

SECURITIZATION OF REAL ESTATE RECEIVABLES IN BRAZIL

**AN ASSESMENT OF THE NEED FOR
AND THE CHALLENGES
IN THE DEVELOPMENT OF A SECONDARY MARKET**

Master of Arts in Law and Diplomacy Thesis

Submitted by Erika Tabacniks

February 2011

Under the Advisement of Professor Laurent Jacque

© 2011 ERIKA TABACNIKS

<http://fletcher.tufts.edu>



THE FLETCHER SCHOOL

TUFTS UNIVERSITY

Abstract

The implementation of a securitization system that could be used as an efficient way of financing the real estate market in Brazil depends on the existence of three main items: a favorable macroeconomic environment; a comprehensive and effective legal and regulatory framework that brings security to investors; and a broad market with investor appetite for different types of investments. These three factors are currently present in the Brazilian market and securitization of real estate receivables seems to be a promising source of funding.

However, its expansion is subject to the rules imposed by the government on the market and in the economy, which can create incentives to attract investors or not. Despite the existence of the three items above in the Brazilian market and the recent developments in securitization and government efforts to enhance long-term funding options, it will still lag behind in 2011. There are important hurdles facing this segment in Brazil, such as the high interest rates that have haunted the economy for decades and other technical and structural problems.

Dedication

To Ana, my math teacher from middle school, who planted the seed.

To Prof. Dr. Maria Alejandra Caporale Madi, who taught me everything about International Economy at UNICAMP, and showed me that a few rays of sun and some drops of water can change a life.

To Prof. Dr. Mário Presser, a star, in every meaning of the word. An inspiration.

To Prof. Laurent Jacque, who made my stay at Fletcher a happier one.

To Prof. Dr. Erly Catarina de Moura and Prof Dr. Manfredo Harri Tabacniks ; more than professors, guides who have always shown me the different trails, but let me write my own path.

To Naninha, my loved sister who makes me smile as I write her name.

This thesis is dedicated to those who have taught me that even the largest task can be accomplished if done one step at a time; and above all to everyone who showed me that the most valuable knowledge is that which is learned for its own sake.

Acknowledgements

The foundation of this thesis was outlined and structured during my summer job as an International Business Development Intern at Genworth Financial, Inc. in Raleigh, North Carolina. My deepest gratitude must be extended to my coworkers, whose sage guidance, insightful commentaries, and patient encouragement aided the writing of this thesis in innumerable ways. A lot of my knowledge in the area discussed herein was solidified during the months I worked with this talented and high spirited group.

Much of this project is a consequence of Professor Laurent Jacque's steadfast support and the higher expectations he had from me; an encouragement greatly needed and deeply appreciated.

Mere power and mere knowledge exalt human nature but do not bless it. We must gather from the whole store of things such as make most for the uses of life.

*Francis Bacon
"The Advancement Of Learning"*

*I make kids wonder,
I make them question.
I make them criticize.
I make them apologize and mean it.
I make them write, write, write.
And then I make them read.
I make them spell definitely beautiful, definitely beautiful, definitely beautiful
over and over and over again until they will never misspell
either one of those words again.
I make them show all their work in math.
And hide it on their final drafts in English.
I make them understand that if you got this (brains)
then you follow this (heart) and if someone ever tries to judge you
by what you make, you give them this (the finger)*

*Let me break it down for you, so you know what I say is true:
I make a goddamn difference! What about you?*

*Taylor Mali
"What Teachers Make, or
Objection Overruled, or
If things don't work out, you can always go to law school"*

Glossary (An Introduction to The Brazilian Real Estate Finance and Securitization Markets 2008)

BNH	Acronym for Banco Nacional da Habitação. See National Housing Bank.
Brazilian Savings and Loans System (Sistema Brasileiro de Poupança e Empréstimo)	Financial institutions authorized by the Central Bank of Brazil to accept savings deposits and engage in lending activities in the real estate sector.
Caixa Econômica Federal	A federal owned financial institution that accepts savings deposits and has lending activities focused on the housing, infra-structure and basic sanitation sectors. CEF is the largest participant in the Brazilian Savings and Loans System measured by savings deposits.
Caixas Econômicas	Publicly owned savings and loans institutions that accept savings deposits and have lending activities in the housing, infra-structure and basic sanitation sectors.
CEF	Acronym for Caixa Econômica Federal.
Central Bank of Brazil (Banco Central do Brasil, “Central Bank”)	A branch of the federal government, subordinated to the National Treasury, created by Law 4,595 of December 31st, 1964. The Central Bank is the principal executor of policy guidelines established by the CMN. The Central Bank is responsible for the inspection of the financial institutions that belong to the SBPE and the regulation of savings accounts.
Certificates Of Real Estate Receivables (Certificados De Recebíveis Imobiliários)	Securities backed by real estate receivables. Only Real Estate Securitization Companies are permitted to issue CRI, which were created in order to allow these companies to raise funds from investors on terms compatible with underlying real estate transactions. They are negotiable, fixed income securities originated through receivables securitization contracts that identify the real estate receivables backing them. The principal characteristics of CRI include the following: a) they are book-entry securities, b) the principal amount can be repaid in installments, c) interest rates can be fixed or floating, and d) they can be guaranteed by the issuer’s assets. CRI are normally settled on one of two, or both, clearing houses, CETIP or CBLC and can be traded on BovespaFix, SomaFix or CetipNet.
CMN	Acronym for Conselho Monetário Nacional. See National Monetary Council.
Comissão de Valores Mobiliários	Brazilian Securities Commission.
CRI	Acronym for Certificados de Recebíveis Imobiliários. See Certificates Of Real Estate Receivables.
CVM	Acronym for Comissão de Valores Mobiliários.
Fiduciary Relationship (Regime Fiduciário)	A legal concept introduced to the real estate market by Law 9,514 in November of 1997 by which a legal relationship is established between

specified real estate receivables and the securities, generally CRI, that back them.

When established by the Securitization Company, this legal concept allows receivables to be separated from the Securitization Company's other assets and their cash flow to be directed exclusively to pay interest and principal on the CRI to which they are associated, plus certain transaction expenses. Receivables covered under this arrangement are not accessible by the Securitization Company's creditors. Therefore, investors that purchase CRI in which a fiduciary relationship has been established do not run the credit or other risks associated with the Securitization Company, including bankruptcy, or any other transactions accounted for on the Securitization Company's balance sheet.

