Global Banks and Retail Banking in Emerging Markets : Developments in Brazil and Beyond

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—Global Banks and Retail Banking in Emerging Markets: Developments in Brazil and Beyond—

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Abstract

A rising number of banks have ventured abroad in recent years. Previous literature appears reluctant to accept retail banking can be a successful segment of global banking. This study questions that notion through an outside-inside approach. The outside approach observes overall retail banking trends in an emerging market country. The emerging market examined here is Brazil, a large, fast growing economy, with high potential for banking sector growth. Improved macroeconomic conditions are a major reason retail banking expansion became possible in Brazil in recent years. The inside approach observes the way trends in international retail banking pertain to global banks. Over the last decade or so, global banks have come to rely more on both retail banking and operations in emerging markets, the latter especially since the 2008 financial crisis, as a source of income. As a result, by shifting focus to retail in emerging markets, global banks contribute to a trend whereby credit-cycles decouple, applying downward pressure on credit in stagnating economies and upward pressure on expanding ones.

Keywords: Retail Banking, Global Banks, Financial Globalization, Foreign Bank Participation
JEL Classifications: G21, G34, F21, F23

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Ⅰ. Introduction

Individual demand for banking services is expanding on a global scale. Whereas in decades past, large percentages of the world's population would have likely been *unbanked*, today, growing numbers of people in emerging markets demand access to financing, which can help them balance consumption and future repayment with expectations for future income. How financial institutions respond will be an important area of research for years to come. Furthermore, these trends are only just beginning in emerging markets, so it is essential to comprehend developments in order to make implications about the future of retail financial services, and how individuals' financial demands will be met in emerging economies.

Brazil, in particular, serves as one of the most intriguing emerging markets to examine not only because of its recently impressive economic growth rates, but also because of its potential to be a large market for retail finance, both for local and global banks. With a population of just under 200 million people, an average age of 29 years old, and the highest gross domestic product (GDP) per capita of the BRIC countries at year-end 2010, it is easy to see why Brazil is already an important market for retail financial services (World Bank and CIA World Factbook)[1]. In fact, in comparison to other BRIC countries, Brazil has received considerable attention from foreign banking institutions. As the Spanish bank Santander pointed out a few years ago, the Brazilian market is the only one of the BRICs to host big international banking groups, which also have a significant presence in that country's domestic banking system (Grupo Santander, 2007 annual report, page 15). While various factors have contributed to this outcome, it nevertheless speaks to the significance of Brazil's banking sector. This paper's focus is to examine the role global banks have played within Brazil's retail banking developments, and also to analyze the role retail banking and emerging markets have in global banking. Drawing from this analysis, the author makes an important implication regarding global financial interconnectivity since the 2008 financial crisis.

Ⅱ. Definitions and Background

(a) Definitions

Establishing concrete definitions for global banking, and retail banking, are not rudimentary tasks. This study draws upon a 2010 *Bank for International Settlements* (BIS) paper for guidance

1) Often considered some of the fastest growing and important emerging markets, the term BRICs (Brazil, Russia, India, and China) was first coined by Jim O'Neill in a 2001 paper, *Building Better Global Economic BRICs*.

in defining global banking. The BIS paper defines international banking (referred to here as global banking) activities as:

> [I]ntermediation activity that falls into one of the following categories. The extension of credit by a bank headquartered in a particular country to residents of another country can occur via: (i) cross-border lending; (ii) local lending by affiliates established in the foreign country; (iii) lending booked by an affiliate established in a third country. (pages 4/5)

The first definition is a model that has been in use for decades. A well-known example of this type was the credit extended to sovereigns by banks in developed countries leading up to the early 1980s debt crisis. The third definition implies funds passing through multiple intermediary and geographical channels. Issues with exchange rate vulnerability and difficulties monitoring large quantities of transactions with many individuals render both of these types as ill-suited forms of intermediation to discussions on retail banking. Therefore, this paper elects to focus its discussion on the second type: financial activities conducted by local affiliates inside a foreign country. Whether purchasing local banks, or growing local branch networks organically over time, the second type of global banking activity has become more common in recent years.

To define retail banking, this study draws from other important literature, also discussed in section III below. Smith and Walter (1997) describe retail as "that part of commercial banking concerned with the activities of individual customers, generally in large numbers" (page 101). Howcroft & Lavis (1986) state that retail banking is "a financial service or group of services offered through an institution to personal customers" (page 6). Clark et al. (2007) classify retail banking "as the range of products and services provided to consumers and small businesses" (page 1). Obviously, some slight differences exist within the literature. This study chooses to exclude products and services allocated to small businesses (SMEs), where possible, and define retail banking as the segment of commercial banking that provides financial services to individuals[2]. The main reason this study focuses solely upon activities with individuals (though the term 'households' may also be used) is data available from sources outlined below are commonly organized with the terms *individuals* and *corporations*. More specific data by size of corporate entity is not usually available. Thus, distinguishing between small, medium and large enterprises would be a statistical impossibility.

(b) Background

Understanding the reason this research examines Brazil's banking sector becomes evident when comparing it with other BRIC countries. Table 1 outlines the position global banks command

2) Note that while the term commercial banking is used here, this does not equate to an exclusion of universal banks. The discussion seeks to highlight retail banking by deposit-taking commercial banks, sometimes as divisions within larger universal bank groups.

within the top ten banking institutions in each of the BRIC countries by assets at year-end 2010 according to the July 2011 publication of *The Banker*. Brazil and Russia have the largest number of global banks in the top ten with three for both. Contrastingly, no global bank in China or India even makes it into the top ten. When comparing the size of global banks between Brazil and Russia we can see that with $327.6 billion in assets, Brazil's global banks are six times larger than Russia's three. Moreover, the percent of top-ten-assets controlled by global banks in Brazil is more than twice that of Russia. Thus, we can say that among BRIC countries, global banks hold the most significant position in Brazil.

Specifically, the three global banks in Brazil's top ten are Santander, HSBC, and Citibank, which respectively were the fifth, sixth and eighth largest banks in Brazil by assets. In 2000, the same publication indicated that not a single global bank was in Brazil's top fifteen banks. So, in just ten years, these three banks were able to capture a large presence, and establish themselves as key players in Brazil's banking sector. Guillén and Tschoegl (2008) have noted the international achievements by these three banks, stating, "Citibank, HSBC, and Santander are building their strategies around the transfer of managerial skills across national boundaries" (pp. 209/210). However, the mode each bank utilized to achieve a sizeable presence in Brazil varies by institution. As will be discussed below, Santander and HSBC acquired local banks, while Citibank elected to grow organically. Nevertheless, all three banks now participate in the domestic retail banking market through their branch networks. What has made that internationalization possible is a series of events occurring within the context of economic developments both in the host nation, and in the wider global economy. Figure 1 illustrates that process.

Beginning with the pre-deregulation period of the 1970s and very early 1980s, corporations started to move toward forms of direct finance. To fill the void, banks in developed countries extended cross-border credit to emerging market sovereigns. At this time, global banking was closer to the first definition from the BIS paper described above. Shifting into the mid and late-1980s, deregulation, interest rate liberalization, the rise of individual information collection, and relatively strong macroeconomic conditions created an environment conducive to retail banking in advanced economies. As a result, banks in those nations gained vital experience in the allocation of financial services to individuals. Transitioning into the mid-1990s, a series of emerging market crises left a number of countries' banking sectors vulnerable and undercapitalized. In response, some countries lowered regulatory restrictions on foreign ownership as a means of recapitalizing banking sectors. This presented a new opportunity for banks from developed nations, and some ventured abroad, buying up local banks and injecting much needed capital. Soon thereafter, the rise of information technology proved another vital development in retail banking. Technology helped improve efficiency in customer connectivity, accuracy of credit modeling, and availability of customer information. As a result, the allocation of financial

services to individuals became more manageable for a number of banks. Banks from developed countries transferred their retail know-how and technological advantages to international affiliates, creating the possibility for retail banking to expand in emerging markets.

III. Literature Review, Problem Definition, and Methodology

(a) Literature Review

Literature devoted to retail banking has experienced steadily increasing attention in recent years, albeit somewhat concentrated on advanced countries. As far as the author could determine, one of the earliest works to use the term *retail banking* was Morison and Frazer (1982). They stated as far back as the early 1980s that as economies grow, so too do individual incomes, and consequently, their demand for financial services. As financial institutions are presented with the task of meeting demand, the determining factor in whether or not they are successful lies in their strategies to approaching retail banking. Banks adopt "a competitive approach to the supply of services, rather than just to the pricing and promotion of a common range of services" (page 114). However, such an approach leads to the copying of retail strategies, ultimately making it "difficult for any one institution to monopolize a successful idea for very long" (page 114). So, while some institutions are particularly innovative, successful strategies soon become industry-wide staples.

Ball (1990) and Howcroft and Lavis (1986) also put forth the idea that as income rises and economic lives become more complex, individuals increasingly demand financial services. Specifically, Ball (1990) wrote, "[c] onsumers, it is argued, felt more assured about their long-term real incomes and so were prepared to contemplate great borrowing" (page 17). Similarly, Howcroft and Lavis (1986) explain that banks turn increased demand for financial services into an opportunity to attract individual customers, and then target them with services. But, they specify that stable macroeconomic conditions are essential to creating an environment in which retail banking can grow.

Clark et al. (2007) highlight a *return to retail* banking that has taken place in the United States banking industry over the past decade. In particular, they stress that the most active banks in the *return to retail* have also been the largest banks. They indicate a main reason banks in the U.S. shifted their attention to retail activities was because of its perceived stability as a source of revenue. On the other hand however, they add that retail banking "does cycle in relatively predictable ways with the performance of nonretail banking and financial market activities" (page 14). So while revenue streams from retail banking may be stable in light of other banking segments because it is spread out over large swaths of individuals, retail banking activity, and the revenue it generates, could be vulnerable to the same shocks as other banking segments. In

conclusion, they make clear that grasping retail banking's impact on the banking system is imperative.

Urdapilleta and Stephanou's (2009) focused specifically on banking developments within Brazil. While their analysis is not specific to retail banking, and their data only covers a very short period, they do state that despite higher default rates in retail banking, the segment is "less volatile" than the corporate segment. Nevertheless, they too suggest that the macroeconomic environment impacts the allocation of financial services to individuals.

Perhaps some of the most well known literature related to global banking is the work done by Roy C. Smith and Ingo Walter. Smith and Walter (1990, 1996, 1997, 2012 with Gayle DeLong) highlight shifts in corporate finance, deregulation, and technological development as important to the expansion of domestic retail banking. They emphasize that retail has become an extremely important source of income for many banks in their home markets. From an international perspective though, they stress the role of globalization in the financial industry, hastening the pace at which financial innovation takes place. Globalization and quicker innovation allows global banks to transfer retail approaches (for example, marketing, risk evaluation, account management, settlement and processing technologies) to foreign markets, and exploit advantages to compete with local institutions. However, since financial products and services can be easily copied, maintaining that advantage is extremely difficult, even for large banks. Additionally, Smith and Walter discuss difficulties in understanding the retail banking market in foreign countries. Grasping cultural and customary intricacies in a vast number of countries' banking sectors is an undeniably ambitious endeavor. Therefore, Smith and Walter (1997) concluded, "failures in international retail banking are perhaps more common than successes" (page 110). Ultimately, they view these two obstacles, the intricacies of retail banking markets and the ease of copying financial products, as being insurmountably high hurdles that prevent global banks from being successful in international retail banking.

