This economic system was internalized which meant that many of the companies as well as the banks ended up more interconnected in the economic sector. This allowed the banking system as well as the economic system to be more accessible on the free trade market. At the beginning of his presidency, one of Cardoso’s main goals was to help control the financial sector after the financial crisis. Many of the foreign banks attained almost complete control of the banking system (Goertzel 1999, 20). During this time, the Brazilian Central Bank continued to play an important role in the banking system even though the federal government now shared revenue with the states. The Brazilian Central Bank still controlled the economic incentives and was the administrator of the federal public debt. With this relationship, the federal government had stronger control over the states’ actions. This in turn would be helpful during future global economic crises (Goertzel 1999, 20-21).

Even though there were some economic problems within the administration, Cardoso’s “Real Plan” was undoubtedly a positive reform out of all his reform proposals. It allowed for macroeconomic stabilization. Cardoso’s plan spread the weight of hyperinflation across society and the benefits of the elimination were equally distributed (Font and Spanakos 2004, 18). This included both the upper and lower classes in society.

This plan became very popular because it eventually liberalized the markets and the economy while helping the government engage in regional trade associations (Font and Spanakos 2004, 18). Most of the policies of Cardoso focused on an aim to improve efficiency not just minimizing the state's size or responsibilities (Font and Spanakos 2004, 59). The main goal of the administration was to decrease the role of the state in the economy and increase the overall competitiveness of the domestic industry (Font and Spanakos 2004, 221). Ted Goertzel discusses how Cardoso needed to accomplish his goal of reestablishing democracy in Brazil before changes in the economic sector could occur (Goertzel 1999, 2). Goertzel stated, "Cardoso believed that Brazil's best chance for a successful future is a strong market economy combined with effective social programs" (Goertzel 1999, 28).

As for the banking system, Cardoso's reforms had different effects on the economic sector. The reforms tried to assure that states would start to put their accounts in order (Abreu and Werneck 2005, 6). There was a strengthening of federal control over the monetary funds of the sub-national government (Abreu and Werneck 2005, 6). They privatized the most important state banks such as the largest state bank, *Banco do Estado de São Paulo* or the Bank of the State of São Paulo. After some resistance against these actions, it became clear that the government would be changing its fiscal policies during Cardoso's second term in office.

In his second term as president, Cardoso focused on controlling the economic turmoil that occurred due to the Asian and Russian crises. The 1997 Asian financial crisis occurred because of a decline in the demands for crude oil, which affected the

Russian foreign exchange reserves leading to their own financial crisis in 1998. The banking system needed reconstruction and the development of more efficient methods of running the state and private owned banks. During this time, the banks continued privatization but they seemed to be especially successful for the state owned banks. State run banks enjoyed the privatization because they could continue to operate while the private owned banks were lending the deposits of their investors to only those customers with whom they had a strong prior friendship or relationship (Baer and Nazmi 2000, 14). By 2004, the economic restructuring program resulted in a more efficient banking system. Author, Luiz Fernando De Paula calls the increase in the credit market an indication of a more stable macroeconomic environment (De Paula 2011, 871).

Luis Inácio Lula da Silva took office after the presidency of Cardoso. It was important that the financial policies established by Cardoso continue into Lula's presidency however many viewed Brazil's economic growth during the 1990s as fragile. For example, in order to pay for imports the country required greater levels of foreign resources. The downside was that this contributed to both the growing public debt and the risk of capital flight (Burton 2010, 3). Even though Cardoso and Lula had similar economic policies, many people feared Lula's election. He did change some aspects of his economic policy radically and this scared many Brazilian businesses. In 1994, Lula opposed the "Real Plan" believing that it would fail like most of the other anti-inflation programs (Burton 2010, 3). The economy had just recovered from many international economic shocks such as the Russian and Asian crises and started to experience a resurgence. Fears of a leader who would destroy the progress that Cardoso had made,

scared many voters. Lula's election highlighted the need to adopt a more pragmatic approach and support for more monetarist policies but once Lula became president in 2002, he inherited Cardoso's economic model. Rather than changing what Cardoso began in his presidency, Lula continued with his economic policies although some of them had experienced re-evaluation during the 1990s (Burton 2010, 3-4). Lula released the *Carta ao Povo Brasileiro* (Letter to the Brazilian people), which spelled out the reforms that he planned to keep in place as well as other new macroeconomic policies (Power 2010, 226). He knew that there would always be great turbulence on the global market and he remained dedicated in continuing to target hyperinflation and lend his support towards the IMF (Power 2010, 228). The transition between the Cardoso administration and the Lula administration seemed to run smoothly due to Lula's conservative take on the economic policies. Lula and his finance officers wanted to maintain a severe monetary policy with high bank deposits and interest rates (Luna and Klein, 2006, 42-43).

Table 2. President Cardoso and Lula's Economic Policies

President Cardoso and Lula's Economic Policies	
Time	Economic/ Banking Event
1993	Cardoso appointed as finance minister of Brazil
1993	Introduction of a new currency called the Unidade Real de Valor (URV)
1993-1994	The Creation of the "Real Plan"
1994	Lula released the <i>Carta ao Povo Brasileiro</i> before his election as president of Brazil
1995	Election of Cardoso as President of Brazil
1995-2002	Stabilization Reforms Continued use of the "Real Plan"
2002	Election of Lula as President of Brazil
2003	Lula's diversification of Brazil's international economic relations Continued use of the "Real Plan"
2002-2003	Lula attends G-7 and G-20 Summits

Lula's economic policies focused on many aspects but mostly on policies directed toward low inflation, interest rate control, and liberalization. When Lula entered office, Brazil had seen a period of economic growth but early in 2003 Brazil was in a weak position. The country remained affected by the financial crisis experienced by the United

States and other European countries as well as low levels of foreign credit brought on by these economic struggles (Burton 2010, 5). Lula decided to develop a new plan that would work on the weaknesses of the economy at this time. This plan would center upon improving issues in social and political sectors. He also focused on the influence Brazil could have on the international market and vice versa. The administration began to work on policies that would diversify Brazil's international economic relations such as obtaining subsidies primarily from the United States, other countries in the European Union, and non-OECD (Organization for Economic Co-Operative and Development) countries (Burton 2010, 5). Above all, Lula and his supporters believed that the economic growth of Brazil was essential to the development of the country. With more economic growth, there would be more jobs, higher incomes, and lower levels of poverty (Burton 2010, 6). He continued to follow the ways of Cardoso and advanced the development agendas by increasing ties with other countries in the developing world. He played an integral role in asserting Brazil's stance in the international market by increasing Brazil's international influence (Williams 2011, 19-20).

Many of the economic policies that Lula put into place revolved around the idea of adapting to a new globalized market. Some of the problems in the past had to do with the previous economic model, a weak relationship with some international agencies such as the IMF and the World Bank, and the meshing of public and private elite opinions (Vigevani and Cepaluni 2009,83). Since the end of the Cold War, the old economic policies made it difficult for Brazil to maintain its standing in the world and therefore allowed the state to become weak (Vigevani and Cepaluni 2009, 130). However, Lula

extending the economic reforms of Cardoso continued to allow the economic system to grow in a way that would be more conducive to the changing global market.

President Lula da Silva's greatest success may have been his ability to increase Brazil's influence internationally. He wanted Brazil to have a stronger relationship with developing members of the IMF. Lula also encouraged moving Brazil from their normal position in the G-7 to the G-20 (which includes more developing countries including Brazil) as another way to address global economic issues (Williams 2011, 10). Probably the most important thing that came out of the Lula administration is the large external growth in the Brazilian economy. This economic development resulted in the increased growth of the GDP between 2002 and 2003 (Williams 2011, 15).

One of the most important and useful accomplishments of the Brazilian economy was that Lula consolidated Cardoso's reform and gave the Central Bank greater independence (Williams 2011, 9-10). Lula still believed that the privatization of the banks was the most successful option for that sector. He felt that the banks were not as efficient as they should be similar to the opinion of authors Baer and Nazmi but stabilization of the market would allow for the banks to grow. The stabilization would take time especially after the smaller international economic crises.

All the literature on the historical information of the Brazilian banks is significant to the discussion although many of the authors miss some key points to the analysis. I believe that authors De Paula, Luna, and Klein each lack the insight into the banking changes made during the military regime. The regime change in Brazil greatly affected the outcome of the Brazilian banks as well as the economy. None of these authors focus

on reasons why the government wanted to implement the policies. What was their motive behind them? Did they have a secret agenda? They explain various policies that the military leaders wanted to implement, however it was not clear how the government wanted to run the economy according to their agenda. This detail would be important to a further study into the economy from 1964-1965 and how the economy ended up in crisis.