By segregating pools of receivables and linking each to specific CRI, Securitization Companies can execute multiple transactions without changing the risk characteristics of any previous or subsequent issues. Similarly, deterioration in the credit quality of any given receivables pool will impact only those CRI associated with that pool, and will not have any impact on the remuneration of any other CRI. For every CRI issue in which a fiduciary relationship has been established by the Securitization Company, a fiduciary agent must be nominated to represent the interests of the CRI investors.

Fiduciary Title Of Real Estate (Alienação Fiduciária Da Coisa Imóvel)

A legal concept introduced to the real estate market in Law 9,514 of November of 1997. Used as a form of guarantee, it takes the form of a transfer of real estate ownership from the obligor to the creditor until such time as the obligation has been extinguished. Establishing fiduciary title consists of two legal relationships. The first is a contractual financial obligation. The second is the transfer of title to real estate from the obligor to the creditor, not for the purposes of securing ownership, but in order to guarantee payment of the contractual obligation established previously. The practical effect of this important legal concept is to abbreviate the time required to repossess real estate in the event of default.

FGTS

Acronym for Fundo de Garantia do Tempo de Serviço. See Worker's severance fund.

Household Finance System (Sistema Financeiro da Habitação)

A special segment of the National Finance System created by the Law 4,380 in 1964. Created institutions as well as financial and legal concepts to regulate and control the country's house market.

Mortgage Company (Companhia Hipotecária)

One of the original financial agents of the SFH. Financial institutions authorized to enter into the same activities as real estate companies in addition to managing third party mortgage credits and real estate investment funds.

Mortgage Notes (Letras Hipotecárias)	Securities issued by financial institutions authorized by the Central Bank to engage in real estate lending.
Multiple Bank (Banco Múltiplo)	Financial institutions authorized by the Central Bank to engage in more than one category of financial intermediation, for example, real estate and corporate lending.
National Housing Bank (Banco Nacional Da Habitação)	Created by Law 4,380 in 1964, the BNH was charged with regulating and providing policy orientation to the housing market. The BNH was extinguished by Law 2,291 of 1986.
National Monetary Counsel (Conselho Monetário Nacional)	Brazil's highest monetary authority. Participants include the Treasury Minister and the President of the Central Bank of Brazil.
Real Estate Company (Sociedade De Crédito Imobiliário)	A legal vehicle created under Law 4,380 of 1964 which acted as one of the SFH's original financial agents. These companies' activities were limited to financing residential home construction and sales. They were forbidden from performing any other kind of financial activity. They could raise funds through borrowings directly from the BNH and two other instruments, savings accounts and mortgage notes.
Real Estate Finance System (Sistema de Financiamento Imobiliário)	Enacted by Law 9,514, it promotes real estate financing by freeing-up lending terms and conditions and establishing the basis for a secondary market for real estate credits through securitization.
Real Estate Notes (Letras De Crédito Imobiliário)	Securities issued by financial institutions authorized by the Central Bank to engage in real estate lending.
Real Estate Receivables	Though not a concept defined precisely in the law, the CVM has been considering real estate receivables to be those credits typically arising from either the sale of real estate to individuals or corporations, or from loan, lease or rent agreements for the purchase, construction or use of real property.
Real Estate Securitization Company (Companhia Securitizadora De Créditos Imobiliários, "Securitization Company(ies)")	A legal vehicle created by Law 9,514 of November of 1997 for the express purpose of securitizing real estate receivables. This securitization vehicle is a non-financial institution organized as a corporation (sociedade anônima). Its business objective is the acquisition and securitization of real estate credits, the issuance and placement in the financial markets of certificates of real estate receivables and other fixed income instruments and the provision of related services. All Securitization Companies must be registered at the CVM prior to issuing securities in the public markets. Since they are not financial institutions, Securitization Companies are not subject to regulation or inspection by the monetary authorities but are subject to CMN norms regarding minimum operating requirements.
Reference Rate (Taxa Referencial)	Monthly average rate of 30-day interbank deposits adjusted by a methodology established by the National Monetary Council.
Savings Accounts	Deposits accepted by financial institutions of the SBPE. One of the main

(Caderneta De Poupança)	sources of funds for the SFH.
SFH	Acronym for Sistema Financeiro da Habitação. See Brazilian Household Finance System.
SFI	Acronym for Sistema de Financiamento Imobiliário. See Real Estate Finance System
SPBE	Acronym for Sistema Brasileiro de Poupança e Empréstimo. See Brazilian Savings and Loans System.
TR	Acronym for Taxa Referencial. See Reference Rate.
Worker's Severance Fund (Fundo De Garantia Do Tempo De Serviço)	A savings fund into which employers are required to deposit 8.0% of their employees' monthly salaries. These funds belong to the employees and can only be withdrawn when the employee is fired, upon the purchase of first home or other special circumstances. The FGTS is managed by the CEF and is one of the SFH's largest sources of funding.

Contents

1	Introduction	12
2	The Brazilian Economy	15
2.1	Introduction.....	15
2.2	1980-1994: Instability & Uncertainties	15
2.3	1995-2010: Stabilization & Sustained Growth	18
2.4	2010 & Beyond: Attractive Investment Opportunities	22
2.5	Concluding Remarks: High Interest Rates & Growing Demand For Credit	26
3	The Brazilian Housing Finance System	27
3.1	Introduction.....	27
3.2	1964: The Household Finance System (“SFH”)	27
3.3	1997: The Real Estate Finance System (“SFI”)	32
3.4	SFH’s and SFI’s Funding Sources	34
3.5	Concluding Remarks: A Need for Real Estate Funding	37
4	Securitization of Real Estate Receivables in Brazil	38
4.1	Introduction.....	38
4.2	Legal & Regulatory Framework	38
4.3	Financial Instruments	40
4.4	Market Participants	44
4.5	Credit Enhancement.....	46
4.6	Developing a Secondary Market	47
4.7	Concluding Remarks: A Very Slow Process	50
5	Conclusions & Policy Recommendations.....	51
6	Bibliography	55