Other important research related to global banking includes Guillén and Tschoegl (1999 and 2008), who examine Spanish banks' activities in Latin America. They point out that large Spanish banks were attracted to countries in Latin America because they "provided the possibility of growth with the development of the banking sector" (page 17). Spanish banks have expanded their presence in Latin America's retail banking segment, and in some cases they gained significant market share. In a 2008 publication, Guillén and Tschoegl discuss Santander's development into a global bank. They also emphasize the differences between various countries' retail banking markets as making competition outside of home banking markets as difficult for banks. But, as they explain, global banks realize two important benefits from purchasing local banks. First, the global bank is able to not only achieve entry into the foreign market, but also it is a relatively fast means of obtaining market share, especially in highly concentrated banking

markets. Second, by acquiring local banks, global banks are able to obtain vital knowledge on the local banking market.

Research statistically demonstrating the idea global banks would find it difficult to compete includes Roberts and Amits (2003), Sturm and Williams (2004), and Fachada (2008), whom all provide evidence showing domestic banks copied global banks in some capacity. Roberts and Amits (2003) confirm domestically-owned Australian banks copied financial services after global bank entry by stating, "[o] f the numerous documented major innovations, none were conceived (in whole or in part) within Australia. Rather, the ideas tended to come from banking industries in other countries" (Roberts and Amits 2003, page 111). Sturm and Williams (2004) stated the entry of global banks was an important source of improvements in technology and operating efficiencies within the banking system. Focusing on Brazil's banking system, Fachada (2008) discusses the impact of foreign entry to the Brazilian banking industry over a 10-year period from 1996 to 2006. Fachada demonstrates that domestically owned banks responded to foreign entry by significantly improving operating efficiencies. As a result, some of the global banks that entered Brazil found it too difficult to compete, and actually left the market in the mid-2000s. Thus, literature lending support to Smith and Walter's view that international retail banking may be unsuccessful is not in short supply.

(b) Problem Definition

The literature makes clear three factors greatly influence international retail banking. First, the macroeconomic environment is a crucial factor that shapes retail. Increasing incomes lead individuals to demand, and banks to supply retail services on a wider scale. In the absence of a favorable macroeconomic environment individuals and households may be less demanding of financial services. Conversely, institutions, both local and global, may also be less willing to provide such services. Second, specific customs and cultures exist within the banking sectors of many countries. For global banks to grasp the banking culture in various countries is a difficult task. Locally owned banks should naturally know their own markets better than global banks, putting the latter at a severe disadvantage. Third, the nature of financial services is such that financial products can easily be copied. Even with superior financial products, global banks may find it extremely arduous to compete and distinguish their services from domestically owned competitors who quickly introduce similar products. Under this scenario, even large global banking institutions that have amassed experience and technological advantages in retail banking would find it difficult to compete with local banking institutions because their advantages are soon negated.

While some of the literature touched on Latin America, the literature is still lacking with respect to global banks' international retail banking developments in emerging markets. Since

emerging markets are expected to experience remarkable growth in individual incomes over coming decades, understanding banking developments in those markets will be of significant value for international finance. Therefore the main purpose of this paper is to focus on retail banking developments within an emerging market, uncovering ⅰ) the role global banks have played within developments in that emerging market and ⅱ) the role retail banking and emerging markets hold for global banks. Brazil in particular, offers an intriguing opportunity for such research, as it is a significant emerging market with high potential for banking sector growth. Further, Brazil could serve as a starting point from which to begin research on global retail banking.

The paper clearly exhibits the following four points. First, the role global banks played in Brazil's retail banking developments. Second, what consequences those developments have had on financial stability. Third, the level of importance retail activities in emerging markets have for global banks. Fourth, given the relationship forming between home and host markets via global banks, to make an important conclusion related to financial interconnectivity. Essentially, this paper seeks to contribute to the literature by clarifying whether retail banking activities can be a significant segment within global banking.

(c) Methodology

This study analyzes data from Brazil, and the global banks observed, using what the author calls an outside-inside approach. The outside portion of approach seeks to gain an overview of Brazil's macroeconomic and aggregate retail banking developments. In the course of this analysis we will observe six banks (three domestically owned banks and three global banks), which combined at year-end 2011 to account for 70.9 percent of Brazil's total banking sector assets[3]. They are the federally owned Banco do Brasil, the domestically owned private institutions of Itau (which merged with Unibanco in 2008) and Bradesco; and the three global banks of Santander, Citibank, and HSBC[4]. The inside approach takes the discussion a step further by looking inside Santander, Citibank, and HSBC's global banking operations. Moreover, this part

3) Based on data retrieved from the Central Bank of Brazil's website. "Total banking sector assets" refers to the Central Bank's "Total Banking - Consolidated One" classification, which is defined as an independent institution or conglomerate that is a commercial bank, a universal bank holding a commercial bank portfolio or a savings and loans institution. This classification comprised 94.6% of all deposits, 83.8% of total assets, and 99.8% of all branches in Brazil as of December 2011. All references and statistics related to Brazil's total banking sector are herein defined as the Central Bank's "Total Banking-Consolidated One", unless otherwise noted.

4) Two sizeable federally owned institutions left out of this discussion are BNDES (Brazilian Development Bank) and CEF (Caixa Economica Federal). BNDES is not included because its retail focus is minimal, and has a small role in overall deposit taking. CEF plays a significant role in deposit taking, but is not included here due to limited data availability. In 2007, CEF accounted for 59% of Brazil's mortgage loan market (Hayward, 2007). In late 2008, Itau merged with Unibanco and Santander purchased ABN Amro's Brazilian operations. In both cases, all data from year-end 2008 reflects combined post-merger data.

of the analysis looks beyond Brazil, and beyond retail, to identify the most important banking segments for each of the global banks.

Statistical data employed are from the following sources. Aggregate macroeconomic and retail banking data and were taken from the Central Bank of Brazil, the IMF's international financial statistics, and the World Bank. Specific data for each bank was obtained from annual reports, financial statements, and quarterly reports on the respective institutions' website. Some possible caveats should be noted. Data for deposits do not differentiate between individual or corporate deposits. Also in some cases, individuals could be the recipients of financial services in lieu of a small firm or microenterprise. Nonetheless, the author feels that combining annual data from banks with Central Bank data should provide an excellent means of interpreting retail banking developments.

Ⅳ. Brazil's Macroeconomic Developments

By now, Brazil's inclusion into the group of BRICs countries as a fast growing emerging economy is widely known. But, Brazil's economic conditions have not always been so bright. In fact, Brazil faced a few episodes of macroeconomic volatility prior to the 2000s. Perhaps most widely known are the periods of hyperinflation in the late 1980s and early 1990s. Other periods include a reorganization of the banking sector in the mid-1990s, and the end of the fixed exchange rate regime in 1999.

Since 2000 though, Brazil's economic footing has been on much more stable ground. Table 2 describes changes in macroeconomic variables over the past decade, as compared to averages from the 1990s. Perhaps most notably, Brazil's authorities have brought inflation under control. Average yearly inflation fell from 767 percent in the 1990s to less than 7 percent in the 2000s. In particular, Brazil has managed to keep inflation beneath 7 percent since 2004, and below 6 percent since 2006, indicating excessively high rates of inflation are now a thing of the past. By the same token, gross domestic product (GDP) experienced substantial improvement between the two periods. At an average of just 1.9 percent growth per year, Brazil's growth was by no means exceptional during the 1990s. That changed during the 2000s however, as Brazil grew at an average of 3.6 percent annually. When looking at the period after 2003, the results are even more impressive, as growth was more than 5 percent in 2004, 2007, 2008, and 2010. It must be pointed out however that growth was negative in 2009; illustrating the global financial crisis negatively impacted Brazil's economy significantly. Even so, the fact that Brazil rebounded with impressive growth in 2010 shows economic conditions in Brazil are sound enough to rebound from serious crisis transmission. In the same vain, GDP per capita also climbed during the 2000s. From an average of just over $3,500 constant US dollars in the 1990s to just over $4,100 in the

2000s, we can see income growth on a per capita basis was noteworthy. Indeed, if comparing 1990s change to the 2000s, GDP per capita rose 27 percent during 2000s, or more than two and a half times the 10 percent increase from 1990 to 2001.

Another key development over the 2000s was the downward shift in the interest rate. The Selic interest rate is the Central Bank of Brazil's main monetary policy tool, and is the main measure of interest rates in Brazil, similar to the federal funds rate in the United States[5]. If taking the Selic interest rate's daily average for each year from 2000-2010 (see figure 2), we can see that rates fell from just below or around 20 percent in the first half of the 2000s to about 10 percent 2010. Actually, the rate more than halved from a peak of 23.5 percent in 2003 to 9.9 percent in 2010. Therefore, costs of taking on debt became much cheaper for borrowers in the second half of the 2000s.

At the same time interest rates were falling, private sector credit developments transformed dramatically. Figure 2 also illustrates the astonishing rise of credit to the private sector as a percent of GDP between 2000 and 2010. In the first half of the decade, credit stagnated, and actually dropped from 2000 to 2001 and again from 2002 to 2003. Since stagnation occurred at a time when GDP growth was sluggish, credit growth was minimal at best before 2003. To the contrary, the latter part of the decade experienced a huge upswing in credit. Beginning with a slight increase from 2004 to 2005, credit jumped from 29 percent of GDP in 2005 to 57 percent in 2010. Moreover, the fact that GDP was climbing at much faster rates during the latter half of the 2000s signals that credit to the private sector was growing at a considerably quicker pace than the first part of the decade.

Altogether, improved macroeconomic conditions combined to produce an environment more conducive to credit expansion. Falling inflation and interest rates made way for GDP, GDP per capita, and credit to grow considerably. On top of that, Brazil managed to preserve its economic improvements despite the 2008 global financial crisis. As a result, the private sector found itself in a position to access to credit at comparatively lower costs. Given the pace of credit growth, presumably many private sector participants, including individuals took on increased debt.

V. Global Bank Entry

Depending on the bank, the history of global banks in Brazil has been either long or short. Banks with longer histories are those very few banks allowed to establish a presence in Brazil during the first part of the twentieth century. Citibank is an example of this bank type, first beginning operations in Brazil in 1915. While Citibank has operated in Brazil since that time, it's

5) Selic is an acronym for *Sistema Especial de Liquidação e de Custódia* in Portuguese, or translated to *Special System for Settlement and Custody* in English.

presence was not always as large as it is today, and moreover global banks present from this period were not considerably involved in retail banking until recently (Fachada 2008). Banks with shorter histories entered Brazil after the government decided to allow banks domiciled abroad to enter in 1995 as a means to "strengthen the domestic banking sector" (Rodriguez De Paula 2003, page 160). Prior to 1995, banks domiciled outside of Brazil (aside from banks such as Citibank) were unable to freely enter the country; making this the first time non-Brazilian banks were allowed to directly purchase locally operating banks. Table 3 represents a list of major acquisitions since 1995 related to global banks observed in this paper.

Each of the three global banks took a distinctly separate approach during this period. First, since Citibank does not appear on the list we can infer they made a strategic decision to stray away from acquiring local banks. Second, HSBC did make two significant purchases. But, both of those transactions were with banks which it some prior connection (Fachada 2008). Lastly, Santander was aggressive in its approach to acquire local banks. Not only did they take over small (Geral do Comercio), medium (Noroeste and Meridional), and large banks (Banespa), but also banks previously acquired by another non-Brazilian bank, ABN Amro. Regardless of the way in which Citibank, HSBC, and Santander established their presence though, the result was by the start of the 21st century they all had attained a sizeable position in Brazil's banking system.