Also, after examining these banking policies implemented by the military government, it is difficult not to ask whether these changes may have had a better impact on the country rather than the drastic plan of privatization. Many of the policies implemented by Cardoso and Lula helped stabilize the economy for a short-term fix but these policies had extreme effects on the economy in decades to come both positive and negative.

2.3 The Restructuring Process of Brazilian Banks

Scholars Werner Baer and Nader Nazmi explored the process of privatization in the Brazilian banks and examined the historical significance of the changes. They will describe many of the major developments in the study of the effects of privatization on the banks. The authors will show how the structural changes of the banks affected the overall growth of the banks and how this affected the workings of the banking sector in Brazil.

Werner Baer and Nader Nazmi, in their article “Privatization and Restructuring of Banks in Brazil” outlined solutions that came out of the problems between private and public banks in Brazil. These variables included 1) liquidation, 2) recapitalization, 3)

merger and acquisition, and 4) restructuring and sales (Baer and Nazmi 2000, 12). The last point, restructuring and sales, is the most important part in the configuration of the banks. The Program of Incentives for the Restructuring of the State Public Financial System, (PROER) (Baer and Nazmi 2000, 13) is just one program that provided rapid consolidation within the banking sector. The scholars in this paper discuss the issues of privatization of the banks in Brazil as well as the addition of new banks and the issue of urban versus rural development. This issue affects regional development in the banking industry. Financial reconstruction allowed for the Brazilian banking industry to privatize the banks in Brazil, increase the number of banks in the country, and enhance regional development.

The government began to persuade the states in Brazil to have “federalization” of the banks, which resulted in many of the banks merging into the Central Bank in order to avoid further debt in the system. The privatization of many of the banks such as BANERJ and BANESPA allowed for an increase of concentration in certain urban regional areas (Baer and Nazmi 2000, 15). It is important to remember to view the efficiency of the banking system after the era of restructuring. Restructuring became a success because it permitted the banking system to regain growth after a period of hyperinflation. The process of the restructuring in Brazil was a good way for the banks to recover from the economic inflation of the 1980s and 1990s.

After examining the article, Baer and Nazmi’s critique reveals many strong points relating to the restructuring process specifically efficiency. Baer and Nazmi believe that it is not an efficient system. By international standards, it is not efficient because of the

administrative and personnel expenses it lacks (Baer and Nazmi 2000, 18). If the thinning of the public sector and the increase of the foreign sector occurs, the private domestic sector may increase the efficiency for the Brazilian banks (Baer and Nazmi 2000, 18). However as mentioned in their article, the efficiency if it does occur will not necessarily benefit all of Brazil. Privatization may only help those with an increased income and high ownership in activities (Baer and Nazmi 2000, 20-21).

Another problem stated by the authors is that social responsibilities rest with the public banks, which makes it difficult to be effective in low-income areas (Baer and Nazmi 2000, 21). These social responsibilities according to Baer and Nazmi result in not maximizing profits and efficiency in these types of regions. The last point indicates that the restructuring process greatly hurt many of the non-urban regions of the country affecting the social inequality. This is one of the major issues when observing the results of the restructuring process. The review of these articles by Baer and Nazmi show that even though the banking privatization process had some severe problems on the social aspects of Brazil most of the successes of privatization gave stability to the banking sector.

After analyzing the restructuring of the banking system and the changes relating to the regional development of Brazil, Baer and Nazmi have illustrated changes made to the reorganization of the Brazilian banks. However, the authors did not look into the issues affecting rural communities, which influence the strength of the banks. After reading their article, a region-based banking system could be an option in Brazil but implementing that system can prove to be difficult. If Brazil could expand their activities

specifically to lower income customers, which can bridge the gap between the different regions in the country, this could help unemployment rates. Developing the country into a region-based banking system requires time but if done correctly, lesser-developed regions of the country become part of the economic system as a whole and the result is a more cohesive economic base.

2.4 The View of the Future

Many scholars have recently examined the current banking sector and economic growth through the eyes of politics. Among these scholars are Werner Baer and Nader Nazmi, Ruchir Sharma, Marcela De Paiva Abreu, Rogério Weneck, and Guy Burton. Other researchers explore the economic affects of the future such as Christopher Alessi, Allen Berger, Rebecca Demsetz, and Philip Strahan. All of these authors help analyze the economic situation today and predict what the future will hold.

After the implementation of the economic policies of Cardoso and Lula, the government tried several ways to maintain the policies of these leaders in order to continue economic growth. One was to extend the “Real Plan” implemented by Cardoso when he was the finance minister. The mission would result in the postponement of the fiscal adjustment. The “Real Plan” provided for low inflation even as it exposed the country to fiscal deficits and occasional instability during times of crisis. The low levels of inflation and limited opening-up of the Brazilian economy along with a modest economic boom have in turn provided the basis for public investment both in social redistribution programs and infrastructure development (Burton 2010, 7). This would be key in making sure that politically complex reforms would continue to be implemented

and preserved (Abreu and Werneck 2005, 7). Will Brazil move into the future with many new contenders in the elections of 2014 (Burton 2010, 7)?

Another issue that makes the economic situation more difficult for Brazil is the uncertainty of the politics in the country. This large problem faced Brazil for many years because of changes in the government that had turned many economic policies upside down. A fear to modify some of the political policies with such uncertainty worries many people because it could cause more economic instability in the international market. According to Marcelo de Paiva Abreu and Rogério L. F. Werneck, “the possibility that reasons for such fears are finally disappearing meant that wider horizons for long run economic decision making were being open, as a major risk factor was being left behind” (Abreu and Werneck 2005, 23).

Ruchir Sharma makes a clear argument that Brazil is a problem waiting to happen due to the falling global appetite for commodities such as oil, copper, iron ore and other resources. His article illustrates how cautious Brazil has become with their economic policy although it has benefited the country in many aspects. Another issue that Sharma describes that is hindering the future of Brazilian economics is what he calls their “Iberian Root” or a welfare system inherited from their European counterparts (Sharma 2012, 86-87). Sharma concludes that Brazil must acknowledge the policies of Cardoso and Lula but cannot rely on this stabilization forever and needs to recognize this reality. The country will need to be ready to make policies that will continue to open up the economy providing for more risks in the market (Sharma 2012, 87).

In October of 2010, Lula decided not be a candidate in that year's presidential election in Brazil and handpicked his successor, Dilma Rousseff, the first woman to hold the office of president in Brazil. The publicity surrounding the decision linked Rousseff very closely to Lula who retained high popularity in the final year of his presidency as the candidate of continuity and of social redistribution. Given the dependence on oil revenues to fund the programs, questions remain about both its accessibility and the political will to achieve it especially in the wake of the current environmental disaster following the BP deep-sea oil spill in the Gulf of Mexico in 2010 (Burton 2010, 7).

Sharma provided good points about the current situation in Brazil and the future measures that the country needs to take in order to continue to be a force in the global economy. Even though Brazil currently has a stable economy, it needs to continue to make strides to keep up with a changing international market. In Brazil, the government must concentrate on many aspects of the economy in order to continue the success from the reforms of Cardoso and Lula. Economic inequality is one troublesome area. Even though Cardoso and Lula's policies helped more people enter the middle class and increased support for democracy, inequalities are still at large. Another area Brazil needs to focus on is controlling corruption. Lastly, more policies that are successful by the current politicians must occur.

In addition, Allen N. Berger, Rebecca S. Demsetz, and Philip E. Strahan believe that there is "little or no cost efficiency improvements which has relatively little effect on the availability of services to small customers; potential improvements in payments system efficiency; and potential costs on the financial system from increasing systemic

risk or expanding the financial safety net” (Berger et al.1999, 135). They feel that the restructuring will become a larger problem in the future for countries like Brazil.

The economic policies of Cardoso and Lula affected other issues in the region. Because of the changing economic sector of the country, Brazil has become a regional power. Regional leadership also affects other areas such as the social sector. However, Brazil faces great economic inequality in the region, which holds it back from continuing to have more growth as a country. Regional development is one example of how economic policies and social issues come together. Numerous scholars have illustrated that changes to the Brazilian economy have helped the development of the country. Many of the banks that were once concentrated in urban economic centers have expanded to other less known areas illustrating that the banks are attempting to improve the economic and social sector.

However, one of the largest realities of the Brazilian economy is the slowed growth in the past two years. The structural issues that face the country due to the restructuring process of the banking system have made it difficult for the country to continue its large growth. Brazil adopted many policies to contain its inflation, which led to increased interest rates eventually causing a slowdown in the economy (Alessi 2013, 1). According to Christopher Alessi the global economic crisis of 2008 affected the investment side and confidence leading to a strong cyclical impact (Alessi 2013, 1-2). Brazil continues to be a topic on the international market because of their domestic consumer demand strategy that drives the economy. As this occurs, the level of growth continues to be lower. First, Brazil needs to start changing their demand policies towards

the investment side in order to rebuild growth. According to Bernarndo Wjuniski, a senior analyst at Senior Medley Advisors, Brazil has “cut interest rates, they have intervened [to weaken the real]--policies to boost demand and protect the economy in the short run” (Alessi 2013, 2-3). The most difficult part of changing the future of the Brazilian economy is developing policies that have short-term growth as well as long-term growth (Alessi 2013, 1-2).