List of Figures

Table 1: GDP Growth and Inflation Rates per Decade (IBGE).....	15
Table 2: Macroeconomic Data, 1980-1994 (EIU).....	18
Graph 1: FDI Inflows, US\$ billion (Central Bank).....	19
Graph 2: Current Account & Reserves (EIU)	19
Graph 3: Historical Exchange Rates (EIU)	20
Graph 4: GDP Growth (IBGE)	21
Table 3: Macroeconomic Data, 1995-2009 (EIU).....	21
Graph 5: Origin of GDP, % Real Change (EIU)	23
Graph 6: Unemployment Rate (IBGE).....	23
Graph 7: SELIC Rate (Central Bank).....	24
Graph 8: Inflation (EIU)	25
Table 4: Delinquency Rate of Home Loans 1980's (Central Bank)	29
Graph 9: Housing Units Financed ('000) (ABECIP, Central Bank).....	30
Graph 10: Types of Mortgage Amortization Schedule	31
Graph 11: Delinquency Rate of Home Loans (ABECIP).....	34
Table 5: Central Bank Requirements (UqBar).....	35
Graph 12: CCIs Deposited at CETIP, R\$ million (UqBar).....	41
Graph 13: Collaterals Are Real Estate Receivables, Residential or Commercial (UqBar)	42
Graph 14: CRIs Deposited at CETIP, R\$ million (UqBar).....	43
Graph 15: Real Estate Securitization Companies Registered at CVM (UqBar).....	45
Graph 16: Sellers of Residential Collateral by Economic Activity in 2009 (UqBar)	46
Graph 17: Sellers of Corporate Collateral by Economic Activity in 2009 (UqBar)	46

1 Introduction

Real estate loans have reached unprecedented levels in Brazil. In 2010 these loans grew 51%, compared with a growth of 19% in the total credit in the economy (Central Bank). Banks and real estate experts predict that this rapid growth will continue. Between January and June 2010 loans for home purchases with funds from the savings accounts hit a record of R\$23.8 billion, 77% more than in the same period of 2009. A total of 187,600 properties were financed in that same period, 51.5% higher than in the first half of 2009.

The growing credit demand is a consequence of the stability-oriented economic policy of the past decade, which foundations were laid by Fernando Henrique Cardoso, initially during his term as Finance Minister from 1992 to 1994, when he launched the Real Plan; and then as President from 1994 to 2000 (Eder 2010). This policy has resulted in 20 years of unprecedented growth. From 1990 to 2010, Brazil's average quarterly GDP growth was 0.8% reaching a high of 9.0% in September 1994 and a low of -7.7% in June 1990. With large and growing agricultural, mining, manufacturing and service sectors, this fast growing emerging economy has acquired a strong position in the global economy (Brazil GDP Growth Rate 2010).

As a consequence of this growth, millions of Brazilians have been able to join the middle class and demand; among other things, higher quality housing. Combined with the financial support of the Federal Government through its subsidies in Brazil's residential mortgage market, especially for low to middle income households; they are responsible for an increasing demand for real estate credit. Mortgages are growing at a faster pace than savings accounts, its main

funding source, which many believe will prompt banks to start packaging more home loans to make room on their balance sheet for other assets.

Therefore, real estate securitization may have an important role in the offer of funding. The most commonly used financial instrument is the Certificate of Real Estate Receivables (CRI). In comparison to other investment options, CRIs offer lower borrowing costs and longer maturities, often up to 30 years. Demand comes mainly from wealthy individuals who receive a 15% tax break on the investments and banks that need to meet a government requirement that 65% of savings deposits go to mortgage financing (Tatiana Bautzer, Gabrielle Coppola 2010). Although regulated since 1997, securities backed by real estate credits are currently a small part of the Brazilian securitization market. It is estimated that in 2008 the total issuance of residential mortgage back securities (RMBS) effectively introduced into the investor market was around US\$ 600 million, a fraction of the origination volume of credit by the Household Finance System, of approximately US\$ 40 billion (Vedrossi 2009).

Nonetheless, many of the elements required for securitization to take off are already in place. The country's legal and regulatory framework is modern, flexible and functional. Demand for household finance products is very large, for the most part among the low-income segments of the population. There is a large quantity of investable funds, at present in excess of the amount of securities being brought to market, and a well established domestic market yield curve for corporate and government fixed-income securities. Its expansion, however, is subject to some government decisions that will affect the maintenance of the positive macroeconomic environment, including GDP growth, low and controlled inflation, interest rates, wage growth,

and credit availability. The Brazilian economy, as we know, is still struggling with high interest rates, used by the government to keep inflation under control. The goal of this work is to show that despite the positive items listed above, the high interest rates combined with other technical and structural hurdles, jeopardize the future of securitization transactions in the Brazilian real estate market.

2 The Brazilian Economy

2.1 Introduction

The last 30 years of Brazil's economic history can be broken down into two different periods to show the radical changes the country has undergone and to explain its emergence as a highly attractive investment opportunity in the minds of investors. This chapter starts with an outline of the first period, from 1980 to 1994, an era of instability and uncertainties. Then, it describes the impressive stability that took place from 1994 to 2010 as a consequence of the implementation of the Real Plan, a sound economic policy that targeted inflation, developed by then-Finance Minister Fernando Henrique Cardoso. Following that, it provides an overview of the macroeconomic characteristics and the new middle class that emerged under the government Lula and some thoughts and expectations for Dilma Rousseff's presidency. Some concluding remarks about the importance of this growing middle class finalize the chapter.

2.2 1980-1994: Instability & Uncertainties

From 1980 to 1994, Brazil had 15 finance ministers, five presidents, and six different currencies. The economy was marked by low GDP growth of 2.1% per year; high interest rates that reached 45% in 1994, and currency depreciation that resulted in astonishing inflation rates of as much as 5,000% in 1993 (Daniel de Souza 2011).

Table 1: GDP Growth and Inflation Rates per Decade (IBGE).

GDP Growth		Inflation
1950-59	7.1%	19%
1960-69	6.1%	40%

1970-79	8.9%	33%
1980-89	3.0%	330%
1990-99	1.7%	764%
2000-09	3.3%	6%

In the 70's, the Brazilian government adopted an import-substitution strategy based on massive investment targeted at key industries and protection against international competition through high tariff barriers. The result was a decade with strong growth referred to as the "Economic Miracle". In 1979, however, the Brazilian economy was adversely affected by three factors:

- the high prices of the second oil crisis increased imports value;
- the high international interest rates increased government spending; and
- the US recession reduced exports.