Ⅵ. Retail Banking Developments in Brazil

Banking activities in Brazil have changed dramatically over the last two decades. In fact, during the high-inflation years of the late 1980s and early 1990s, banking in Brazil amounted to little more than a process whereby banks collected deposits, purchased inflation-indexed government securities, and pocketed the difference (Goldfajn, Hennings, & Mori, 2003). While banking has without question transformed since then, perhaps even more remarkable has been the rise of retail banking into one of the most important banking segments. This section examines retail banking developments in Brazil utilizing the outside-inside approach described above. Outside analysis details aggregate developments, while inside analysis looks at developments as they pertain to each bank specifically. We begin by setting forth some of Brazil's most important banking institutions. Then we apply the outside-inside to observe aggregate and bank specific developments deposits and loans to individuals. Later we discuss physical bank presence before observing aggregate non-performing loan and debt-to-income ratios.

(a) Prominent Institutions

A considerable share of Brazil's banking industry is concentrated in the hands of a few large

institutions. While smaller institutions, such as credit unions, savings and loan institutions, and medium-sized banks also play a role; the largest players dwarf them in size. As a matter of fact, the six banks we examine (Banco do Brasil, Itau[6], Bradesco, Santander[7], Citibank, and HSBC) controlled roughly 70 percent of total bank deposits and loans at the end of 2011. In addition to providing an excellent opportunity to comprehend overall banking developments, this group of banks also provides some of the most reliable data on retail banking activities in Brazil.

Table 4 shows market share developments in total deposits and loans for each bank during the 2000s. Deposit market share grew for each of the six banks, and overall their combined share grew 23.4 percent from 2000 to 2011. Granted, some important mergers and acquisitions played a role in this outcome. Nevertheless, the result was that the six banks increased their overall influence on deposits in Brazil's banking system. Loans developments, on the other hand, took shape differently. On the one hand, Citibank, HSBC and Bradesco saw very little growth in loan market share, and Citibank actually saw their share fall. On the other hand, Banco do Brasil, Itau, and Santander saw their market share climb 8.0 percent or more. Overall, these six banks accounted for 27.5 percent more loan market share in 2011 than at the end of 2000. These developments suggest that all six banks were actively competing with each other for loan and deposit market share.

(b) Deposits

Deposits collection is a central part of banking activities, especially in retail banking. Without an approach for capturing deposits, banks will be unable to procure funds necessary for loan expansion. This subsection looks into deposit developments from both an outside and inside perspective. Beginning with aggregate developments, Figure 3 shows total year-on-year deposit growth in Brazil from 2001 through 2011. Deposits expanded more than 10 percent each year during the period, with the exception of 2003 and 2009. Contrastingly, in the years immediately preceding, deposits rose by over 20 percent in both 2002 and 2008. In total, deposits grew from 310.8 billion real in year-end 2000 to 1.61 trillion real in year-end 2011, representing an impressive 418 percent gain in eleven years.

Since the six banks observed here control large portions of the banking industry, an inside approach should reveal substantial gains in deposit taking activities for each. In fact, table 5 shows each bank saw deposits increase more than the industry-wide increase of 418 percent mentioned above. Of which, the three global banks achieved the fastest growth. Santander achieved the fastest growth with over 2,300 percent, a development surely related to their acquisition activity. Interestingly though, Citibank had the second fastest growth despite not

6) Merged with Unibanco in 2008.
7) Officially took over ABN Amro's Brazilian Operations in 2007, and amalgamated them into Santander in 2008.

acquiring any other banks, suggesting organic growth too, was possible. Also, HSBC experienced faster growth than domestic competitors despite the fact that its most significant acquisition took place prior to 2000. Yet another interesting development was the jump by the three global banks in the first half of the decade, Santander Citibank and HSBC saw growth of 499, 264, and 445 percent respectively. Suggesting their efforts were focused on grabbing more deposit market share early in the decade. Nonetheless, in terms of overall size, domestic banks were by far the largest institutions. Thus. deposit developments demonstrate that both domestic and global banks successfully expanded deposits. Further, global banks were more successful than domestic competitors in terms of the pace of growth, but still do not command the same size as domestic banks.

(c) Lending Activities

With incomes rising, interest rates falling, inflation relatively stable, and deposits growing; conditions were ripe for banks to expand loans to individuals. First we observe lending activities via the outside approach. Within Brazil's entire banking system, important changes took place in loans to individuals. Figure 4 illustrates the evolution of housing and all other types of loans to individuals over the 2000s. This data highlights two crucial changes. The first, and perhaps the most extraordinary of which was the overall growth of loans to individuals. Non-housing loans to individuals rose from around 80 billion real in 2001 to almost 633 billion in 2011, or an astounding 687 percent. Housing loans grew from just under 24 billion real in 2001 to just over 200 billion by 2011, an even more extraordinary jump of 737 percent. Second, individual loans rose considerably as a percent of total private sector loans. Non-housing credits to individuals grew from 24.6 percent of all private sector credit to 32.5 percent by 2011, peaking at 34.3 percent in 2007. Housing loans grew from 7.3 percent of total loans to 10.3 percent, though the vast majority of that increase occurred after 2008. This surge made individuals the largest type of borrower in Brazil each year after 2004.

Prior to applying the inside approach, another development requires mentioning. Comparing the overall emphasis banks placed on individual loans, by bank type, highlights a striking shift took place between the late 1990s and early 2000s, or around the same time global banks were gaining a stronger foothold in Brazil's banking industry. Figure 5 illustrates the percent of total loans *all* public domestic banks, private domestic banks, and foreign-owned banks allocated to individuals between 1997 and 2004. Beginning with year-end 1997, and running all the way until year-end 2004, foreign-owned banks devoted more of their portfolios than both domestic types. Crucially, domestic banks appear to have taken note of this practice, and increased their focus on individual lending immensely. Thus, echoing the literature, this data suggests domestic banks may have copied the practices of global banks.

Shifting to the inside approach, we dig deeper by observing retail lending activities from the perspective of the six banks, making specific interpretations on the three global banks' activities. Tables 7 through 10 lay out statistics on individual loans for each bank from year-end 2003 through year-end 2011. Statistical limitations mean most data is available only from 2003, but since that was precisely the period when loan growth was most prominent, a number of noteworthy observations can be made from this data.

First, Brazil's domestic banks are the dominant players in the individual loan segment (tables 7 and 8). Nevertheless, Santander's experience shows that a global bank can be successful in grabbing considerable market share, if it is actively engaged in acquisitions. In 2004, even though HSBC was roughly even with Santander in terms of market share and volume of individual loans, at the end of the period Santander was four times larger than HSBC by the same measures. Indicating HSBC's lack of continued local bank acquisition activity was the key difference between those two global banks. Still, it is important to point out HSBC's loans to individuals doubled in just four years from 2004 to 2008. So, Santander's growth was even more remarkable. Citbank's scale is considerably smaller, however the rate at which it extended retail loans between 2004 and 2008 was more than double the rate of total loans, signifying it was intensely focused on retail expansion.

Second, all six banks lost market share after 2009 (table 8). While the drop is sharper for certain banks than for others, the financial crisis appears to have nevertheless affected all banks. Santander and Itau's positions fell despite mergers that saw their positions rise significantly at year-end 2008. One explanation for this trend might be the sudden rise in housing loans (figure 4 above) from year-end 2008. Since the federally-owned CEF controls a majority of the housing loan market, it likely accounted for the lion's share of this change. The global financial crisis appears to have had the biggest impact on HSBC's retail activities, with loans growing just 9.41 percent, and market share falling 2.1 after 2008. Conversely, post-crisis Citibank was the leader in individual loan pace. Thus, the depth of financial crisis impact was different for each bank.

Third, all banks placed a higher emphasis (as percent of total loans-table 9) on loans to individuals in 2011 than they did in 2003, with the exception of HSBC. The positive change was highest for Santander and Citibank, at more than 14 percent. In fact, by the end of the period Santander devoted around half oall loans to retail. Citibank did not reach that level, but did manage to roughly double retail's importance to the loan portfolio. Meanwhile, HSBC placed the highest emphasis of any bank on individual loans at any point during the entire period with 63.2 percent of loans in 2005. By 2011 though, that statistic roughly halved to 36 percent. Still, given that HSBC devotes 5 percent more of its portfolio to retail than Banco do Brasil, and 3.7 percent more than Citibank, it is too soon to declare HSBC has abandoned retail banking in Brazil.

Fourth, individual loan growth was fastest for domestic private and global banks prior to the financial crisis, and the federally owned domestic bank Banco do Brasil after the crisis (table 10). In fact, each bank, including Banco do Brasil, more than doubled retail lending in just four years from the end of 2004 to the end of 2008. After the crisis, Banco do Brasil's growth shows that it may have been compensating for reductions by other banks. Nonetheless, 2010 and 2011 data show improvement for most banks observed. Interestingly, aside from Banco do Brasil, Citibank and Santander led the domestic and global bank recovery, in terms of year-on-year growth, each year from 2009 through 2011. Santander achieved the fastest growth in 2009 and 2011, while Citibank was fastest in 2010 and second fastest in 2009. Thus, the crisis caused a large hiccup in retail lending, but appears to have recovered partially because of efforts by global banks.

On balance, individual loan developments suggest early strategies by global banks spurred domestic banks to mirror their retail loan emphasis. Moreover, impressive deposit growth by global banks probably increased competitive pressure on domestic banks to expand their retail operations. In the face of higher competition, domestic banks push individual loans rapidly after 2004. The result was a massive expansion in retail credit, and although this trend slowed briefly after the crisis, most banks replenished retail lending in 2010 and 2011.

(d) Physical Presence

Since both deposits and loans to individuals grew during the 2000s, it is important to introduce the physical presence banks established for connecting with customers. Continuing the inside approach, table 6 depicts branch developments from 2000 through 2011 for each bank. Three important interpretations can be made from these statistics. First, the three domestic banks had the largest number of branches both at the beginning of the period and the end. Banco do Brasil dominated with the most branches throughout the decade, surpassing 5,000 branches by 2011. Perhaps somewhat peculiarly, Bradesco had more branches than Itau at the end of 2011, which merged with Unibanco in 2008. Itau had the fewest branches among domestic banks despite being the leader of total gross lending to individuals at the end of the period. Thus, while a branch network is important, this development suggests banks can effectively expand retail lending despite having fewer branches than competitors.

Second, developments among global banks differed in stark contrast. In one case, HSBC rolled back its branch network by 117 bank branches, or just under 12 percent, in 11 years. Standing at the opposite end of the spectrum, Santander increased its branch network (certainly in part due to acquisitions[8]) considerably over the period. Santander's total was 2,102 more branches in 2011 than 2000. Citibank represented a third type. To be sure, branches more than

8) ABN Amro had 1,107 branches in Brazil at the time of acquisition.

doubled to 128 from 54 in 2000, an impressive result given that Citibank's growth was purely organic. Even with impressive growth though, Citibank remained, among these six, the bank with the smallest physical presence.

Third, the most intense period of branch growth differed by bank. Banco do Brasil and Santander had larger growth in the first half of the decade. While Bradesco, Itau, and Citibank reserved the majority of their growth for the latter half of the 2000s. HSBC was the only bank to see branches decline, and in both halves of the decade no less. Since HSBC also peeled back on loans to individuals, branch decline may be a sign HSBC attempted to tidy up its retail banking activities in Brazil, especially in the second half of the decade.