2.5 Summary of the Literature: Gap in Literature

After exploring the arguments of the authors above, the open economy that Brazil set out to achieve during the restructuring process of the Brazilian banking system appears to have more challenges than the government thought. Scholars have illustrated changes to the Brazilian economy that have helped many regions of the country. Banks that were once concentrated in urban economic centers have expanded to other less known areas. Historically, many of those actions that occurred in the past cannot change yet these past actions still influence the banking process. In the end of this analysis, many of the scholars believe that a region-based banking system could be an option in Brazil but implementing that system can prove to be difficult. Due to factors such as long standing history, urbanization, centralization, and concentration, Brazil has most of its economic centralization in the urban areas. According to many of the scholars above, there is some evidence that the banks in Brazil have expanded their activities specifically to lower income customers, which can bridge the gap between the different regions in the country. Developing the country into a region-based banking system requires time but if

done correctly, lesser-developed regions of the country become part of the economic system as a whole and the result is a more cohesive economic base.

However, the country lacks the continued growth as well as the governmental policies it had 5 years ago. Brazil needs to continue to open up its economy because this is how its economy developed and it is how the economy runs best. Brazil has not been as aggressive as it once was a decade ago. For an open economy to work, it needs to keep expanding. If Brazil wants to be at the level of other developing economies such as China and India, they need to implement different economic policies.

I believe that even though the Brazilian economy has difficulties today with their economy, the restructuring process of the banking system laid the groundwork for Brazil and it continues to have opportunities to be an economic presence in the world. Brazil can still grow from its domestic demand and increased expansion in the global market. The fate of the Brazilian economy is in the hands of the government and their economic politics. It is important for the government to create policies that focus on both short-term and long-term results in order for Brazil to continue to compete with other economies.

After exploring all the literature of the Brazilian banks, their history with regimes changes, privatization, and the current economic growth, it is a pertinent topic in many fields. However, the largest gap in the literature is the fact that no scholars study the relationship between the privatization of the banks and the economic growth that occurred. Did privatization allow for economic growth? How can there be a correlation made between the two? These questions were neither explored nor asked. The goal of

my study is to examine the relationship between bank privatization and the economic growth and determine if there is a correlation.

CHAPTER 3: DATA AND METHODOLOGY

Data collected throughout the study is fully described and analyzed in this chapter. This chapter also explores the quantitative instruments used for collecting and analyzing data. I intend to examine the variables through time, the process of the tests employed, and how these tests explain the relationship between the economy's health and the implementation of private banks on the Brazilian banking system. These tests will show the significance of the reorganization of the banks.

3.1 Data

In this study, I collected macro data for all my variables from The World Bank Database of World Development Indicators (2012) from 1973 until 2012. Within this database, many variables were listed. I reviewed all the data within the database and selected 4 variables in each of two categories, economic and banking variables for study. These variables will examine the health of the economy and banks and how these relationships are interrelated. I focus on four main economic variables that best reveal the impact on the banking sector. Next, I examine four main banking variables that will highlight the significance of any changes during 1973-2012. The relationship between these two sets of variables demonstrates how the privatization allowed for changes in the banks.

In terms of the economic variables, I examine the following four variables. The first variable, unemployment, total (% of total labor force), refers to the share of the labor force that is without work but available for and seeking employment (World Development Indicators, Meta-Indicators, 2012). This variable specifically examines the

definition of labor force and unemployment in Brazil but this can differ depending on the country. The second variable, gross domestic savings (% of GDP), is GDP less final consumption expenditure (total consumption).

The third variable gross fixed capital formation (% of GDP), formerly known as gross domestic fixed investment, includes land improvements (fences, ditches, drains, and so on); plant, machinery, and equipment purchases; and the construction of roads, railways, and the like, including schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings (World Development Indicators, Meta-Indicators, 2012).

Lastly, the fourth variable is GDP growth which is annual percentage growth rate of GDP at market prices based on constant local currency (World Development Indicators, Meta-Indicators, 2012). GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. When looking at economic growth, fast growth is evident by strong economic data, such as rising GDP, GDP per capita, trade volumes, and foreign reserves. Faster growth means higher profits for foreign investors, which allows for more foreign investment in a country, increasing the growth of the economy (Williams 2011, 1-2). According to the World Bank, it is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources (World Development Indicators, Meta-Indicators, 2012). During my study, I will be measuring real GDP because it is in constant local currency.

In terms of the bank variables, I examine the following four variables. The first variable, PPG, commercial banks (DOD, current US\$), which represents public and publicly guaranteed commercial bank loans from private banks and other private financial institutions in current U.S. dollars (World Development Indicators, Meta-Indicators, 2012). The second variable, total reserves (% of total external debt), is international reserves to total external debt stocks.

The third variable, domestic credit provided by the banking sector (% of GDP), is domestic credit provided by the banking sector and includes all credit to various sectors on a gross basis with the exception of credit to the central government, which is net (World Development Indicators, Meta-Indicators, 2012). The banking sector includes monetary authorities and deposit money banks as well as other banking institutions where data is available (including institutions that do not accept transferable deposits but do incur such liabilities as time and savings deposits). Examples of other banking institutions are savings and mortgage loan institutions and building and loan associations. The fourth variable, external debt stocks (% of exports of goods, services and primary income), is the total external debt stocks to exports of goods, services, and income (World Development Indicators, Meta-Indicators, 2012).

3.2 Methodology

During this study, I examined the privatization process through various banking and economic variables. Therefore, I used quantitative instruments for the collection of data and for the analysis of the data collected. My estimation technique of univariate analysis and regression was put in place to show the significance of the changes in each

variable over the privatization process. It shows what variables became drastically changed in key periods of new banking organization. Within my working, I examined the standard deviation and mean of each individual variable within the four time periods. After that, I would take the differences between the time periods in each variable. For example, I looked at the differences between Period 2 and Period 1, Period 3 and Period 2, and Period 3 and Period 4. Using these time periods, I employed the univariate results for each of the time periods. This included the mean and standard deviation and a t-stat for differences of means.

Within my analysis, I focus on the four main time periods before, during, and after the implementation of the privatization programs. I examine all my data through Period 1: 1973-1982, Period 2: 1983-1992, Period 3: 1993-2002, and Period 4: 2003-2012. If the data does not exist for a specific range of time, then the variable will be tested in all the time periods minus the missing data. The study looked at these specific ten year periods because of the process of privatization that took place in the banks. The significance of the four periods of time will be explained below.

Period 1(1973-1982), represents the pre privatization years in which the banks had serious hyperinflation and high interest rates. I examine this period because it is a representative baseline for data in the time of bank privatization. Comparing Period 1 with the time of implementation can give a good frame of reference to the effect of the privatization policies. It also shows what banks and economic health looked like prior to privatization.

Period 2 (1983-1992), marks important dates in the development of privatization policies or the planning period before privatization implementation. Around 1983, the federal government released state banks under the program PAC (Programa de Apoio Crediticio). This program allowed state banks to consolidate their debt to the Central Bank as well as provide state banks with credit lines (Anwar 2007, 34-35). However, the resources for the program were limited and the credit lines only made the use of banks for inappropriate project financing worse (Anwar 2007, 34-35). In 1985, the failure of the PAC led to a Decree Law where the Central Bank's task of restructuring the financial system began (Anwar 2007, 34-35). At the conclusion of this period, the Central Bank ended up controlling the following large Brazilian banks: Beron, Benad, Pedruban, BANESPA and BANERJ. This period ends with the beginning of the implementation of privatization, while Period 3 shows the years in which implementation actually occurred.

Period 3(1993-2002) examines the implementation of the privatization policies. Between 1993 and 1994, the creation of the "Real Plan" occurred with the introduction of a new currency called the Unidade Real de Valor (URV). At the beginning of 1994, the first bank to be privatized was Banerj. Continuous deterioration of banks that was aggravated with the end of hyperinflation after the implementation of the Real Plan led the government to adopt measures to reduce the potential of a banking crisis, which occurred in 1994-1995. In 1995, there was a government creation of the PROER credit lines for bank restructuring and the FGC. According to Carolina Miccolis Anwar, "this program's main objective was to reduce the presence of the public sector in banking activities, by providing financing to restructure state banks in exchange for state

government to privatize, liquidate or transform their banks. If states wanted to keep their banks, however, they had a fourth option, but this would only allow for half of the refinance funds necessary” (Anwar 2007, 24). In 1996, successes of PROER decreased the role of government run banking, reduction of state bank participation in the financial system, and the prevention of a systematic banking crisis (Baer and Nazmi 2000, 12). In 1999, the share of government ownership had already been reduced to 43% of Total Assets (Baer and Nazmi 2000, 12-13). This reduction was largely due to the privatization of Banespa and Banerj. Figure 2 shows the timeline of President Cardoso and Lula’s policies, which is when the privatization policies were implemented. As the figure will show, privatization was executed in Period 3. I look at this period because it is the most vital period of time during privatization. However, the banking and economic health changes that occurred after privatization actually took place much later. When observing Figures 3-10, changes in the banks and the economic health occur at a slower rate, most past Period 3 into Period 4. Analysis of these changes will come later on in the paper.