To stimulate exports and contain imports, a devaluation of the local currency was necessary. The decade that followed is known as the "Lost Decade", characterized by stagflation, reduction in growth and high inflation (Gomes n.d.). The country was facing an unsustainable foreign debt (two-thirds owed by the government and state-owned enterprises), which led to increased public deficit made worse by irresponsible government expenditure. Brazil was also still negatively affected by a degree of immobility created by excessive protection to domestic industries in the previous decade. As a consequence of the external shocks, there was a significant reduction in investment and in 1982 the flow of external funding ceased. Since the currency was undervalued, the government started printing more money to service its debt, which generated more inflation and more depreciation of the currency. An inflationary spiral resulted in a reduction in public sector savings.

Between 1986 and 1991 the government made five unsuccessful attempts to stabilize the economy including a sophisticated system of price indexation that consisted in freezing prices for a period of time in an attempt to de-index the economy. On the political side, the crumbling economy caused the military regime to lose its hold on the country. The 90s started with new hopes brought by the first President elected directly by Brazilian citizens since 1960, Fernando Collor de Mello. Two years later, though, Mr. Collor was impeached by the Congress amid a corruption scandal and replaced by Itamar Franco (Ziegler n.d.). In the following year, Fernando Henrique Cardoso became the Minister of Finance and created the Real Plan, an economic policy launched in July 1994 to control inflation. In October of that year, Mr. Cardoso was elected President and the Real Plan, implemented.

Under this plan state bank officials were no longer allowed to lend money to the government, reducing one of the sources of inflation. Moreover, the government enacted a series of contractionary fiscal and monetary policies, restricting its expenses and raising interest rates. To address the inertial inflation phenomenon, prices were adjusted on a daily basis according to changes in price indexes and to the exchange rate of the local currency to the US dollar. Plano Real then created a non-monetary currency called “Unidade Real de Valor” (URV) which value was set to approximately 1 US dollar (Sicsú 1996). All prices were quoted in these two currencies, Cruzeiro Real and URV, but payments had to be made exclusively in Cruzeiros Reais. Prices quoted in URV did not change over time, while their equivalent in Cruzeiros Reais increased nominally every day. Inflation fell from 50% to less than 2% per month.

Table 2: Macroeconomic Data, 1980-1994 (EIU).

	GDP Growth (%)	Infla- tion (%)	Current- Acc. /GDP	Trade Balance /GDP	Unemp. (%)	Int. Reserve	Net Direct Inv.
1980	9		-5.4	-1.2		6,912	1,544
1981	-4	102	-4.5	0.5	15	7,509	2,313
1982	1	101	-5.9	0.3	12	3,993	2,534
1983	-1	135	-3.4	3.3	13	4,562	1,422
1984	6	192	0.0	6.5	13	11,996	1,552
1985	4	226	-0.1	5.6	10	11,609	1,360
1986	7	147	-2.0	3.1	7	6,761	202
1987	1	228	-0.5	3.8	7	7,458	1,031
1988	0	629	1.3	5.8	7	8,116	2,629
1989	2	1,431	0.2	3.9	6	8,729	608
1990	-4	2,948	-0.8	2.3	8	9,176	324
1991	1	411	-0.3	2.6	9	8,764	89
1992	-1	945	1.6	3.9	11	23,268	1,924
1993	5	1,926	-0.2	3.0	10	31,711	801
1994	6	2,076	-0.3	1.9	10	38,488	2,035

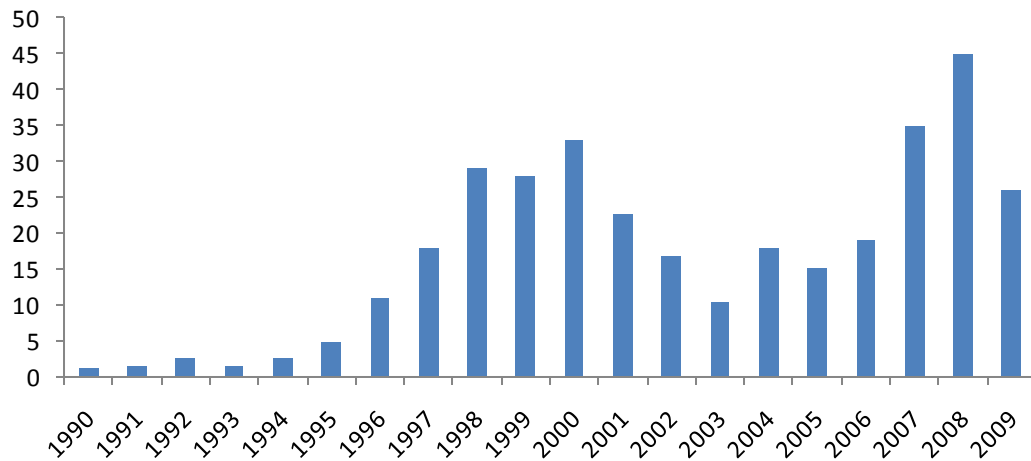
2.3 1995-2010: Stabilization & Sustained Growth

From 1995 to 2010, Brazil had three finance ministers, two presidents, and only one currency, the Real. The success of a currency stabilization implemented in 1994, combined with lower net debt levels and an increase in foreign reserves that went from US\$49 billion in 2003 to US\$239 billion in 2009, led to a decrease in real interest rates that went from 45% in 1994 to as low as 8.75% in 2009 and an era of macroeconomic stability that has been the basis for the country's sustained growth in the last ten years (Daniel de Souza 2011).