In sum, retail banking expanded remarkably over the last ten years or more. Deposit, loan, and branch developments all suggest that the provision of financial services to individuals became a central aim for all banks, though whether HSBC returns to a high focus on retail, or shifts its attention elsewhere, remains to be seen. More importantly, global banks played a noteworthy role in the rise of retail over the 2000s. Global banks impacted domestic banks, spurring them to increase retail banking activity. The sudden upswing of retail credit raises the issue of whether loan growth was excessively fast. While the 2011 year-on-year increase of 6.6 percent (and 9.41 percent since 2009) indicates HSBC has not completely abandoned retail, HSBC's operations imply a change in strategy has taken place. In fact, "more clients are failing to pay back loans" in Brazil after what HSBC has called, a "rapid rise in lending balances in previous periods", indicating major issues may now be starting to emerge within Brazil's banking system, and HSBC is merely responding to those issues (Mustoe and Finch, 2012). We examine the stability of retail lending.

(e) Non-performing Loans and Debt Obligations

The astonishing growth of individual loans signals banks operating in Brazil identified opportunities to extend retail finance. Yet, whether the recipients of these financial products were creditworthy individuals, or whether excessively rapid credit allocation could pose a threat to financial stability, are separate questions. It is quite possible imprudent lending practices were prevalent, and that banks were reckless in the face of fierce competition, especially given the increased importance of global banks. Indeed, financial institutions have been known to give employees incentives to take risks in retail finance, and therefore they could have been motivated to disperse loans to unworthy individuals (Walter 2009). In this subsection we apply the outside approach to determine whether recent developments could jeopardize financial stability in the Brazilian banking system by examining nonperforming loans (NPLs) and debt to income ratios.

As a crucial indicator of loan quality, nonperforming loan ratios provide a means of understanding overall creditworthiness of borrowers, and the quality of loans. Below we divide individual

loan NPLs into those for real estate, all other (non-real estate) loans to individuals, and compare them to total loan NPLs. Figure 6 allows us to make four meaningful observations. First, non-real estate individual NPLs were higher than total NPLs over the entire period, however, individual real-estate loans fell dramatically from 2004. This drop in real-estate non-performing loans was likely connected to a 2004 law change, which reduced the riskiness of housing loans (Martins, Lundberg, & Takeda 2011). Thus, while it probably comes as no surprise, generally speaking, non-real estate loans to individuals tended to be riskier than other loan types.

A second observation we can make concerns the first part of the decade, 2001 to 2004, when all NPLs dropped. Up to 2004, credit to the private sector stagnated (figure 2), and loans to individuals (figure 4) grew only very slowly. A possible explanation for this might be banks rationed credit to individuals with the aim of removing individual loan NPLs from their books. Since total NPLs too dropped to a period low of 3.6 percent in 2004, it seems plausible declining NPLs of all types contributed to increased credit allocation after 2003. Significant interest rate drops in 2004 probably also contributed to the shift in credit growth as well as declining NPLs as the cost of repaying some loans would have become cheaper.

Third, the period from year-end 2004 through 2008 saw non-real estate loans to individual NPLs climb from 6.13 percent to 7.91 percent. This jump coincides precisely with the years when retail lending was expanding fastest. On the one hand, it might be said that this coincided with similar developments to total NPLs. On the other hand however, the rise in total NPLs increased just 0.76 percent from 3.6 percent to 4.36 percent, whereas the same difference for non-real estate individual loan NPLs was 1.78 percent. So, increased lending to individuals coincided with quickly rising nonperforming loans, by comparison, and thus, the quality of retail lending could seriously be questioned.

Fourth, even though some strong data through year-end 2010 suggest improvement in all loan types, sudden NPL jumps in 2011 indicate weakness. NPLs surging upward in 2008 (non-real estate individual NPL) and 2009 (total NPL) are probably attributable to spill over effects from the financial crisis. Declines witnessed in 2007 might well have continued without the crisis. Nevertheless, non-real estate individual and total NPLs ballooned in 2011, shooting up 1.67 percent in just one year. Since individual loans now account for large shares of overall private sector lending, we should also expect total NPLs to have risen as well. Indeed, total NPLs rose 1 percentage point in the same year. In fact, the non-real estate individual NPL increase in 2011 was larger than during the financial crisis years of 2008 and 2009. When taken together, real estate loans to individuals improved, but other loans to individuals did not experience similar improvement. On the contrary, they deteriorated after 2004, when individual loans began climbing, and experienced a worryingly rapid deterioration in 2011.

Another vital measurement we should consider is debt in relation to household incomes. The

Central Bank of Brazil has made two useful statistics on household debt, total household debt as a percentage of income and percentage of monthly income devoted to debt repayment, available since the beginning of 2005 through present. These statistics illustrate how much debt households in Brazil have accrued, and the overall pressure they are under in order to meet loan repayment schedules. Figure 7 displays developments in household debt to income ratios.

The first interpretation we can make from this data is that household debt, as a percent of income, rose by a wide margin between 2005 and 2011. At the beginning of 2005 it was just 18.4 percent, but by the end of 2011 it was just over 42 percent. Meaning Brazilian household debt more than doubled in just six years. Given the fact that loans to individuals grew so quickly during the same time, it should come as no surprise that households accumulated more debt. While household debt fell roughly one percentage point in 2008, the steep recovery afterwards shows the financial crisis did not deter Brazilian households from shouldering more debt after the beginning of 2009.

Contrastingly, the household debt service ratio did not jump to similar heights, but climbed significantly in recent years. This ratio allows us to comprehend what percent of monthly income households spend to service outstanding debt. At the beginning of 2005 the ratio stood at 15.63 percent of monthly income, but by the end of 2010 it had not even grown 4 percentage points in 5 years, finishing at 19.42 percent. Thus, it would seem Brazilian households did not overextend themselves because their incomes expanded at roughly the same pace as their debt commitments. However, this trend shifted quickly in 2011 when the household debt service ratio jumped 3 percentage points to 22.43 in October, and 22.19 by year-end. Such a sudden rise in debt service burdens for households indicates a households must devote larger shares of their income to service debt, potentially increasing their financial fragility.

On balance, financial services to individuals and their financial positions appeared relatively stable until 2010, but deteriorated quickly in 2011. Technically speaking, individual nonperforming loans improved (declined) from 2002 to 2007, and further improved in 2010. However, in 2011, NPLs shot up, casting huge doubts over the quality of individual lending. Given loan developments larger amounts of household debt were to be expected. But, the huge rise in debt to income and sudden rise in debt service ratio indicate households may be taking on too much debt, and implies Brazil's recent retail growth is unsustainable.

Ⅶ. The Importance of International Retail in Global Banking

In order to contribute to the discussion on international retail banking and its position as a segment of global banking, we now apply the inside approach toward grasping its importance in each global bank's overall earnings. This section takes the discussion beyond Brazil to explore

two important aspects related to the three global banks: the importance of retail as a business segment, and the importance income originated in markets outside of each banks' home market.

(a) Retail's Position in Global Banking

The share of income a business segment holds in total bank income is a solid indicator of the importance any bank places on that segment. Uncovering where retail falls relative to other segments allows us to comprehend retail banking's position in global banking. Figures 8 through 10 shows retail banking's share of income for the three global banks' over the 2000s.

Retail was the largest income segment for HSBC, growing larger over the decade. In 2000, retail constituted around 40 percent of income. By 2005 though, retail had grown to nearly 60 percent of total bank income. Other segments, such as commercial, investment, and corporate banking shrank drastically in those five years. Over the next six years retail regressed somewhat, accounting for just less than 50 percent in 2011, but was still by far the largest segment of its global business.

Likewise, the majority of Citibank's income was from what they label as *consumer banking*, but we treat as retail banking operations. Actually retail comprised more than half of income from early on, at 55 percent in 2003. On top of that, data from Citibank's 2008 annual report showed that figure went as high as 66 percent in 2007. The 2008 crisis seemingly had an impact though, as retail dropped to 50.46 percent in 2011. Nonetheless, for Citibank too, retail was by far the largest segment of their global banking income.

Santander saw retail grow to even higher heights than the other two banks. Already at 60 percent in 2000, Santander's retail income was high by comparison even at that time. Thereafter, retail grew to nearly 80 percent of income in 2005, slipping to 75 percent in 2011, suggesting for Santander too, the 2008 crisis impacted retail income. Still, at 70 percent or more of income for each year after 2001, Santander's retail segment is obviously the most significant portion of their business. Therefore, for all three global banks, retail is without question the most important segment of income, and has been for the past decade.

(b) International Markets' Position within Global Banking

Exploring the position foreign markets held in banking income sheds light on how crucial global banks view international opportunities. HSBC is domiciled in the United Kingdom, so we consider that to be its home market. However, it does have a long history with Hong Kong, and so we might consider that to be a special case. In 2002, the U.K. and Hong Kong contributed to just over 75 percent of total income, suggesting that most of its income originated in markets in which it was historically *familiar*. Almost a decade later, the U.K. and Hong Kong did not even comprise half of HSBC's total income. In 2011, income was much more globally distributed, with

roughly 50 percent of income coming from other international markets. Since Latin America, Brazil, the Middle East, North Africa, and Asia-pacific expanded in importance, emerging markets now contribute to just over half of HSBC's total income.

Similarly, earlier in the decade, well over half, 64 percent, of Citibank's income originated in its home market[9]. Thereafter emerging markets grew in importance, and by 2011 Asia and Latin America combined to form 45 percent of income, and 64 percent when combined with Europe, the Middle East, and Africa. North America attributed just 36 percent in 2011, a near 30 percent drop in just six years.

Santander too drew most of its income from familiar markets as recently as 2005. Regrettably, data published by Santander for 2005 does not distinguish between continental European countries, so where exactly its home market of Spain fell in that year is difficult to discern. At more than 50 percent, a majority of income came from its home market, or at least home *region*. The situation reversed by 2011 though, when 51 percent of income originated in Latin America. In fact, Brazil became the largest contributor to income at 28 percent, while the rest of Latin America brought in 23 percent. Spain on the other hand, only contributed 13 percent, and together with continental Europe just 25 percent, or less than half of its contribution six years earlier.

Despite some slight statistical imperfections, what we can emphatically say upon observing this data is that international retail banking is of much greater importance to the three global banks more than ever before. Moreover, emerging markets now contribute sizeable shares of income, meaning global banks have come to rely on economies where, unlike their home markets, are still experiencing economic growth.

Ⅷ. Global Retail Banking and International Financial Connectivity

In recent years the decoupling debate has received mounting attention. Supporters argue emerging markets have managed to 'decouple' their economies from developments in developed markets to the point where economic growth cycles do not move in parallel[10]. Those on the other side contend, however, that the effects of globalization are too strong to allow emerging market countries to completely escape the impact from large crises and other events, effectively meaning they are still relatively 'coupled' with developed nations[11]. In other words, this debate is centered on whether or not economic interconnectivity between emerging and developed

9) North America represents Citibank's home market for two reasons. First, Mexico is separated in all statistics, and included in statistics for Latin America in 2011. Second, even within the wider classification of North America, it is expected that the United States comprises a much larger share than Canada.
10) For example Akin & Kose (2007) or Kose, Otrok, & Prasad (2008)
11) For example, Walti, S. (2009)

countries is deepening. This study seeks to add another dimension to the discussion by considering interconnectivity within the context of recent financial developments, specifically, trends in global retail banking.