Lastly, Period 4 (2003-2012) shows the after effect on privatization on the banks output and input values. I look at this period because it shows a good frame of reference to the effect of the privatization policies on the banks and economic health after privatization. This period is when the privatization changes can be shown clearer since they went into effect at a slower rate.

I calculate t-statistics for differences of means of two independent samples as given in Equation 1. In this case, the two independent samples were data from two different time periods.

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

Where $\bar{x}_1$ = mean of sample 1
 $\bar{x}_2$ = mean of sample 2
 n_1 = number of subjects in sample 1
 n_2 = number of subjects in sample 2
 s_1^2 = variance of sample 1 = $\frac{\sum(x_1 - \bar{x}_1)^2}{n_1}$
 s_2^2 = variance of sample 2 = $\frac{\sum(x_2 - \bar{x}_2)^2}{n_2}$

[1 T-Statistics Formula]

With every variable, I employed this test to determine whether the null hypothesis (means across periods are equal) could be rejected. In my study, if the difference appears statistically significant, then the variables change through time due to changes implemented in the banking sector during privatization.

In my study, I also employed multivariate regression analysis to test for changes in economic variables resulting from privatization and changes in bank characteristics. The following models presented in equations 2 and 3 were used.

$$Y = A + B \times (\text{Banking Variables}) + G \times (\text{Time Dummy Variables})$$

[2 Multivariate Regression Analysis with the Time Dummy Variables]

For the first set of regressions, the dependent variable is one of the four economic health variables and the independent variables are PPG commercial bank loans, total reserves, and external debt stocks presented previously. Time dummy variables are constructed for

each of Period 2 (1983-1992), Period 3 (1993-2002) and Period 4 (2003-2012) and take a value of 1 if the observation occurs during the period and 0 otherwise. Also, there will be a regression that will use the independent variables (domestic credit provided by the banking sector, total reserves, and external debt stocks) presented previously but time dummy variables are constructed for just Period 3 (1993-2002) and take a value of 1 if the observation occurs during Period 3 and 0 otherwise.

For the third regression table, the dependent variable is one of the four economic health variables and the independent variables are domestic credit provided by the banking sector, total reserves, and external debt stocks presented previously. Time dummy variables are constructed for each of Period 2 (1983-1992), Period 3 (1993-2002) and Period 4 (2003-2012) and take a value of 1 if the observation occurs during the period and 0 otherwise. Also, there will be a regression that will use the independent variables (domestic credit provided by the banking sector, total reserves, and external debt stocks) presented previously. Time dummy variables are constructed for just Period 3 (1993-2002) and take a value of 1 if the observation occurs during Period 3 and 0 otherwise. Standard errors, coefficients, intercept, number of observations, and adjusted R square are presented for all of the regressions. In total, there will be 16 regressions with four for each of the variables.

These regressions are divided into these two categories because one set of regression tests PPG commercial banks and the other tests domestic credit provided by the banking sector. Since these two variables are very similar in nature, it is more productive to not test them together but to test them apart. This will yield better results.

Also within these regressions, the unemployment variables will be tested. However, with regarding the time dummy variables unemployment will use both Period 3 and Period 4 for the first sets of regression, and strictly just Period 3 for the second sets of regressions. This is because unemployment has a lack of data for Period 1 and it would not be useful to test in Period 2 since there is no set of data to refer prior to.

3.3 Expectations

After examining the banking and economic health variables, it is important to make expectations of what the relationship between the two sets of data will look like after the completion of the univariate results and multivariate regression analysis.

When looking at PPG commercial banks, I would expect the higher value of PPG leads to less unemployment. I expect higher public and publicly guaranteed commercial bank loan of DOD (PPG), higher reserves, higher domestic credit and lower external debt, to be associated with stronger economics. A higher value of PPG leads to higher gross domestic savings. A higher value of PPG leads to higher gross fixed capital formation. A higher value of PPG leads to higher GDP growth. Therefore, I would expect that there would be a positive relationship with gross domestic savings, a positive relationship with gross fixed capital formation, a positive relationship with GDP growth and a negative relationship with unemployment.

When examining total reserves, I would expect the higher value of total reserves leads to less unemployment. A higher value of total reserves leads to higher gross domestic savings. A higher value of total reserves leads to higher gross fixed capital formation. A higher value of total reserves leads to GDP growth. Therefore, I would

expect that there would be a positive relationship with gross domestic savings, a positive relationship with gross fixed capital formation, a negative relationship with GDP growth and a negative relationship with unemployment.

When looking at domestic credit provided by the banking sector, I would expect the higher value of domestic credit provided by the banking sector leads to less unemployment. A higher value of domestic credit provided by the banking sector leads to higher gross domestic savings. A higher value of domestic credit provided by the banking sector leads to higher gross fixed capital formation. A higher value of domestic credit provided by the banking sector leads to higher GDP growth. Therefore, I would expect that there would be a positive relationship with gross domestic savings, a positive relationship with gross domestic capital formation, a positive relationship with GDP growth and a negative relationship with unemployment.

When examining external debt stocks, I would expect the higher value of external debt stocks leads to higher unemployment. A higher value of external debt stocks leads to less gross domestic savings. A higher value of external debt stocks leads to less gross fixed capital formation. A higher value of external debt stocks leads to lower GDP growth. Therefore, I would expect that there would be a negative relationship with gross domestic savings, a negative relationship with gross fixed capital formation, a negative relationship with GDP growth and a positive relationship with unemployment.

CHAPTER 4: EMPIRICAL RESULTS

In this chapter, I will fully describe and analyze the results of the tests performed. These results specifically delve into the relationship between the economic and bank variables. It will relate how the privatization of the banks affected the variables.

4.1 Economic Variables Analysis

Figure 1 presents the total unemployment in Brazil as a percentage of the total labor force. For Period 1, there was a lack of data so that period of time will be left out for this figure. In the 1980s unemployment was relatively stable and fluctuated around 4%. During the implementation of privatization (early 1990s) unemployment increased to 6%. This upward trend continued through the rest of the 1990s. In the 2000s, there has been a slow decline in unemployment through it has not declined to pre-privatization levels. This suggests privatization impacted employment in Brazil. This may be the result of bank mergers or general growing pains as systematic changes occurred. See page 79 for Figure 1.

Figure 2 presents gross domestic savings measured through the percentage of GDP. During 1988, it peaked around 30% and decreased fairly consistently throughout the 1990s. In the 2000s, it has appeared to have leveled off compared to the period of pre-privatization. This graph is consistent with Figure 1 and shows the overall economic health declined as result of privatization. It is expected as employment increases, the national savings will decrease. See page 80 for Figure 2.

Figure 3 presents gross fixed capital formation measured though the percentage of GDP. The path for gross fixed capital is somewhat unclear. In the 1980s, gross fixed

capital decreased later followed by an increase. There was a general slow decline with some recovery later around 1983. Consistent with the prior two figures, Brazilians were reinvesting at a slower pace while consuming at a faster rate, which is consistent with a weak economy. See page 81 for Figure 3.

Figure 4 presents real GDP in constant local currency as a percentage of 1972 GDP. During my study, I will be measuring real GDP rather than nominal because it is in constant US dollars. The figure shows the gradual increase of GDP starting from 1973. There is a period of sharp increase in 1980. There is slight decrease in 1983, which continues into the 1990s. GDP levels out between 1990 and 1993 around 2.2 %. GDP continues to increase into the 2000s and reaches 4% in 2012. This trend of increased GDP is consistent with Figure 3 in which GDP growth is increasing and is accompanying gross capital formation. Also, the increase of GDP after 1993 is consistent with the decrease in unemployment showed in Figure 1. See page 82 for Figure 4.

4.2 Banking Variables Analysis

Figure 5 presents the public and publicly guaranteed commercial bank loans of DOD measured in current US dollars through time. The figure shows the rapid increase which occurs in 1983 but things level off which is consistent with the GDP slowing. It appears that in 1983 a ceiling was reached for acceptable debt levels. After this, debt levels were consistent, which is where GDP decreased in 1983. In 1983, there were high levels of debt and low levels of GDP where policy makers could argue for a change in the

system. This change shows that something needed to change, however it would take quite some time. See page 83 for Figure 5.