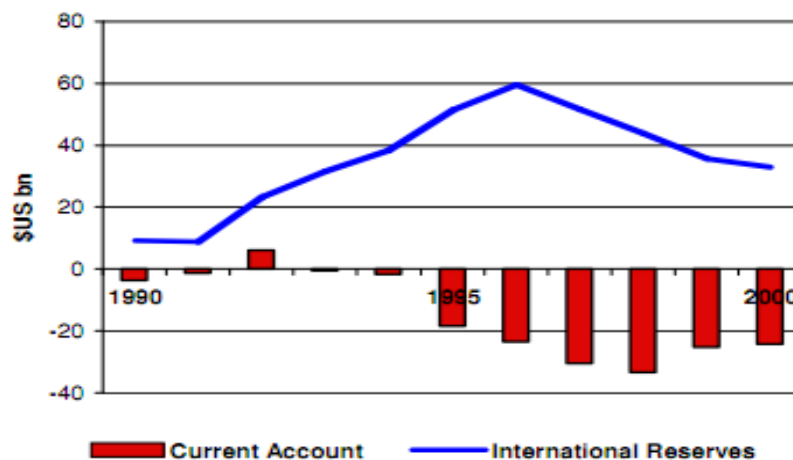
In 1995, the governments kept high interest rates to reduce inflationary pressures by decreasing the incentives to hold currency. As a consequence, investors started pouring money

into the Brazilian economy at unprecedented rates, thus appreciating the currency. The country also started to run consistent current account deficits and hold precarious foreign exchange reserves.

Graph 1: FDI Inflows, US\$ billion (Central Bank).



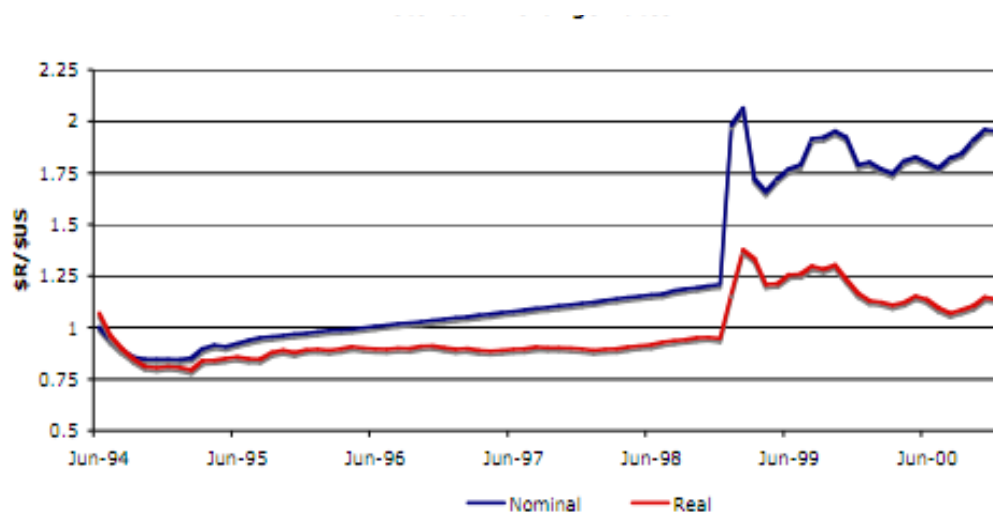
Graph 2: Current Account & Reserves (EIU).



Internationally, Brazil weathered the 1997-98 Asian financial crisis fairly well, but Russia's devaluation and default on its debt in 1998 sent international investors into a panic. Foreseeing

a similar devaluation in Brazil, investors began to exchange domestic currency (Mike Evangelist 2006). These economic shocks, the Southeast Asian overvalued currency, the declining exchange rate reserves, the high unemployment and massive capital outflows led to an economy closed to recession. In January 1999, the central bank decided to devalue the Real by 8% and by the end of the month, the local currency had depreciated 66% against the US dollar. Brazil's sizeable public debt held in US dollars instantaneously increased.

Graph 3: Historical Exchange Rates (EIU).



In October 2002, left wing Luis Inacio “Lula” da Silva was elected President and promised social reform and to continue President Cardoso’s economic framework of fiscal discipline, floating exchange rate and inflation targeting. Uncertainty amid the presidential election triggered a crisis of confidence. The stock market fell, the country risk premium increased, inflation became higher and the currency weakened significantly at the end of the year.

Contrary to market expectations, however, a surge in exports due in part to productivity gains in 2003 and 2004, particularly in agriculture, led to record trade surpluses and the first current

account surplus since 1992. Inflationary pressures eased reflecting strict monetary policy and an appreciation of the Real. In 2006, Lula was reelected President. In his second term, from 2007 to 2010, Brazil had an average GDP growth of more than 5%. Positive trade surpluses and declining inflation rates were achieved, resulting in positive market sentiments towards Brazil and foreign direct investment started to flow back into the country.

Graph 4: GDP Growth (IBGE).

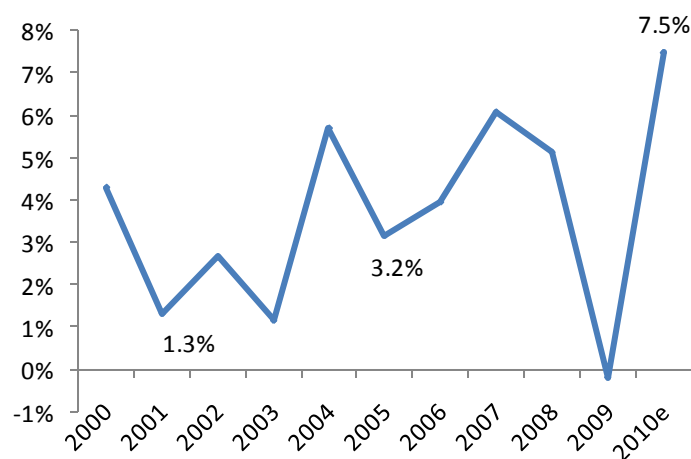


Table 3: Macroeconomic Data, 1995-2009 (EIU).