This paper's interpretation of financial interconnectivity is fundamentally intertwined with the shift that has taken place in global banking. Above, we defined global banking as the second definition used in the 2010 BIS paper. The first definition could be described as a more classic case. Indeed, in decades past, it was more common for global banks to conduct international activities via cross-border lending. Today, the second definition, in which global banks operate in local currency through local branch networks, has become the contemporary model. To be sure, one of the biggest reasons this change has occurred is the lowering of regulatory barriers on ownership, allowing global banks to enter emerging markets. Since this has not been the case in all emerging markets though, we should view Brazil as an early example where this development has taken root on a comparatively wider scale. Once a global bank achieves a sizeable presence in a local market, whether by purchasing local banks or through organic growth, its local *brick and mortar* presence connects the emerging market and the home market in two distinct ways. First, global banks' local presence makes them more visible to domestic banks. As a result, domestic banks can more easily analyze financial products, services, and other operations implemented by global banks. Second, branch networks equate to a longer time commitment to the host market than cross-border lending. When cross-border lending was commonplace, emerging markets were more susceptible to sudden swings in credit conditions. Retail banking networks require huge investment, and cannot be retracted as quickly as cross-border credits. Therefore, financially speaking, global banks have more deeply interconnected host and home markets.

The reasons retail banking has emerged to take a central role within recent financial developments in emerging markets are threefold. First, retail banking services are a lucrative business segment. Many banks view retail as "a valuable source of high-margin lending as well as fee and commission income" (Smith & Walter 1997, page 101). Given that pursuing retail banking opportunities in their home markets has allowed global banks to acquire valuable know-how and technological advancement, it seems predictable they would attempt international expansion once home market growth opportunities approach their limits. Second, since financial services cannot be patented, copycat behavior will lead local banks to quickly catch on to retail strategies employed by global banks, and begin their own forays into the segment. Since, in many cases, domestic banks hold large market share, they have the potential to compound retail's growth. Third, and perhaps most significantly, retail banking developments and future individual income expectations are tightly connected. For obvious reasons banks are more likely to extend loans to individuals with high likelihood of repayment. That is much easier to foresee if individual

incomes are growing. Since retail is of such importance to bank income, global banks will therefore seek out opportunities in markets with higher expectations for income growth. Indeed, global banks currently rely more on emerging markets for this very reason. Furthermore, it appears the opposite is also true: global banks are likely to deemphasize home markets when income growth outlook there is negative. As a result, competition in retail banking services will heat up in emerging markets, adding even more upward pressure to the expanding credit cycle. Deemphasizing the home market will have the opposite effect, applying downward pressure on a stagnating economy. Thus, provided retail continues to serve as a strong source of bank income, global bank operations will 'seesaw' in nature: rising in markets with higher individual income growth expectations, and idling in those with lower expectations.

Therefore, developed economies and emerging economies are undoubtedly 'coupled' through their common connections to global banks. Global banks are the seesaw's axel, locking the home and host market into a connection. However, when economic conditions in the home market turn negative, global banks intensify efforts in emerging markets; deemphasize efforts in home markets, and contribute to a *decoupling of credit cycle momentum*. Figure 11 illustrates this seesaw effect. Under relatively normal conditions, a state of equilibrium exists whereby retail credit expands in both markets, and home market bank earnings' are more significant, or at least on par with earnings in other markets. After a credit shock in the home market occurs though, global banks attempt to recuperate home market earning shortfalls through operations in other markets. Because prospects for individual income growth in emerging markets are more positive global banks push the emerging market side of the seesaw upwards. As global banks expand retail operations abroad, competition with domestic banks intensifies, leading credit expansion to grow even faster. Meanwhile, GDP per capita stagnates in the home market, and banks ration credit. Reduced credit availability extension to consumers negatively impacts the overall economic recovery, which in turn further darkens expectations for future individual incomes in a continuous cycle.

This notion of financial interconnectivity mirrors the scenario presently occurring in developed and emerging markets. Data in table 11 and figure 12 corroborate this theory by comparing the three global bank's home and host markets. Home market economies slipped into recession in late 2008, individual income growth turned negative the following year, and outlooks for GDP per capita became gloomy. Contrastingly, per capita GDP growth, and forecasts in emerging markets have been much brighter, even if they experienced a hiccup in 2009. Credit expansion (figure 12) in select emerging nations slowed somewhat from 2008 to 2009, but accelerated thereafter, lending support to the implication global banks moved to prop-up earnings through emerging market operations; spurring competition with domestic banks, and hastening credit growth. In the meantime, credit developments in home markets continued to stagnate after the

2008 financial crisis. Thus, ultimately, this notion of financial interconnectivity puts forth that *i)* by amplifying credit expansion in emerging markets and *ii)* suppressing credit growth in home markets, the result may be prolonged economic disequilibrium. At the end of 2011, Brazil's credit expansion over 2007 levels outpaced all other emerging markets observed. The impact of global banks may be to hasten the speed at which credit cycles decouple in a post-crisis environment.

IX. Conclusions and Future Research

Providing a response to Smith and Walter's assertion that retail banking can be a viable segment in global banking hinges upon what exactly they meant by *success*. If by success they meant market share, global banks' results in Brazil were mixed. Deposit market share rose, but gains in loan market share were not especially strong. Of course, acquisitions of local banks allowed Santander to be the exception in loan market share, indicating the only way to gain large swaths of loan market share may be to repeatedly acquire locally operating banks. Admittedly though, recent growth in housing loans may have also had a significant impact on market share developments. If by success Smith and Walter meant cultivating opportunities to realize earnings abroad, it appears all three banks observed here were not only successful in Brazil, but also in other emerging markets. When taken from the second notion of success, this study has emphatically shown that global banks are not only capable of success, but also international retail banking is becoming the most important segment within global banking. As individual incomes stagnate in the developed world, global banks will need to take advantage of growth opportunities elsewhere. With quickly rising incomes, and large populations eager for access to finance, retail operations in emerging markets will be essential for any bank with global aspirations.

This research posed three essential factors that contributed to Brazil's retail's expansion. First, Brazil successfully stabilized its macroeconomic situation. With impressive GDP and per capita income growth, lower interest rates, and subdued inflation, conditions were more conducive to retail lending. Additionally, rising incomes likely increased individual demand for retail financial products. Second, retail banking is a vital source of bank income. Higher margins in individual lending provide banks a strong incentive to deepen their retail efforts. Third, global banks influence domestic banks to place a higher emphasis on retail banking. Domestic banks noticed global banks utilizing technology and know-how in retail banking, caught on to the trend, and helped speed up the pace of expansion.

This paper has also suggested the stability of Brazil's retail banking developments may be deteriorating. Despite extraordinary loan growth, and the financial crisis, nonperforming loans and debt repayment levels appeared stable, until the end of 2010. However, in 2011, nonperform-

ing loans and household debt to income ratios rose sharply. Individuals had to devote larger shares of their income to debt service, and seemingly some of those individuals defaulted as a result. Brazil, and other emerging markets, will need to make sure retail banking expansion does not lead to severely deteriorating financial stability.

We have theorized the nature of global retail banking is like a seesaw. Developed and emerging markets are undeniably connected because of global bank activities. But since the retail banking segment is at the center of those activities, global banks will constantly seek opportunities where individual income growth is strongest. Therefore, when incomes in their home markets stagnate, they raise the emerging market side of the seesaw, and drop the home market side. Competition with domestic banks intensifies, and credit grows at a faster pace. In this way, global banks contribute to a decoupling of credit expansion momentum. Presumably, the opposite scenario, if income growth expectations were to decline in emerging markets, would return the seesaw towards a state of equilibrium only if income growth expectations turned positive in home markets. If that were not the case, global banks will likely seek out opportunities in new markets to prop up total bank income.

The central conclusion of this paper is to state the degree to which home and emerging market credit cycle decoupling develops depends upon the following two factors. First, the severity of the home market crisis directly impacts expansion by global banks in the emerging market. More specifically, it is the crises' impact on individual incomes that pushes global banks to rely more on emerging markets. Spain and continental Europe's share of Santander's income dropped drastically by 2011, while Latin American operations, specifically Brazil, rose significantly as a share of their income. This is because the crisis' impact on individual incomes has been more protracted in Santander's home markets (table 11), providing Santander the strongest incentive to augment income through operations in emerging markets. By comparison, the drop in home market income was not as acute for Citibank or HSBC. Nevertheless, the drop was still noteworthy, and contracting GDP per capita in the U.S. and U.K. certainly provided those two banks the motivation to pursue profit-earning strategies in emerging markets. Thus, while all three banks attempted to compensate income via emerging markets, Santander probably contributed the most to quicker credit expansion in Brazil.

Second, global banks' geographical diversity is immensely important in determining where banks concentrate their efforts. When income prospects in home markets decline, global banks initially expand efforts in markets where *they already have a brick and mortar presence*. At the time of the global financial crisis, Santander was present mainly in Latin America. HSBC and Citibank on the other hand were not just present in Latin America, but also in faster growing Asian economies. Since HSBC and Citibank were more diversified, their efforts to augment income were not solely concentrated on Brazil. On the other hand, Santander's efforts were

more focused on Brazil, and Latin America, because they had fewer options by comparison, and again, likely further contributed to speed up the pace of retail credit growth in Brazil.

This seesawing nature of global retail banking could continue because global banks can indeed successfully conduct profitable retail banking strategies by transferring know-how and technological advantage abroad. Other emerging markets will probably attract similar attention if regulations on foreign ownership are further relaxed. As such, policymakers should have these developments in mind when deciding to remove ownership regulations. Future research should conduct similar inquiries into other emerging markets. Other important research would include a comprehensive analysis on the role advancements in information technology have played in retail banking.

Table 1 – Global Banks' Position in Top 10 BRIC Countries Banking Sectors by Assets
(Source: The Banker Magazine, Top 1,000 Banks, July 2011 Issue)[12)]

		Top 10 Banks by Assets	Foreign Banks in Top 10
Brazil	Number of Banks	10	3
	Assets $USD Million	1,925,226	327,630
	% of Top Ten Banks	100%	17.02%
China	Number of Banks	10	0
	Assets $USD Million	8,964,087	0
	% of Top Ten Banks	100%	0%
India	Number of Banks	10	0
	Assets $USD Million	1,005,176	0
	% of Top Ten Banks	100%	0%
Russia	Number of Banks	10	3
	Assets $USD Million	630,411	50,462
	% of Top Ten Banks	100%	8.00%

12) The largest global bank in China is HSBC, while the largest in India is Standard Chartered India; neither of which were in the top ten.