Figure 6 presents total reserves shown in percentage of total external debt measured in the percentage of external debt through time. It appears from Figure 6 that the total reserves remained consistent, which corresponds with the previous Figure 5. Figure 8 shows a decrease of total reserves since 1973 through the early 1990s consistent with increasing public and publicly guaranteed (PPG) commercial bank loans of DOD that remained high from the early 1980s to early 1990s. Not surprisingly, the total reserves as part of external debt increased after privatization. The increase was quite rapid until 1995. From 1995-2005, there was a decrease and recovery which continues to rise rapidly. This is consistent with the increase in reserves where there was not a huge drop in debt. See page 84 for Figure 6.

Figure 7 presents the domestic credit provided by the banking sector measured in the percentage of GDP throughout time. From 1985 to 1988 domestic credit quadrupled. This is followed by a steep decline in the late 1980s and early 1990s. Soon after privatization, banks were too free with capital and perhaps quality of loans was not right. The drop shown in 1993-1995 was a correction, which was followed by steady growth. See page 85 for Figure 7.

Figure 8 presents external debt stocks measured through the percentage of exports of goods, services, and primary income throughout time. External debt looks at how much debt is owned by non residents of Brazil. The decline is consistent with domestic credit provided by the banking sector, increase in total reserves, upward trend in gross

capital formation, and fast increasing GDP. Domestic banking is improving since it is not relying so much on external debt. See page 86 for Figure 8.

4.3 Tables

Table 3 presents the univariate results for the each economic variable over the various four time periods. Average unemployment as seen in Figure 1 was much higher in the 1993-2002 than in the previous 10 year period. The difference of these averages is 4.06 % during Period 2 and 7.89 % in the following period. The difference is statistically significant at the one percent level. This again shows the large increase in unemployment that accompanied privatization. The average of 2003-2012 is near 1993-2002. Over this 2 year span, unemployment increased and later decreased.

Gross domestic savings in the first and second periods are statistically significant. There is a statistically significant drop with Period 3. There is a drop from Period 4 to Period 3, nearly statistically significant. This is consistent with Figure 2, which shows the decrease in 1993-2001 and slight increase in 2002.

Gross fixed capital formation from Period 2 to Period 1, averages decreased. This difference, 2.84 % is statistically significant. The third period was lower and statistically significant. Shown in Figure 3, this relationship is not easy to see or as consistent as the other variables. In the first two periods there was a lot of fluctuation in the gross capital formation where the decrease is not as apparent. During the third period, there is actually consistent decrease.

GDP grew at a rapid rate during the 1970s. The average GDP in the next two periods were varied with an average of 4.5 % in each period. These numbers are

consistent with Figure 4 but no differences are statistically significant. See page 86 for Table 3.

In Table 4, looking at PPG commercial banks, it tremendously increased from Period 1 to 2, which was highly statistically significant. There was a huge decrease from Period 2 to 3. Then from Period 3 to 4, it levels off. This data is consistent with Figure 4 because privatization and commercial debt went away.

Total reserves as percentage of external debt had a significant decrease from Period 1 to 2, as debt levels increase. From Period 2-3, there is a significant increase, which is consistent in the dropping gross capital formation and public debt going down. This data is consistent with less borrowing in relation to reserves. There is a large increase in reserves for the last period. Overall, the bank health variables signify a strengthening banking sector, GDP increasing, decreased employment and decrease in gross capital formation.

Domestic credit relationship varies a great deal during the second period. There was a significant increase in Period 1 to 2, consistent with very high debt levels. There was a huge drop in Period 3 due to the credit bubble during the second period where too much credit was provided. This does not show up as statistically significant or as extremely high levels of variation. We can see the relationship but it was not statistically significant because it was not well behaved.

External debt stocks increase nearly significantly from Period 1 to Period 2. This is not apparent on the graph especially in the first period. External debt varied greatly from one year to the next. There was a tremendous drop in external debt stock from

Period 3 to 4, which is consistent with an increase in banking sector as shown by decrease in unemployment, increase in GDP, and decrease in gross capital formation. See page 87 for Table 4.

In Table 5, there is a regression analysis of the economic variables with PPG commercial bank loans, total reserves, and external debt stocks as well as the time dummy variables of Period 2, Period 3 and Period 4.

GDP growth shows statistically significant values in Period 3 and 4. Period 3 implies lower GDP growth and Period 4 implies lower GDP growth. This result does not support my expectations before the test was done. If PPG is up, then it is going to decrease unemployment. More loans mean an increase in money supply, consistent with the monetary policy to stimulate the economy and decrease unemployment. If total reserves are up, it is going to decrease unemployment as well. This is consistent with the relationship shown between Figure 1 and 6. In Period 4, unemployment should be higher which is consistent with Figure 1. When the structure of an economy changes, workers normally lose their jobs in shrinking companies or industries and may move to find new jobs. The structural changes made in the Brazilians banks had an effect on most economic health variables. However, prominent changes appear after the implementation of privatization, causing higher levels of unemployment to appear early in Period 4 and lower levels of unemployment to appear later in Period 4. As external debt decreases, the gross domestic savings increase. As total reserves increase, the gross domestic savings decrease. When looking at gross fixed capital, it is positively related to PPG. This makes sense because as companies have access to more money they create more fixed

assets. Gross fixed capital has a negative relationship with external debt. This might be due to a substitution effect as more domestic credit is relative to foreign credit. These results are in agreement with my hypothesis and the univariate results. See page 88 for Table 5.

In Table 6, there is a regression analysis of the economic variables with domestic credit provided by the banking sector, total reserves, and external debt stocks as well as the time dummy variables of Period 2, Period 3, and Period 4.

When looking at GDP, it is lower during Period 4. As reserves decrease, then unemployment increases. This result can be due to health of the banks. When the reserves are lower, banks are not going to do as much lending. Gross domestic savings has a negative relationship to reserves. This makes sense with my expectations because companies have fewer reserves during a hard economy. People do not have as much to spend and the banks do not have as much either. Gross domestic savings also has a negative relationship with external debt. This follows along with my expectations because companies could not take on external debt since the economy was so bad, therefore decreasing external debt when gross domestic savings increased. Gross domestic savings was lower in Period 4 which is consistent with Figure 4. See page 89 for Table 6.

In Table 7, there is a regression analysis of the economic variables with PPG commercial bank loans, total reserves, and external debt stocks as well as the time dummy variables of just Period 3.

As GDP increases, PPG decreases which shows a negative relationship. This relationship was not explained and is not consistent with my expectations. As total reserves increase, the unemployment decreases which is consistent with the results found in Table 3. When looking at gross domestic savings, there was a positive relationship with PPG consistent with the relationship between Figures 2 and 5. There is a negative relationship between gross domestic savings to Period 3. Gross domestic savings has a negative relationship with total reserves and external debt. These two relationships counter to my expectations made prior to the test. When looking at gross fixed capital formation, there is a negative relationship in Period 3, declining in Period 3, consistent with Figure 3. See page 90 for Table 7.

In Table 8, there is a regression analysis of the economic variables with domestic credit provided by the banking sector, total reserves, and external debt stocks as well as the time dummy variables of Period 2, Period 3 and Period 4.

Unemployment has a negative relationship with external debt, in which as external debt decreases, unemployment increases. Unemployment is also higher in Period 3 which makes sense when looking at Figure 1. Gross domestic savings decreases while total reserves increase. This is not consistent with my expectations made prior to the test. Gross fixed capital formation decreases in Period 3, which is consistent with Figure 3. See page 91 for Table 8.

CHAPTER 5: CONCLUSION

While most studies examine the changes of Brazilian bank privatization on its own, my focus was to explore the relationship between the banking changes made during the time of privatization and the economic growth seen in the Brazilian markets. I aimed to examine how economic variables are related to banking health variables. This relationship shows the effects of banking privatization had on the economy at the time of privatization. My expectations suggest privatization would lead to decrease in unemployment, increase in gross domestic savings, increase in gross fixed capital formation and increase in GDP.

My results indicate that during the history of the Brazilian economy from 1973 to the 1980s, the debt increased to an unsafe level. Once this happened, the government and policy makers made drastic changes. Privatization was an attempt to correct the extreme levels of debt but was too drastic for the Brazilian situation. As shown on many of the graphs, periods of extreme peaks and pinnacles illustrate the after effects of privatization. However, after some time the economy eventually adjusted. GDP and domestic credit steady increased, which took awhile. Unemployment eventually decreased. This was due to the fact that unemployment coupled with a few issues such as the global credit crisis led to decreases in unemployment. Most developing countries such as Brazil experienced this after effect.