	GDP Growth (%)	Inflation (%)	Budget Deficit /GDP	Public Debt /GDP	Current-Acc. /GDP	Trade Balance /GDP	Unemp. (%)	Int. Reserve	Net Direct Inv.
1995	4	66	-6.7		-2.4	-0.5	9	51,475	3,475
1996	2	16	-5.4		-2.8	-0.7	10	59,704	11,667
1997	3	7	-5.7		-3.5	-0.8	11	51,730	18,608
1998	0	3	-7.4	56	-4.0	-0.8	14	43,938	29,192
1999	0	5	-9.0	59	-4.3	-0.2	14	36,342	26,886
2000	4	7	-3.4	63	-3.8	-0.1	13	33,012	30,497
2001	1	7	-3.3	68	-4.2	0.5	11	35,866	24,716
2002	3	8	-4.2	77	-1.5	2.6	12	37,837	14,108
2003	1	15	-4.6	72	0.8	4.5	12	49,297	9,894
2004	6	7	-2.4	69	1.8	5.1	11	52,935	8,694
2005	3	7	-3.0	68	1.6	5.1	10	53,799	12,550

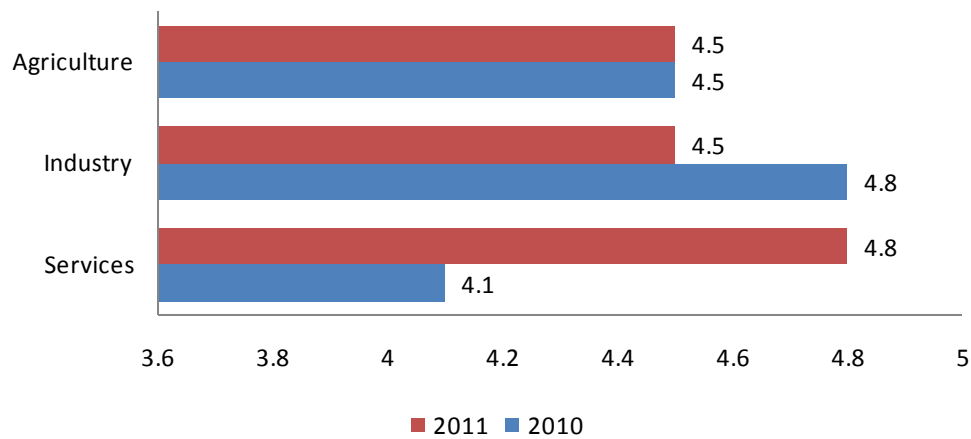
2006	4	4	-2.9	56	1.3	4.3	10	85,839	-9,420
2007	6	4	-2.8	56	0.1	2.9	9	180,334	27,518
2008	5	6	-2.0	59	-1.7	1.5	8	193,784	24,601
2009	0	5	-3.3	60	-1.5	1.6	8	238,539	36,032

2.4 2010 & Beyond: Attractive Investment Opportunities

The Brazilian economic performance of 2010 has been compared to what the country experienced in the first half of the '70s, with the so-called “Economic Miracle”. This time, however, there are more opportunities for welfare distribution (Brazil poised to elect its first woman president 2010).

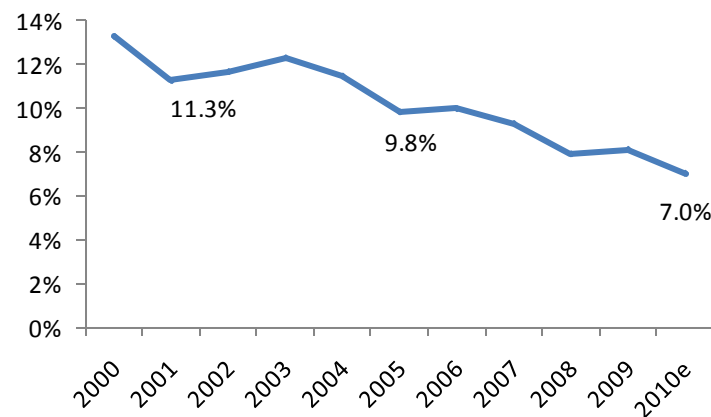
Brazil has increasingly become a service-oriented economy, although its large agricultural sector and diversified industrial base are important drivers of growth. In the past four years, favorable external conditions have boosted economic growth, particularly stronger-than-anticipated commodity exports demand from the Asian markets, such as China. As a consequence, trade flows have more than doubled, and export markets are more diversified than in the past.

Graph 5: Origin of GDP, % Real Change (EIU).



One of the main consequences of this economic growth and macroeconomic stability is an emerging middle class that has provided the grounds for a solid expansion of private consumption (Philip Rauber 2010). In 2011, roughly 6 million people are expected to move from Class C to Class B (Acioli 2011).

Graph 6: Unemployment Rate (IBGE).



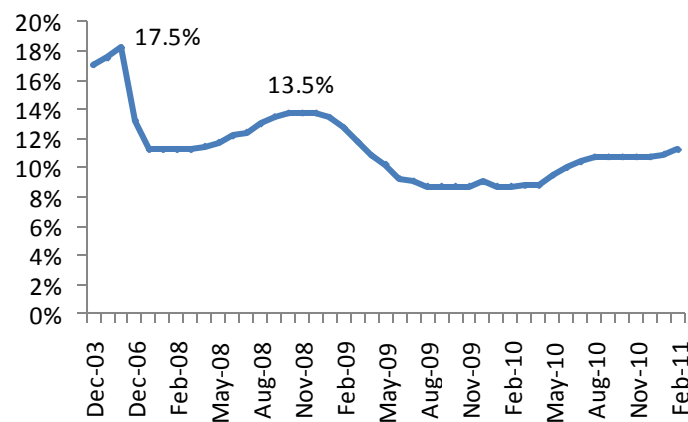
A recovery in internal private consumption has also been underpinned by poverty alleviation policies and easier access to credit. This is important because it allows higher savings in the

economy; thus contributing to sustainable GDP growth. Real estate credit, in particular has two major positive outcomes: it promotes the development of the construction industry, a labor intensive sector; and it reduces the Brazilian housing deficit, currently estimated at around 7.5 million housing units (Sports frenzy fuel Brazil's housing boom 2009). Additionally, real estate credit has an important role in the development of the secondary mortgage market, incipient in Brazil and currently focused on non-residential ventures.

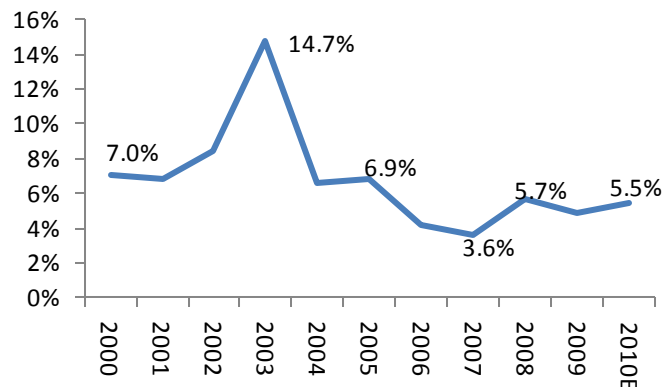
Brazil's potential GDP growth however continues to be constrained by:

- Large Public Debt: currently at 60.8% of GDP (The World Factbook n.d.);
- Lack of investment in infrastructure;
- A burdensome tax regime; and
- High real interest rates (SELIC rate at 11.25%) to help maintain inflation inside policy targets (the official inflation rate forecast for 2011 is 4.90%, slightly above the inflation target of 4.5%).