Figure 1 – Internationalization Process of Retail Banking
(Source: Author's organization of various previous literature)

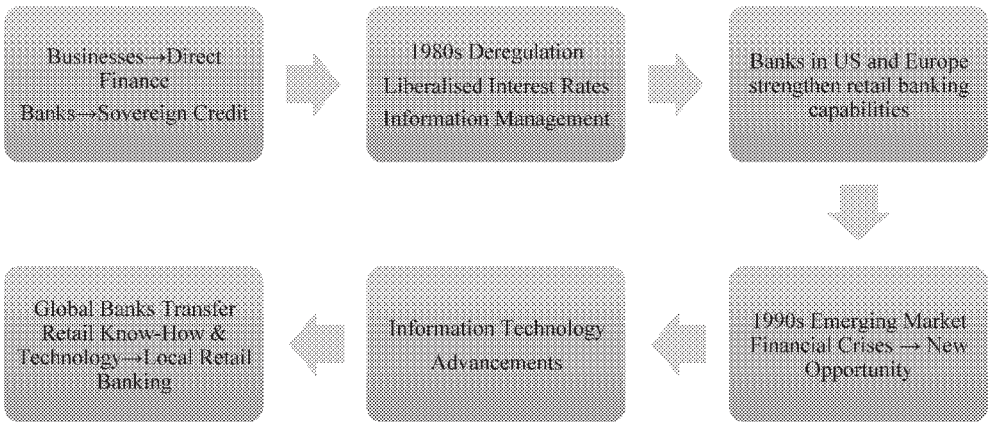


Table 2 – Key Macroeconomic Indicators From Brazil (Source: World Bank)

	1990	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average 1990-2000	Average 2001-2010
Inflation, consumer prices (annual %)	2948	6.8	8.5	14.7	6.6	6.9	4.2	3.6	5.7	4.9	5.0	767.3	6.7
GDP growth (annual %)	-4.3	1.3	2.7	1.1	5.7	3.2	4.0	6.1	5.2	-0.6	7.5	1.9	3.6
GDP per capita (constant 2000 US$)	3353	3693	3740	3734	3899	3977	4091	4298	4479	4410	4699	3520	4102

Figure 2 – Interest Rates and Domestic Credit to The Private Sector in Brazil
(Sources: Selic Interest Rate from Brazil's Central Bank, Domestic Credit (%GDP) from World Bank)

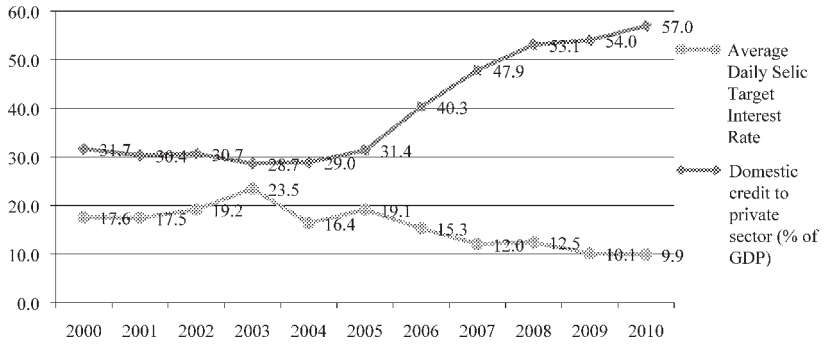


Table 3 – Major and Related Banking Acquisitions in Brazil Since 1995
(Source: Guillén and Tschoegl (2008) Fachada (2008))[13]

Year	Acquiring Bank	Acquired Bank	Acquisition Amount (Million)	Acquiring Bank Domicile Location
1997	Santander	Banco Noroeste	$564 (USD)	Spain
1997	Santander	Banco Geral do Comercio	N/A[14]	Spain
1997	HSBC	Bamerindus	$,1,000 (USD)	United Kingdom
1998	*ABN Amro*	Banco Real	*$2,100 (USD)*	*The Netherlands*
2000	Santander	Banco Meridional	$700 (USD)	Spain
2000	Santander	Banespa	$3,640 (USD)	Spain
2003	*ABN Amro*	*Sudameris/Intesa*	*$800 (USD)*	*The Netherlands*
2003	HSBC	Lloyds TSB	$815 (USD)	United Kingdom
2007	Santander	ABN AMRO Brazilian Operations	€19,855 (Euro)[15]	Spain

Table 4 – Bank Deposit and Loan Market Share (Source: Central Bank of Brazil)[16]

Bank	Share of Total Deposits (%)				Share of Total Loans (%)			
	Dec-00	Dec-03	Dec-10	Dec-11	Dec-00	Dec-03	Dec-10	Dec-11
Banco do Brasil (1)	21.1%	23.7%	26.7%	27.5%	14.8%	21.4%	24.4%	23.7%
Itau (2)	9.0%	8.1%	15.2%	15.7%	7.3%	10.4%	17.1%	17.2%
Bradesco (2)	11.8%	12.6%	13.8%	13.5%	12.5%	14.1%	14.4%	14.1%
Santander (3)	1.6%	3.9%	8.3%	7.6%	1.9%	4.4%	10.4%	10.3%
HSBC (3)	2.6%	3.3%	5.4%	4.6%	2.4%	3.5%	2.9%	2.9%
Citibank (3)	0.4%	0.3%	1.1%	1.0%	2.5%	1.7%	0.8%	0.8%
Total	46.5%	51.8%	70.6%	69.9%	41.4%	55.5%	69.9%	69.0%

13) ABN Amro's acquisitions in italics. Santander acquired ABN Amro's entire Brazilian operations in 2007.
14) Exact amount of the transaction unavailable. Data from the Central Bank of Brazil indicates Banco Geral do Comercio had roughly $1.4 billion (USD) in total assets at the time of acquisition, and around 0.34% market share of deposits, suggesting it was a smaller takeover.
15) Santander's acquisition amount source: 2007 Report entitled "Acquisition of Certain Businesses of ABN AMRO Holding N.V. ("ABN AMRO") for approximately €19.9 billion".
16) (1)=Federal Domestic Bank, (2)=Domestic Private Bank, (3)=Global Bank. Applies for tables 5 through 10 below as well.

Figure 3–Year-on-Year Growth of Deposits in Brazil 2001-2011 (Source: Central Bank of Brazil)

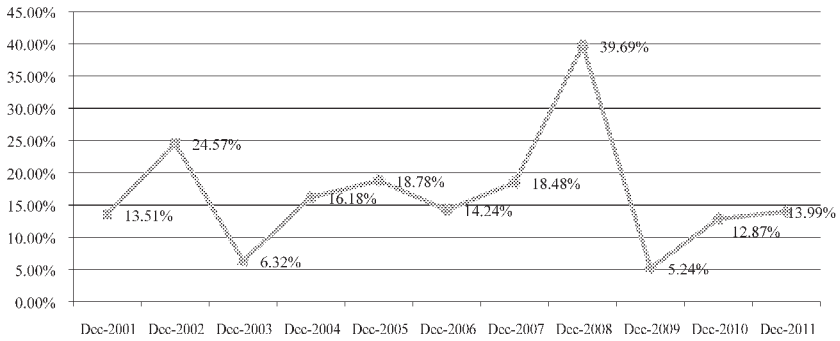
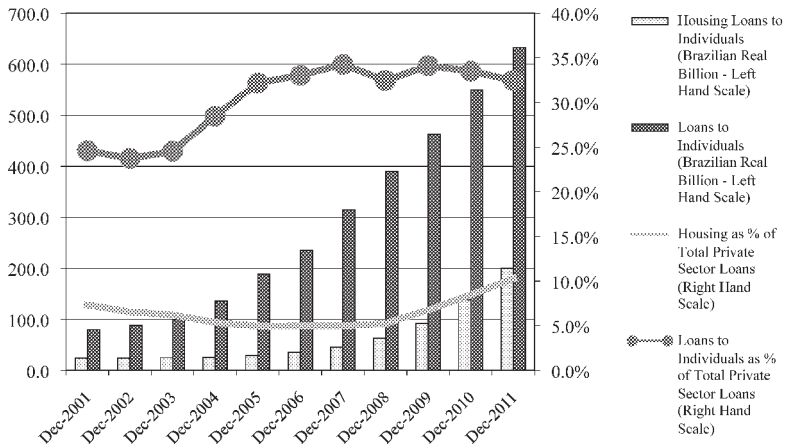


Table 5 – Deposits and Growth for the Six Banks 2000-2011 (Source: Central Bank of Brazil)
Billions of Brazilian Real At Year-End and %

Bank	Dec-2000	Dec-2005	Dec-2010	Dec-2011	2000-2005 Growth (%)	2005-2011 Growth (%)	2000-2011 Growth (%)
Banco do Brasil (1)	65.7	137.7	377.4	442.8	109.6%	174.2%	574.1%
Itau (2)	28.0	51.7	215.0	252.6	84.6%	316.1%	802.3%
Bradesco (2)	36.7	75.5	194.4	218.0	105.7%	157.6%	494.2%
Santander (3)	5.0	30.0	117.6	121.8	499.0%	292.4%	2333.4%
HSBC (3)	8.0	29.1	76.9	74.1	264.5%	164.5%	828.9%
Citibank (3)	1.2	6.3	15.4	16.5	445.0%	145.6%	1331.0%

Figure 4 – Loans to Individuals At Year-End (Source: Central Bank of Brazil)[17]



17) In this case, *total individual loans* refers to the entire financial system as reported by the Central Bank of Brazil. Still, "Banking Consolidated One", and therefore the six banks reviewed in this paper account for the lion's share. The same is true for Figure 5.

Figure 5 – Individuals Loans as Percent of Total Loans Portfolio At Year-End by Bank Type (Source: Central Bank of Brazil)[18)]

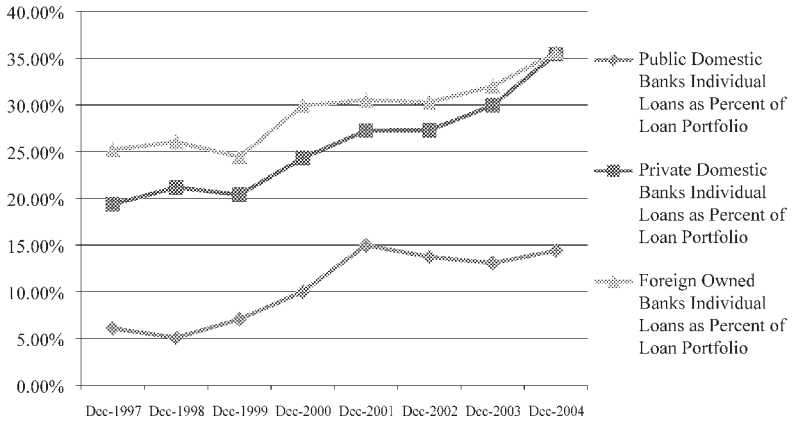
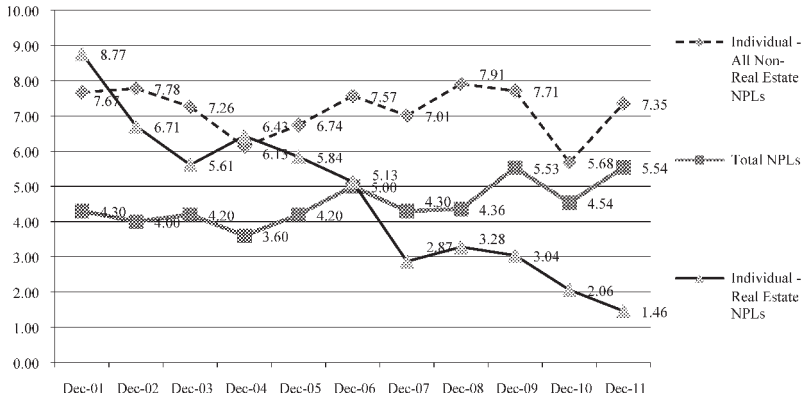


Table 6 – Physical Presence of Retail Banking in Brazil at Year-End (Source: Central Bank of Brazil)

Bank	Number of Branches			2000-2005	2005-2011
	2000	2005	2011	Growth %	Growth %
Banco do Brasil (1)	2,909	4,008	5,201	37.78%	29.77%
Bradesco (2)	2,589	2,927	4,643	13.06%	58.63%
Itau (2)	2,032	2,315	3,849	13.93%	66.26%
HSBC (3)	985	932	868	-5.38%	-6.87%
Citibank (3)	54	61	128	12.96%	109.84%
Santander (3)	410	1,033	2,512	151.95%	143.18%

Figure 6 – Brazil Nonperforming Loan Developments at Year-End 2001-2011 (Source: Central Bank of Brazil)[19)]



18) Excludes mortgages.
19) Non-earmarked credit operations as percentage of portfolio in arrears more than 90 days.