Even though there may not have been as much success, there has been extreme improvement in the banking system since the reconstruction plans in the 1980s. As shown by the late growth of public and publicly guaranteed commercial banks, total

reserves and domestics provided by the banking sector, the banking sector did see important changes. The restructuring of state banks followed by liquidation and the entry of foreign competitors into the banking sector has shown significant improvements as well as success in the operation of the country's private banks. Even though these plans were implemented too quickly, this proved to be an asset to the success of Brazil's economy.

After the analysis of my study I did find unexpected results which were likely due to a misspecification of the model due to the omission of important variables. This is an issue that I may address in future research. However, privatization should have shown successful results in Brazil. If the implementation would have been done at a slower pace, I feel that the effect of the changes would have an even greater impact on the health of the economy. Right now the connection is not as clear due to the poor implementation of a smart plan. The economic policies such as the Real Plan were important tactics in implementing privatization; however putting them into place in less than a year is a drastic measure. Even though Brazil was in a state of economic turmoil, quick policies that would take decades to work did not help the situation. If the leaders would have seen this less as a drastic situation but a valuable opportunity to have a long term solution to economic problems for many decades in the future, then privatization might have gone better. I would recommend that a gradual implementation of economic policies and patience is the key to success. However, there has been no such example of a privatization plan that did not drastically affect an economy before getting better.

5.1 Suggestions for Further Research

After my study, more research is still needed in the field. In reviewing my research objectives in the Introduction, I believe that Question 3 was an issue that I did begin to answer in my study but I was unable to answer it completely. My research suggests an outward oriented economy compared to an inward oriented economy fosters growth in a country. Brazil experienced their crisis in the 1980s because of their inward oriented economy. The results from external debt and total reserves show that processes outside the country such as exporting would benefit Brazil's economy. Looking into the effect of exporting rates on Brazil would also be another avenue for further research. The growth rates of countries with an outward oriented economy have shown to be faster than inward oriented economies; however, it will take time to see the ultimate long term effects of privatization of banks in Brazil. Also, due to my limited access to economic and variable data, it would be helpful. In addition, I believe data from the Brazilian banks during and after privatization would solidify the argument further. Significant banking data will show the changes that occurred in individual banks possibly allowing a stronger relationship between the economic and banking changes. Further study into more extensive banking variables will strengthen the argument of the importance of the relationship between economic growth and banking health in Brazil.

REFERENCES

- Abreu, Marcelo de Paiva and Rogério L. F. Werneck. "The Brazilian Economy From Cardoso to Lula: An Interim View." *Texto Para Discussão* 507 (2005): 1-30.
- Abreu, Marcelo, and Dorte Verner. "Long Term Brazilian Economic Growth: 1930-1994." Development of the Organization for Economic Cooperation and Development: Paris (1997).
- Alessi, Christopher. "Brazil's New Protectionist Mood." Oct 2012. Council on Foreign Relations. July 2013.
- Amado, Arianna. "The Regional Issue and the Financial System in Brazil: A Post Keynesian Interpretation." *Estudos Econômicos* 27:2 (1998): 417-440.
- Anwar, Carolina Miccolis. "Causes and Effects of Changes in the Brazilian Banking System." *Fordham Economics Paper Discussion Series* (2007): 1-108.
- Baer, Werner, Nader Nazmi. "Privatization and Restructuring of Banks in Brazil." *The Quarterly Review of Economics and Finance*: 40 (2000): 3-24.
- Baer, Werner, and Joseph S. Tulchin, ed. *Brazil and the Challenge of Economic Reform*. Washington, D.C.: The Woodrow Wilson Center Press, 1993.

Baer, Werner. "Privatization in Latin American." *The World Economy*, July 1994, 509-528.

Baer, Werner. *The Brazilian Economy: Growth and Development*. Westport, CT: Praeger, 1995.

Barros, Alexandre Rands. "How to Make Bankers Richer: The Brazilian Financial Market With Public and Private Banks." *Quarterly Review Of Economics And Finance* 48, The Party Conference Papers: Regulation, Competition and Income distribution in Developing Countries (n.d.): 217-236.

Barros, J. R. M., Loyola, G. J. L., and Bogdanski, J. Reestruturação do Sistema Financeiro. Brasília. *Banco Central do Brasil*, 1998.

Belaisch, Agnes. "Do Brazilian Banks Compete?" IMF Working Paper, WP/03/113.

Beck, T. "Impediments to the Development and Efficiency of Financial intermediation in Brazil." World Bank Policy Research Working Paper 2382 (June 2000).

- Beck, T., J.M. Crivelli, and W. Summerhill. "State Bank Transformation in Brazil: Choices and Consequences." *Journal of Banking & Finance*, 29: 8-9 (2005), 2223-2257.
- Berger, Allen N., Rebecca S. Demsetz, and Philip E. Strahan. "The Consolidation of the Financial Services Industry: Causes, Consequences, and Implications for the Future." *Journal of Banking and Finance* 23 (1999), 135–94.
- Berger, Allen, G.R.G. Clarke, R. Cull, L. Klapper, and G.F. Udell. "Corporate Governance and Bank Performance: A Joint Analysis of the Static, Selection, and Dynamic Effects of Domestic, Foreign, and State Ownership, Including Domestic M&As, Foreign Acquisitions, and Privatization." *Conference on Bank Privatization*, World Bank, 2003.
- Bevilaqua, A., and Loyo, E. "Openness and Efficiency in Brazilian Banking." Department of Economics, PUC, Rio de Janeiro, Discussion Paper 390, 1998.
- Boehmer, Ekkehart, Robert Nash, and Jeffery M. Netter. Bank Privatization in Developing and Developed Countries: Cross-Sectional Evidence on the Impact of Economic and Political Factors, *Journal of Banking and Finance*, Forthcoming (2005).

Burton, Guy. "Lula and Economic Development." *Global Affairs* 20 (2010): 1-7.

Cardim de Carvalho, F. J. "The Recent Expansion of Foreign Banks in Brazil: First Results." University of Oxford, Centre for Brazilian Studies Working Paper 18-01, 2001.

Cajueiro, Daniel O. and Benjamin M. Tabak. "The Role of Banks in the Brazilian Interbank Market: Does Bank Type Matter?" *Physica A: Statistical Mechanics and Its Applications* 387, (n.d.): 6825-6836.

Cepaluni, Gabriel. "Lula's Foreign Policy." *Third World Quarterly* 28:7 (2007): 1309-1326.

Crocco, Marco, Anderson Cavalcante, Claudio Barra. "The Behavior of Liquidity Preference of Banks and Public and Regional Development: The Case of Brazil." *Journal of Post Keynesian Economics* 28:2 (2005-6): 217-240.

Cysne, R.P. & Da Costa S.G. (1996). Effects of the Real Plan on the Brazilian Banking System, Working Paper. Rio de Janeiro, Fundacao Getulio Vargas.

De Paula, Luiz Fernando. "Banking Efficiency, Governance and Financial Regulation in Brazil." *Brazilian Journal of Political Economy* 31:5 (2011): 867-873.

- Dean, W. "The Brazilian Economy, 1870-1930." In L. Bethell (Ed.) *The Cambridge History of Latin America*, Volume V (pp 685-724). Cambridge: Cambridge University Press.
- Dow, S.C. "The Treatment of Money in Regional Economics." *Money and the Economics Process*, S.C. Dow (ed.), Aldershot, UK: Edward Elgar, (1993): 117-136.
- Faria J. Paula, L.: Marinho. Eficiência do Setor Bancário Brasileiro: A Experiência Recente das Fusões e Aquisições. In: Paula, L. F., Oreiro, J. L. (org.). *Agenda Brasil: Política Econômicas para o Crescimento com Estabilidade de Preços*. São Paulo: Manole, 2007.
- Filho, Fernando Ferrari. "Brazil's Response: How Did Financial Regulation and Monetary Policy Influence Recovery?" *Brazilian Journal of Political Economy* 31:5 (2011): 880-888.
- Font, Mauricio A., and Anthony Peter Spanakos. *Reforming Brazil*. Oxford: Lexington Books, 2004.
- Galano, Anthony III. *International Monetary Fund Response to the Brazilian Debt Crisis: Whether the Effects of Conditionality Have Undermined Brazil's National Sovereignty*, 6 Pace International Review. (1994) 323.

Giarraputo, Joseph. "Banking In Brazil." *Global Finance* 20, no. 6 (June 2006): 40-47.

Goertzel, Ted. "Eight Years of Pragmatic Leadership in Brazil." In *Fernando Henrique Cardoso: Reinventing Democracy in Brazil*. Boulder: Lynne Reinner Publishers, 1999.

Gomes, Gustavo Maia. "Regional Development Strategies in Brazil." Mimeo (2002): 1-26.