Graph 7: SELIC Rate (Central Bank).



Graph 8: Inflation (EIU).



As per the exchange rate, the recent appreciation of the Real mainly because of the increase in US dollars inflow has made the government adopt some protective measures such as a tax on foreign purchases of fixed income security. The political goal of protecting the national exporters might keep heavy pressure on the government to prevent the currency from appreciating much beyond the BRL1.75/US\$ level, and creates the possibility of further capital controls (Latin America Monitor 2010).

On the political side, Dilma Rousseff from the PT party has been elected President for the 2011 term, which confirms a general continuation of the current economic policy mix. The market believes the administration of President Rousseff will see moderate, but discreet fiscal consolidation over the coming four years. The infrastructure investment, fiscal situation, and reforms such as labor, pension and politics, should be the major challenges for her agenda (Aleman 2011).

2.5 Concluding Remarks: High Interest Rates & Growing Demand For Credit

Floating exchange rate, inflation targeting and primary fiscal surpluses have been the three pillars of the Brazilian macroeconomic framework for more than a decade.

Brazil is not unique in having a history of hyperinflation, currency crises, and high interest rates. However, while other countries have successfully controlled inflation with a proportional moderation of interest rates, Brazil's lending rates remain persistently high. The government also has little room to maneuver when trying to reduce the budget deficit and increase the primary budget surplus. The country has excessive and complicated tax systems that directly increase spreads. Additionally, high volumes of government expenditures are necessary to support some social programs that will be difficult to cut (Slawson 2010).

Nonetheless, it is a fact that Brazilians now have easier access to credit, especially real estate credit, which has resulted in increasing prices and property values. Major lenders in the Brazilian market have never seen such a high demand for real estate loans. In order to analyze the effects of this growing demand and the availability of funds, a better understanding of the Brazilian Housing Finance system is necessary, and this is the topic of the next chapter.

3 The Brazilian Housing Finance System

3.1 Introduction

The Brazilian real estate finance market is comprised of two systems that operate side by side: the Household Finance System (*Sistema Financeiro da Habitação*, “SFH”) created in 1964 and the Real Estate Finance System (*Sistema de Financiamento Imobiliário*, “SFI”) put in place in 1997. This chapter starts with an introduction and a description of the SFH and then, the SFI. Following that, there is a brief description of both systems’ assets and liabilities in order to show where their funding comes from. The chapter ends with a brief analysis of the current housing finance conditions and concluding remarks about the future origins of funding for the real estate finance market in Brazil.

3.2 1964: The Household Finance System (“SFH”)

Housing construction in Brazil was a responsibility of the private sector until 1930. After that, with the intensification of industrialization and urbanization, the government began to intervene directly in infrastructure and construction of homes. The country did not have, however, a structured housing loan mechanism capable of coordinating housing investment supply and demand. With the goal of promoting a national housing policy, the government, at that time a military regime, created the Household Finance System (*Sistema Financeiro da Habitação*, “SFH”) with the approval of Law 4,328 in 1964 (An Introduction to The Brazilian Real Estate Finance and Securitization Markets 2008).

The SFH's central pillar was the National Housing Bank (*Banco Nacional da Habitação*, "BNH"), responsible for regulating and setting the policy which would guide the housing market. The BNH's main market agents were real estate companies and government and private sector savings and loans institutions. This was the first effective initiative of the government with well defined goals and targets, source of funding and specific credit mechanisms such as interest rates, payment rules and guarantees. Lending under the SFH is strictly regulated and includes some of the following provisions: (i) maximum of R\$245 thousand financing per unit; (ii) maximum of R\$350 thousand appraised value per unit; (iii) 12% per year of maximum cost to borrower; (iv) the reference rate (*Taxa Referencial*, "TR") must be used as a payment index; and (v) under certain circumstances automatic extensions are allowed.

The system had to be isolated from the effects of inflation that reached 91.8% in 1964, so monetary correction was widely used in the Brazilian economy. The mortgage payments at that time were adjusted by the borrower's wage index and the outstanding balance was adjusted by the savings account index plus interest. Due to this disparity in rates, at the end of the term, the borrower would still have an outstanding balance equivalent to four times the market value of the property. To fix this issue, a Mortgage Assistance Fund (*Fundo de Compensação de Variações Salariais*, "FCVS") was created in 1967 with the goal of making the payment of any outstanding balance at the end of the loan contract (Fundo de Compensação de Variações Salariais - FCVS n.d.).