Figure 7 – Monthly Household Debt Ratios 2005-2011 (Source: Central Bank of Brazil)[20]

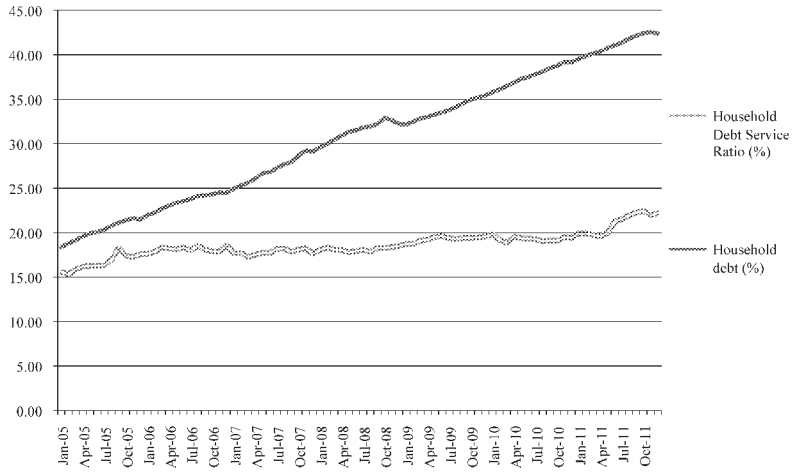


Table 7 – Total Loans and Loans to Individuals by Bank All Values at Year-End (See Notes Below)
(Source: Annual and Quarterly Reports and Financial Statements from Respective Banks)[21]

Bank	Loans (Brazil Real Billion)	2003	2004	2005	2006	2007	2008	2009	2010	2011	04-08 Growth	09-11 Growth
Banco do Brasil (1)	Total Loans	68.16	79.54	92.61	120.98	149.37	222.09	302.90	358.37	422.99	179.23%	39.65%
	Loans To Individuals	12.90	17.31	20.17	24.00	32.00	48.81	91.79	113.10	130.56	181.92%	42.24%
Bradesco (2)	Total Loans	54.34	62.79	81.13	96.22	137.11	179.96	190.99	230.61	268.67	186.61%	40.67%
	Loans To Individuals	15.63	21.19	33.22	39.61	58.72	72.60	80.92	96.88	106.97	242.61%	32.19%
Itau[22] (2)	Total Loans	38.66	47.41	60.64	84.15	115.55	241.04	245.95	295.05	345.48	408.45%	40.47%
	Loans To Individuals	15.06	20.18	30.44	42.67	60.38	102.59	112.85	132.33	155.35	408.35%	37.67%
Santander[23] (3)	Total Loans	16.60	21.59	28.68	37.34	43.72	136.04	138.39	160.56	194.18	530.02%	40.31%
	Loans To Individuals	5.69	7.57	10.31	13.53	17.86	63.91	68.30	77.95	93.87	743.71%	37.44%
HSBC (3)	Total Loans	–	16.24	20.18	25.18	33.48	42.41	42.40	51.44	59.25	161.14%	39.76%
	Loans To Individuals	–	9.37	12.76	14.93	18.22	21.38	19.54	20.06	21.38	128.30%	9.41%
Citibank (3)	Total Loans	5.58	5.74	5.04	5.74	6.66	9.20	9.35	10.87	14.03	60.31%	50.07%
	Loans To Individuals	0.94	0.99	1.38	1.80	2.28	2.70	3.08	3.96	4.55	171.25%	47.66%

20) Household debt service ratio data is seasonally adjusted. Household Debt＝Total Debt Stock/Total Income (over most recent 12 months). Household Debt Service Ratio＝Total Monthly Debt Service Payments/Monthly Income.
21) Table 7 (as well as 8 through 10) include housing loans.
22) Unibanco data included from 2008.
23) ABN Amro's Brazilian operations included from 2008.

Table 8 – Percent of Each Banks' Individual Loans in Total Banking System Individual Loans at Year-End
(Source: Annual and Quarterly Reports, Financial Statements and Central Bank of Brazil)

Bank	2003	2004	2005	2006	2007	2008	2009	2010	2011
Banco do Brasil (1)	10.4%	10.7%	9.3%	8.8%	8.9%	10.8%	16.6%	16.4%	15.7%
Bradesco (2)	12.6%	13.1%	15.2%	14.6%	16.3%	16.0%	14.6%	14.1%	12.8%
Itau (2)	12.1%	12.4%	14.0%	15.7%	16.8%	22.7%	20.4%	19.2%	18.6%
Santander (3)	4.6%	4.7%	4.7%	5.0%	5.0%	12.9%	12.3%	11.3%	11.3%
HSBC (3)	–	5.8%	5.9%	5.5%	5.1%	4.7%	3.5%	2.9%	2.6%
Citibank (3)	0.8%	0.6%	0.6%	0.7%	0.6%	0.6%	0.6%	0.6%	0.5%

Table 9 – Percent of Individual Loans in Total Bank Loan Portfolio at Year-End
(Source: Annual and Quarterly Reports and Financial Statements from Respective Banks)

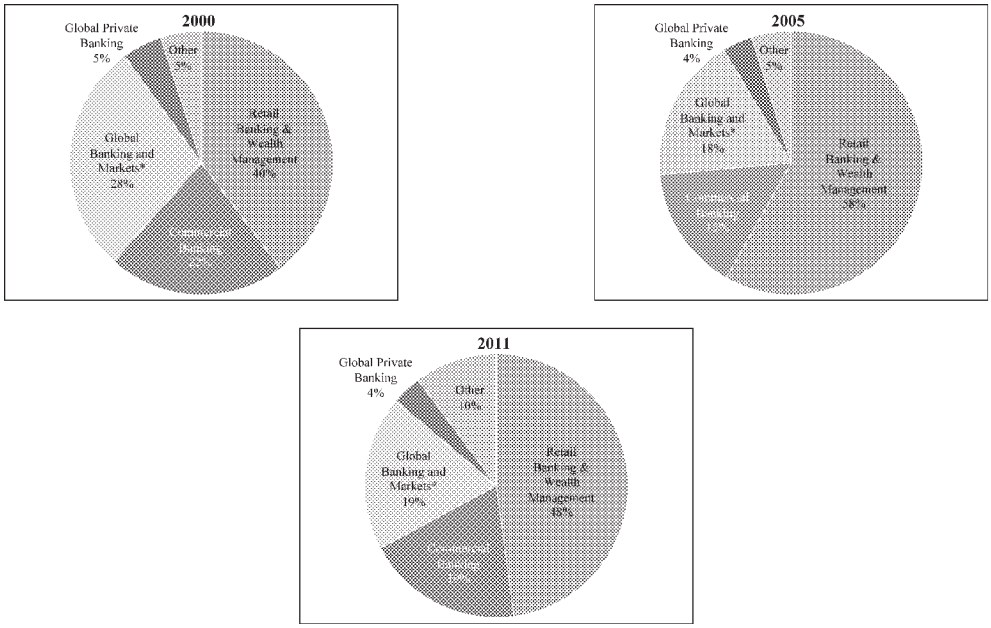
Bank	2003	2004	2005	2006	2007	2008	2009	2010	2011	Change[24)]
Banco do Brasil (1)	18.9%	21.8%	21.8%	19.8%	21.4%	22.0%	30.3%	31.6%	30.9%	11.9%
Bradesco (2)	28.8%	33.8%	40.9%	41.2%	42.8%	40.3%	42.4%	42.0%	39.8%	11.0%
Itau (2)	38.9%	42.6%	50.2%	50.7%	52.3%	42.6%	45.9%	44.8%	45.0%	6.0%
Santander (3)	34.3%	35.1%	35.9%	36.2%	40.8%	47.0%	49.4%	48.5%	48.3%	14.1%
HSBC (3)	–	57.7%	63.2%	59.3%	54.4%	50.4%	46.1%	39.0%	36.1%	-21.6%
Citibank (3)	16.8%	17.3%	27.3%	31.3%	34.2%	29.3%	33.0%	36.5%	32.4%	15.6%

Table 10 – Year-on-Year Individual Loan Growth by Bank from Year-End to Year-End Data
(Source: Annual and Quarterly Reports and Financial Statements from Respective Banks)[25)]

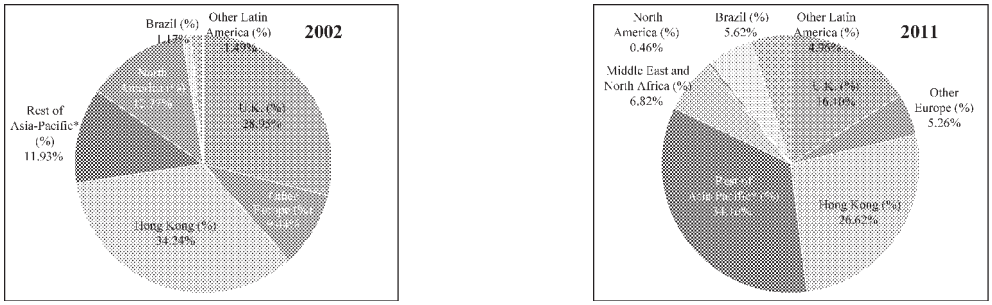
Bank	2003	2004	2005	2006	2007	2008	2009	2010	2011
Banco do Brasil (1)	–	**34.2%**	16.5%	19.0%	**33.3%**	52.5%	**88.1%**	23.2%	15.4%
Bradesco (2)	–	**35.6%**	**56.8%**	19.2%	**48.2%**	23.6%	11.5%	19.7%	10.4%
Itau (2)	–	34.0%	**50.8%**	**40.2%**	**41.5%**	69.9%	10.0%	17.3%	17.4%
Santander (3)	–	**33.1%**	**36.1%**	31.3%	**32.0%**	227.1%	16.9%	14.1%	20.4%
HSBC (3)	–	–	**36.2%**	17.0%	**22.1%**	**17.3%**	–8.6%	2.7%	6.6%
Citibank (3)	–	6.1%	**38.5%**	**30.5%**	26.7%	18.5%	14.2%	**28.6%**	14.9%

24) HSBC change from 2004.
25) Three highest years in bold. Italics indicates acquisition year.

Figure 8 – HSBC Income by Segment at Year-End
(Source: HSBC Annual Reports, All Information from most recently available report)[26)]
By Business Segment

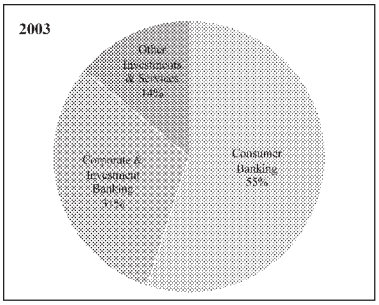


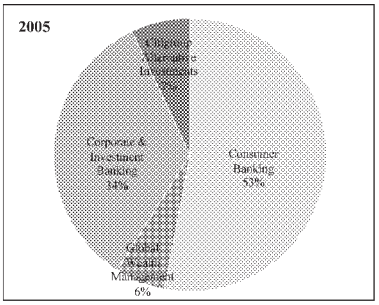
Percent of Income By Geographic Segment

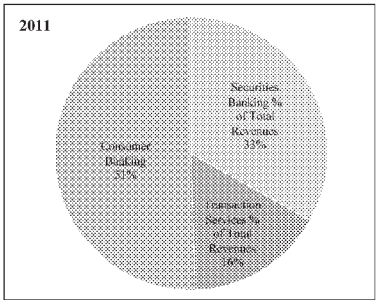


26) Profit on ordinary activities before tax. Global banking and markets refers to corporate and investment banking. Middle East included in Asia-Pacific in 2002, but separate in 2011.