Hanson, Stephanie. "Brazil on the International Stage." *Council on Foreign Relations*. Council on Foreign Relations, Updated: July 2, 2012, Accessed July, 22, 2013. <http://www.cfr.org/brazil/brazil-international-stage/p19883>

Hausman, R. & Rojas-Suarez, L. (Eds.). (1996). *Banking Crises in Latin America*. Washington D.C.: The Inter-American Development Bank.

Juan de Onis, *Brazil's Big Moment*, 87 FOREIGN AFF. 110 (2008).

Kanitz, Stephen. *Brazil: The Emerging Economic Boom, 1995-2005*. Sao Paulo: Makron Books, 1995.

“Latin America and Caribbean - Brazil - Inequality and Economic Development.” *World Bank* Accessed July 22, 2013.

<http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/LACEXT/0,,contentMDK:20415223~pagePK:146736~piPK:146830~theSitePK:258554,00.html>

Lees, F.A., J.M. Botts and R.P. Cysne. *Banking and Financial Deepening in Brazil*. The Macmillan Press Ltd. (1990).

Lima, Marcos and Marcelo Resende. “Banking and Regional Inequality in Brazil: An Empirical Note.” *Brazilian Journal of Political Economy* 28:4 (2008): 669-677.

Luna, Francisco Vidal and Herbert S. Klein. *Brazil Since 1980*. New York: Cambridge University Press, 2006.

Maia, Geraldo. “Restructuring the Banking System –the Case of Brazil.” BIS Policy Papers no. 6--August 1999 (Basil, Bank for International Settlements).

McKinsey & Company. 2006. “How Brazil Can Grow.” *McKinsey Quarterly* 2006 No.2.

McQuerry, Elizabeth (2001): *Managed Care for Brazil's Banks*, Federal Reserve Bank of Atlanta Economic Review, Second Quarter, 27-44.

Nakane, Márcio I. A Test of Competition in Brazilian Banking. Working Paper Series 12.

Brasília, Brazil: Banco Central do Brazil, 2011.

Nakane, Márcio I. and Daniela B. Weintraub. “Bank Privatization and Productivity:

Evidence for Brazil.” World Bank Policy Research Working Paper 3666, July 2005.

Nakane, M. I. “Productive Efficiency in the Brazilian Banking Sector.” Mimeo, IPE-

USP, Seminar 20/99, 1999.

Ness, Walter L., Jr. Reducing Government Bank Presence in the Brazilian Financial

System: Why and How, Quarterly Review of Economics and Finance 40, (2000) 71-84.

Neto, Alexandre Assaf, Tabajara Pimenta Júnior, Fabiano Guasti Lima, and Marcelo

Augusto Ambrozini. “The Paradigm of the New Millennium Management: A Study of Brazilian Bnks Performance.” *Review Of Business Research* 12, no. 3 (June 2012): 90-99.

Palmeira, C. “Ranking dos Bancos: Os Melhores do Brasil,” *Conjuntura Economica*,

(November 2001).

Paula Jr., L. F. R., Antonio, J. A., and Marques, M. B. L., 1999. Ajuste Patrimonial e Padrão de Rentabilidade dos Bancos Privados no Brasil durante o Plano Real. Grupo de Estudos da Moeda e Sistemas Financeiros da UFRJ. Rio de Janeiro, unpublished.

Power, Timothy L. “Brazilian Democracy as A Late Bloomer: Reevaluating the Regime in the Cardoso-Lula Era.” *Latin American Research Review, Special Issue 45* :(2010), 218-247.

Purcell, Susan Kaufman, and Riordan Roett. *Brazil Under Cardoso*. Boulder: Lynne Rienner Publishers, 1997.

Roselino Jr., J. E. S., and Gomes, R., 2000. Software e as Cadeias Produtivas Internacionalizadas. Relatório Final de Pesquisa do Projeto *Limites e Possibilidades do Brasil nas Configurações Produtivas Globalizadas* (Convênio Grupo de Estudos em Economia Industrial – Unesp/Araraquara e Instituto de Pesquisa Econômica Aplicada – IPEA/Brasília), unpublished, April.

Samolyk, K.A. “Banking Conditions and Regional Economic Performance.” *Journal of Monetary Economics* 34:2 (1994): 259-278.

Sharma, Ruchir. "Bearish on Brazil: The Commodity Slowdown and the End of the Magic Moment." *Foreign Affairs* 91:3 (2012): 80-87.

Sergio Sardenberg & Francisco A. Fabiano Mendes, *Investing in Brazil – Latin America's Powerhouse*, 17 LATIN AM. L. & BUS. REP. 13 (2009).

Scholtens, B., 2000. Competition, Growth, and Performance in the Banking Industry. The Wharton School, University of Pennsylvania, The Wharton Financial Institutions Center Working Paper 00-18 (first draft).

Sobreira, Rogerio. "The Brazilian Experience on Prudential Regulation and Its Impact on The 2008 Financial Crisis." *Brazilian Journal of Political Economic* 31:5 (2011): 893-902.

Triner, Gail D. *Banking and Economic Development: Brazil, 1889-1930*. New York: Palgrave Macmillan Press, 2000.

Todorov, Francisco Ribeiro, and Marcelo Maciel Torres Filho. "History of Competition Policy in Brazil: 1930-2010." *Antitrust Bulletin* 57: 2 (2012): 207-257.

(Unknown Author) "Brazil's Economy: A Breakdown of Trust." *The Economist*, December 8, 2012. Accessed December 9, 2012.

<http://www.economist.com/news/leaders/21567942-if-she-wants-second-term-dilma-rousseff-should-get-new-economic-team-breakdown-trust>

Urdapilleta Eduardo, Constantinos Stephanou. “Banking in Brazil: Structure, Performance, Drivers, and Policy Implications.” *The World Bank: Policy Research Working Paper 4809*.

Vasconcelos, Marcos Roberto and José Ricardo Fucidji. “Foreign Entry and Efficiency: Evidence from the Brazilian Banking Industry”.

Vigevani, Tullo, and Gabriel Cepaluni. *Brazilian Foreign Policy in Changing Times: The Quest for Autonomy from Sarney to Lula*. Lanham: Lexington Books, 2009.

Welch, J.H. (1993). *Capital Markets in the Development Process: The Case of Brazil*. London: Macmillan.

Welch, J.H. (1996). *Emerging Markets--Latin America*. New York: Lehman Brothers.

Werlang, S. R. da C., and Fraga Neto, A. “Os Bancos Estaduais e o Descontrole fiscal: Alguns Aspectos.” *Revista Brasileira de Economia*, 49, 265-275. 1995.

William C Gruben & John H. Welch, *Banking and Currency Crisis Recovery: Brazil's Turnaround of 1999*, Fourth Quarter 2001 ECON. AND FIN. REV. 12 (2001).

Williams, Sean. "Why Is Brazil An Emerging Market Economy?" *Center for International and Finance Development* (2011): 1-27.

Yildirm, Semih H. and George C. Philippatos. "Restructuring, Consolidation and Competition in Latin American Banking Markets." *Journal of Banking and Finance* 31:3 (2007): 629-639.

Figure 1. Unemployment, Total, (% of Total Labor Force)

Source: Data used from World Development Indicators, World Bank, 2012.

Figure 2. Gross Domestic Savings (% of GDP)

Source: Data used from World Development Indicators, World Bank, 2012.

Figure 3. Gross Fixed Capital Formation (% of GDP)

Source: Data used from World Development Indicators, World Bank, 2012.

Figure 4. GDP constant local currency (% of 1972 GDP)

Source: Data used from World Development Indicators, World Bank, 2012.

Figure 5. PPG, Commercial Banks (DOD, current US \$)

Source: Data used from World Development Indicators, World Bank, 2012.

Figure 6. Total Reserves (% of total external debt)

Source: Data used from World Development Indicators, World Bank, 2012.

Figure 7. Domestic Credit Provided by Banking Sector (% of GDP)

Source: Data used from World Development Indicators, World Bank, 2012.

Figure 8. External Debt Stocks (% of exports of goods, services and primary income)

Source: Data used from World Development Indicators, World Bank, 2012.

Table 3
Univariate Results Panel A

The table shows the univariate results for the each bank variable over the various four time periods. The numbers below have been rounded for the purpose of analysis.