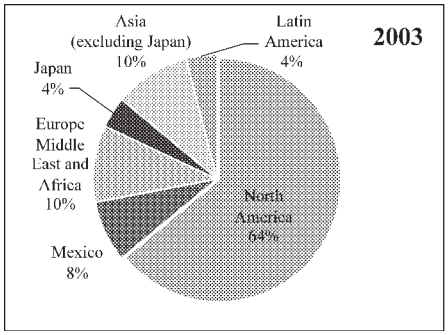
Figure 9 – Citibank Income by Business Segment at Year-End
(Source: Citibank Annual Reports, all information from respective years' annual report)
Income By Business Segment

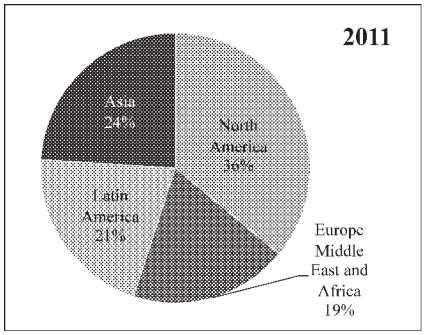






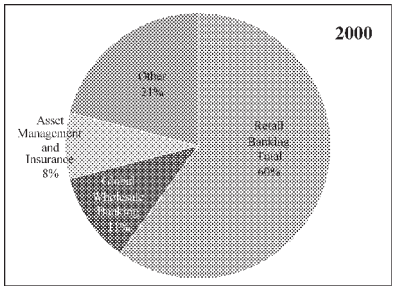
Percent of Income by Geographic Segment[27)]

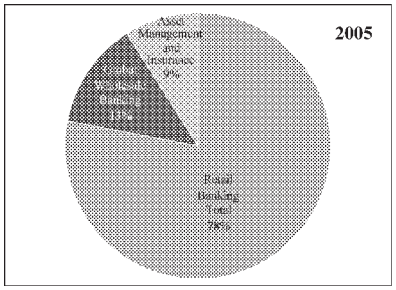


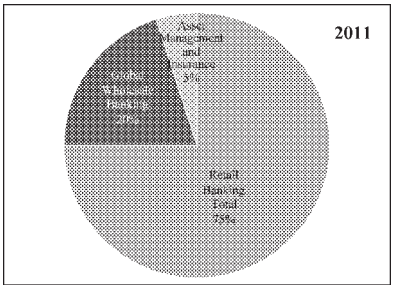


27) Mexico included in Latin America and Japan included in Asia in 2011.

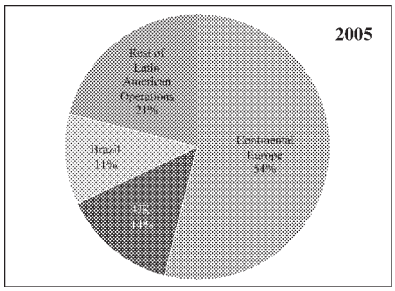
Figure 10 – Santander Income at Year-End
(Source: Santander Annual Reports, all information from most recently available report),
Income By Business Segment (‘Other’ segment only classified separately in 2000)







Percent of Income By Geographic Segment
(Spain not differentiated from Continental Europe until 2009)



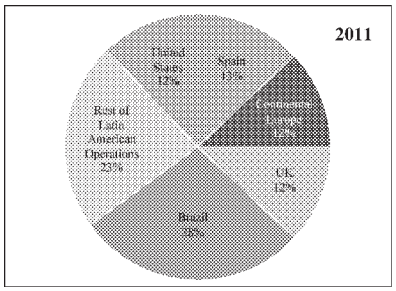
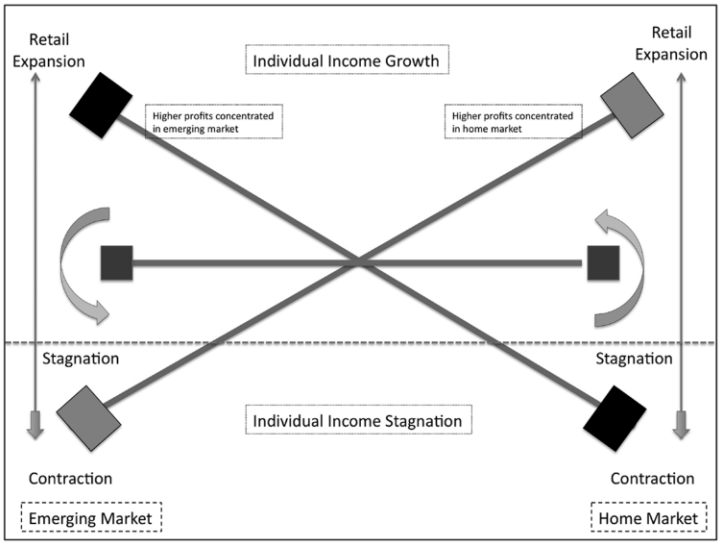


Figure 11
(Illustrations by Author)



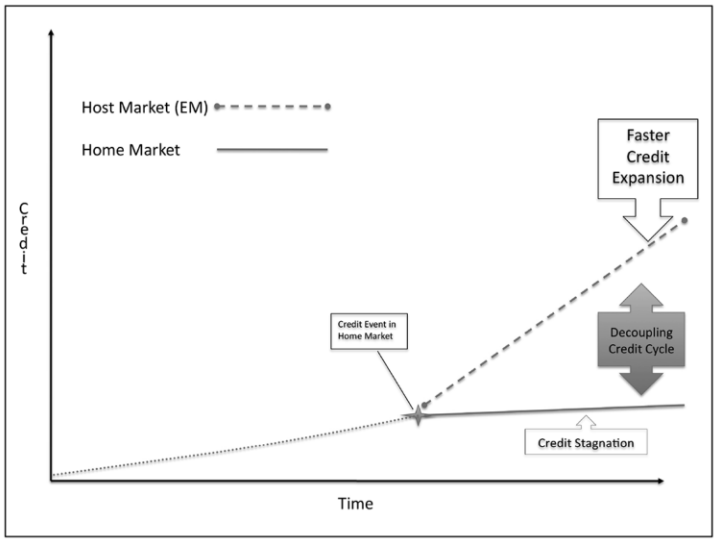
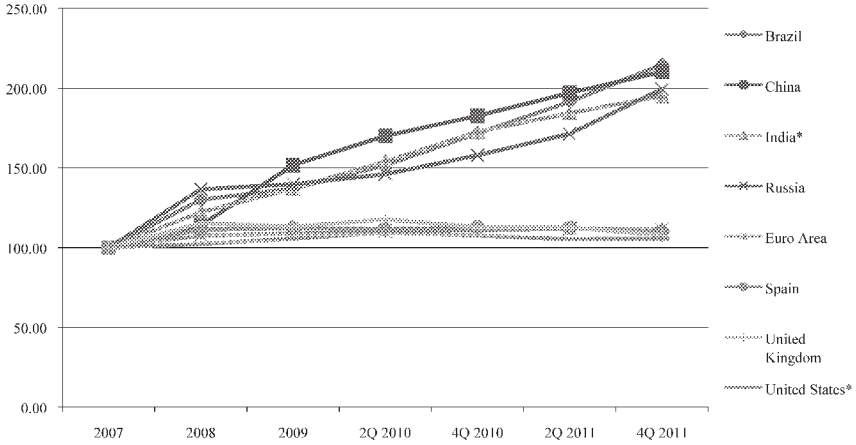


Table 11 – GDP Per Capita PPP Outlook for Various Countries and Regions
(Current International US Dollars Per Capita and %, Source: IMF)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008-2017 Growth
Home Markets													
Spain	29,085	30,472	30,863	29,665	29,881	30,626	30,315	30,688	31,375	32,274	33,228	34,348	11.29%
	–	4.8%	1.3%	-3.9%	0.7%	2.5%	-1.0%	1.2%	2.2%	2.9%	3.0%	3.4%	
United Kingdom	33,794	35,751	35,907	34,460	35,344	36,090	36,605	37,663	38,935	40,324	41,804	43,534	21.24%
	–	5.8%	0.4%	-4.0%	2.6%	2.1%	1.4%	2.9%	3.4%	3.6%	3.7%	4.1%	
United States	44,750	46,467	46,901	45,348	46,900	48,387	49,601	51,058	52,817	54,921	57,220	59,708	27.31%
	–	3.8%	0.9%	-3.3%	3.4%	3.2%	2.5%	2.9%	3.4%	4.0%	4.2%	4.3%	
Euro area	30,732	32,377	33,035	31,857	32,727	33,786	34,023	34,766	35,694	36,768	37,898	39,197	18.65%
	–	5.4%	2.0%	-3.6%	2.7%	3.2%	0.7%	2.2%	2.7%	3.0%	3.1%	3.4%	
Emerging Markets													
Brazil	9,164	9,894	10,526	10,498	11,314	11,769	12,181	12,780	13,390	14,050	14,738	15,510	47.35%
	–	8.0%	6.4%	-0.3%	7.8%	4.0%	3.5%	4.9%	4.8%	4.9%	4.9%	5.2%	
Central and Eastern Europe	12,533	13,534	14,195	13,731	14,435	15,463	15,913	16,552	17,331	18,222	19,182	20,266	42.77%
	–	8.0%	4.9%	-3.3%	5.1%	7.1%	2.9%	4.0%	4.7%	5.1%	5.3%	5.7%	
Developing Asia	3,495	3,961	4,314	4,611	5,057	5,506	5,920	6,413	6,945	7,534	8,170	8,891	106.12%
	–	13.3%	8.9%	6.9%	9.7%	8.9%	7.5%	8.3%	8.3%	8.5%	8.4%	8.8%	
Latin America and the Caribbean	9,605	10,308	10,830	10,617	11,253	11,863	12,323	12,873	13,447	14,052	14,683	15,374	41.96%
	–	7.3%	5.1%	-2.0%	6.0%	5.4%	3.9%	4.5%	4.5%	4.5%	4.5%	4.7%	

Figure 12 – Post-Crisis Decoupling Credit Cycles in Home and Host Markets
2007＝100, All Values at End of Period Indicated
(Source: IMF International Financial Statistics)[28)]
*4th quarter 2011 USA and India Data from 3rd quarter.



28) Brazil–depository corporations' domestic claims on private sector. China (People's Republic of China Mainland)–Banking institutions' claims on other (non-government and non-financial) sectors. India–deposit money banks' claims on private sector. Russia–depository corporations' claims on private sector. Euro Area –depository corporations' claims on other (non-government) sectors. Spain–Euro Area-Wide residency depository corporations' domestic (within Spain) claims on other (non-government) sectors. United Kingdom–banking institutions' claims on private sector. United States–depository corporations' claims on private sector.

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