	1973-1982 (P1)		1983-1992 (P2)		1993-2002 (P3)		2003-2012 (P4)	
	Mean	Std.Dev.	Mean	Std.Dev.	Mean	Std.Dev.	Mean	Std.Dev.
Unemployment (% of Total Labor Force)			4.06	1.15	7.89	1.56	7.95	1.28
Gross Domestic Savings (% of GDP)	21.33	1.05	23.36	3.60	17.26	2.84	19.20	1.44
Gross Fixed Capital Formation (% of GDP)	22.50	0.93	20.02	3.17	17.54	1.51	17.53	1.52
GDP Growth (Annual %)	5.79	5.22	2.13	4.29	2.85	1.88	3.61	2.55

	P2-P1		P3-P2		P4-P3	
	Difference	t-stat	Difference	t-stat	Difference	t-stat
Unemployment, total (% of total labor force)	-0.05	(0.12)	3.83	(6.26)	0.07	(0.10)
Gross domestic savings (% of GDP)	2.03	(1.71)	-6.09	(4.20)	1.93	(1.92)
Gross fixed capital formation (% of GDP)	-2.48	(2.38)	-2.47	(2.23)	-0.02	(0.03)
GDP growth (annual %)	-3.66	(1.71)	0.72	(0.49)	0.75	(0.75)

Source: Data used in univariate calculations where from World Development Indicators, World Bank, 2012.

Table 4
Univariate Results Panel B

The table shows the univariate results for the each bank variable over the various four time periods. The numbers below have been rounded for the purpose of analysis.

	1973-1982 (P1)		1983-1992 (P2)		1993-2002 (P3)		2003-2012 (P4)	
	Mean	Std.Dev.	Mean	Std.Dev.	Mean	Std.Dev.	Mean	Std.Dev.
PPG, Commercial Banks	16.49	10.65	49.67	50.72	15.39	11.17	9.36	3.42
Total reserves (% of Total External Debt)	18.07	10.79	8.69	3.90	21.64	7.08	60.54	27.75
Domestic Credit (% of GDP)	50.40	5.54	105.91	52.36	79.57	36.48	89.72	12.66
External Debt Stocks	319.18	42.98	356.57	47.74	332.19	39.54	153.41	47.96

	P2-P1		P3-P2		P4-P3	
	Difference	t-stat	Difference	t-stat	Difference	t-stat
PPG, Commercial Banks	33.19	(8.90)	-34.28	(8.84)	-60.26	(1.63)
Total reserves (% of Total External Debt)	-9.39	(2.59)	12.96	(5.07)	38.90	(4.30)
Domestic Credit (% of GDP)	55.51	(3.33)	-26.35	(1.31)	10.16	(0.83)
External Debt Stocks	37.39	(1.84)	-24.38	(1.24)	-178.78	(9.10)

Source: Data used in univariate calculations where from World Development Indicators, World Bank, 2012.

Table 5
Regression Analysis, PPG, With Period 2, 3, 4 Dummy Variables

The table shows the multiple regression results for the each economic variable and the banking variables PPG DOD, Total Reserves, and External Debt. The table specifically is looking at them through Period 2, 3 and 4. The numbers below have been rounded for the purpose of analysis. * denotes statistical significance at the 5% level and ** denotes statistical significance at the 1% level.

	GDP Growth	Unemployment	Gross Domestic Savings	Gross Fixed Capital Formation
PPG DOD	-0.073 (0.078)	-0.078 * (0.027)	0.117 (0.044)	0.074 ** (0.036)
Reserves	0.028 (0.046)	-0.038 ** (0.014)	-0.046 ** (0.026)	0.021 (0.021)
External Debt	-0.009 (0.016)	0.003 (0.005)	-0.029 * (0.009)	-0.018 ** (0.008)
P2	-0.614 (0.03)		-1.2 (1.701)	-4.084 * (1.408)
P3	-0.03 * (0.017)	0.017 (0.011)	-0.034 * (0.01)	-0.047 (0.008)
P4	-0.054 * (0.029)	0.034 ** (0.015)	-0.042 ** (0.017)	-0.083 (0.014)
N	40	30	40	40
Adjusted R Square	0.054	0.788	0.589	0.611
Intercept	-0.095 * (0.056)	0.071 * (0.023)	0.296 (0.032)	0.265 (0.026)

Source: Data used in the regression calculations where from World Development Indicators, World Bank, 2012.

Table 6
Regression Analysis, Domestic Credit, With Period 2, 3, 4 Dummy Variables

The table shows the multiple regression results for the each economic variable and the banking variables Domestic Credit, Total Reserves, and External Debt. The table specifically is looking at them through Period 2, 3 and 4. The numbers below have been rounded for the purpose of analysis. * denotes statistical significance at the 5% level and ** denotes statistical significance at the 1% level.

	GDP Growth	Unemployment	Gross Domestic Savings	Gross Fixed Capital Formation
Domestic Credit	-0.005 (0.02)	-0.009 (0.006)	0.048 (0.009)	0.041 (0.007)
Reserves	0.031 (0.046)	-0.039 ** (0.015)	-0.053 ** (0.021)	0.016 (0.016)
External Debt	-0.013 (0.016)	0 (0.006)	-0.015 ** (0.007)	-0.007 (0.006)
P2	-0.026 (0.022)		-0.006 (0.01)	-0.043 (0.008)
P3	-0.027 (0.018)	0.041 (0.006)	-0.051 (0.008)	-0.061 (0.006)
P4	-0.055 * (0.03)	0.059 (0.012)	-0.043 * (0.014)	-0.084 (0.01)
N	40	30	40	40
Adjusted R Square	0.03	0.695	0.729	0.786
Intercept	0.096 (0.061)	0.051 ** (0.024)	0.248 (0.028)	0.223 (0.021)

Source: Data used in the regression calculations where from World Development Indicators, World Bank, 2012.

Table 7
Regression Analysis, PPG, With Period 3 Dummy Variable

The table shows the multiple regression results for the each economic variable and the banking variables PPG DOD, Total Reserves, and External Debt. The table specifically is looking at them through Period 3 only. The numbers below have been rounded for the purpose of analysis. * denotes statistical significance at the 5% level and ** denotes statistical significance at the 1% level.

	GDP Growth	Unemployment	Gross Domestic Savings	Gross Fixed Capital Formation
PPG DOD	<div> <div></div> <div>-0.086 *</div> <div>(0.046)</div> </div>	<div> <div></div> <div>-0.122</div> <div>(0.02)</div> </div>	<div> <div></div> <div>0.092 *</div> <div>(0.027)</div> </div>	<div> <div></div> <div>-0.011</div> <div>(0.031)</div> </div>
Reserves	<div> <div></div> <div>0.007</div> <div>(0.045)</div> </div>	<div> <div></div> <div>-0.032 **</div> <div>(0.014)</div> </div>	<div> <div></div> <div>-0.062 **</div> <div>(0.027)</div> </div>	<div> <div></div> <div>-0.01</div> <div>(0.031)</div> </div>
External Debt	<div> <div></div> <div>0.008</div> <div>(0.013)</div> </div>	<div> <div></div> <div>-0.002</div> <div>(0.005)</div> </div>	<div> <div></div> <div>-0.016 **</div> <div>(0.008)</div> </div>	<div> <div></div> <div>0.008</div> <div>(0.009)</div> </div>
P3	<div> <div></div> <div>-0.022</div> <div>(0.016)</div> </div>	<div> <div></div> <div>-0.001</div> <div>(0.007)</div> </div>	<div> <div></div> <div>-0.027 *</div> <div>(0.01)</div> </div>	<div> <div></div> <div>-0.031 *</div> <div>(0.011)</div> </div>
N	40	30	40	40
Adjusted R Square	0.015	0.754	0.534	0.152
Intercept	<div> <div></div> <div>0.037</div> <div>(0.047)</div> </div>	<div> <div></div> <div>0.111</div> <div>(0.015)</div> </div>	<div> <div></div> <div>0.253</div> <div>(0.028)</div> </div>	<div> <div></div> <div>0.183</div> <div>(0.032)</div> </div>

Source: Data used in the regression calculations where from World Development Indicators, World Bank, 2012.

Table 8
Regression Analysis, Domestic Credit, With Period 3 Dummy Variables

The table shows the multiple regression results for the each economic variable and the banking variables Domestic Credit, Total Reserves, and External Debt. The table specifically is looking at them through Period 3 only. The numbers below have been rounded for the purpose of analysis. * denotes statistical significance at the 5% level and ** denotes statistical significance at the 1% level.

	GDP Growth	Unemployment	Gross Domestic Savings	Gross Fixed Capital Formation
Domestic Credit	-0.019 (0.017)	-0.019 ** (0.008)	0.045 (0.008)	0.017 (0.011)
Reserves	0.015 (0.046)	-0.024 (0.02)	-0.069 * (0.023)	-0.008 (0.03)
External Debt	-0.002 (0.013)	-0.019 * (0.006)	-0.003 (0.006)	0.009 (0.008)
P3	-0.789 (1.51)	2.67 * (0.683)	-4.244 (0.737)	-2.963 * (0.966)
N	40	30	40	40
Adjusted R Square	-0.044	0.508	0.664	0.203
Intercept	0.057 (0.051)	0.134 (0.023)	0.206 (0.025)	0.165 (0.033)

Source: Data used in the regression calculations where from World Development Indicators, World Bank, 2012.

OHIO
UNIVERSITY

Thesis and Dissertation Services