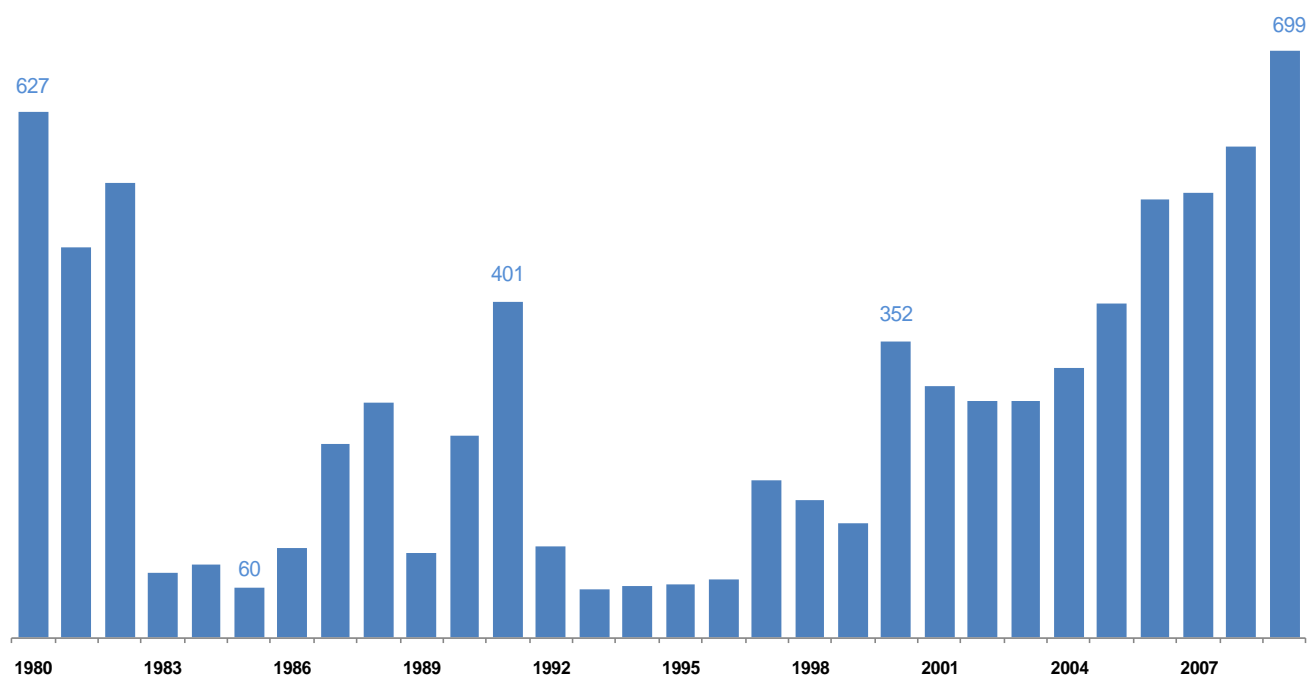
The annual number of new units financed grew constantly from the system's beginning through 1980 when it peaked at 627 thousand units. In the subsequent years, increased unemployment

and skyrocketed inflation (95.2% in 1981) resulted in lower payment capacity of the borrowers (IADB n.d.). The situation was aggravated by the unsuccessful policy of mismatched indexes since the borrower's income was not being adjusted at the same rate as the higher mortgage payments that were increasing with the high inflation (An Introduction to The Brazilian Real Estate Finance and Securitization Markets 2008). The high delinquency rates in addition to an unstable economic policy, resulted in funds being transferred from the citizens' savings accounts to government bonds, leading to a decrease in the financial resources available to the SFH.

Table 4: Delinquency Rate of Home Loans 1980's (Central Bank).

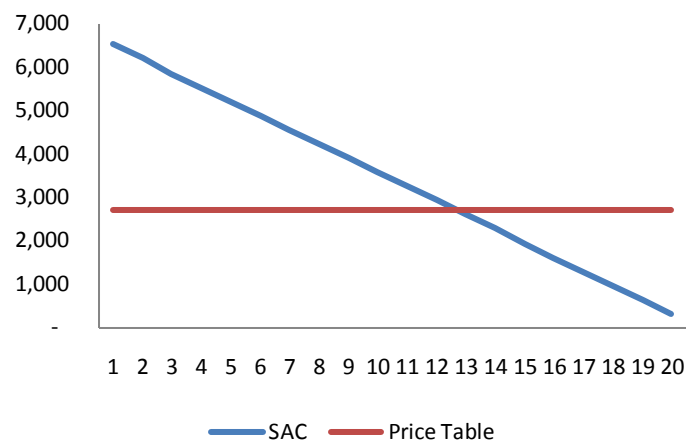
	3 months past due	>3 months	Total
1980	22%	4%	26%
1981	24%	4%	28%
1982	29%	5%	34%
1983	34%	12%	46%
1984	32%	23%	55%

Graph 9: Housing Units Financed ('000) (ABECIP, Central Bank).



With the goal of reducing this high delinquency, borrowers started replacing the Constant Principal Amortization Scheme (“SAC”) with the Normal Amortization scheme, also referred to as “Price Table”. In the SAC, first payments have a higher nominal value, thus reducing access to financing from lower income borrowers.

Graph 10: Types of Mortgage Amortization Schedule.



In addition, in response to pressures from major players, the government started granting more and more subsidies. The FCVS estimated deficit reached US\$ 40 billion (Bevilaqua 1998). The BNH had become financially insolvent and had not succeeded in providing resources to low-income population. As a consequence, in 1986, the SFH underwent a major restructuring and the BNH was terminated. Part of its functions was transferred to a state-owned bank called Caixa Economica Federal ("*Caixa*"), responsible for the operations, and part to the Brazilian Central Bank ("*Banco Central*"), responsible for the regulation of the system. Currently, the system is also managed by the Special Secretary of Urban Development, the Office of the President and the National Monetary Council.

In 1988, the government approved a new Constitution. One of its amended resolutions was that new loans would no longer be insured by the FCVS and a 25% discount was granted to borrowers who paid off their outstanding balances in advance. Not much changed in the Brazilian housing finance model until November 1997 when, due to the increased macroeconomic stability of the mid 1990s, the National Congress enacted Law 9,514 creating

the Real Estate Finance System (“SFI”) to bring a new approach to real estate development and complement the SFH.

3.3 1997: The Real Estate Finance System (“SFI”)

The SFI’s key purpose was to address the country’s housing needs and reformulate the model based on the **securitization of mortgage loans** and **increased legal security** in contracts.

Differently than the highly regulated SFH, the SFI was established as a voluntary system in which lenders and borrowers were free to agree on the terms and conditions of their financing arrangements. The only conditions were that the total amount borrowed must be repaid; the interest paid must be contractually determined; the interest must be accrued; and life and disability insurance must be contracted on the borrower (An Introduction to The Brazilian Real Estate Finance and Securitization Markets 2008).

Interest rates on home loans in Brazil are among the highest in the world, just like the credit market in general. Nationally, the figure is around 11.3% against an average interest rate of 14.5% practiced in the US, 5% in Spain, 4.9% in Russia and 3.4% in Chile. Brazil is also in front of several countries when it comes to the average spread in real estate. The spread is the difference between the rate that banks pay to raise money in the market and the amount they charge to pass it to the client. In Brazil, the difference is 5.05 percentage points per year, compared to 3.1 in Russia, 4.8 in the US, three in Chile and 2.2 points in Spain.

The operational mechanics of this new system were established through the creation of several legal concepts, financing instruments and securitization vehicles. The market participants were then able to create securities backed by real estate receivables and finance them in the capital

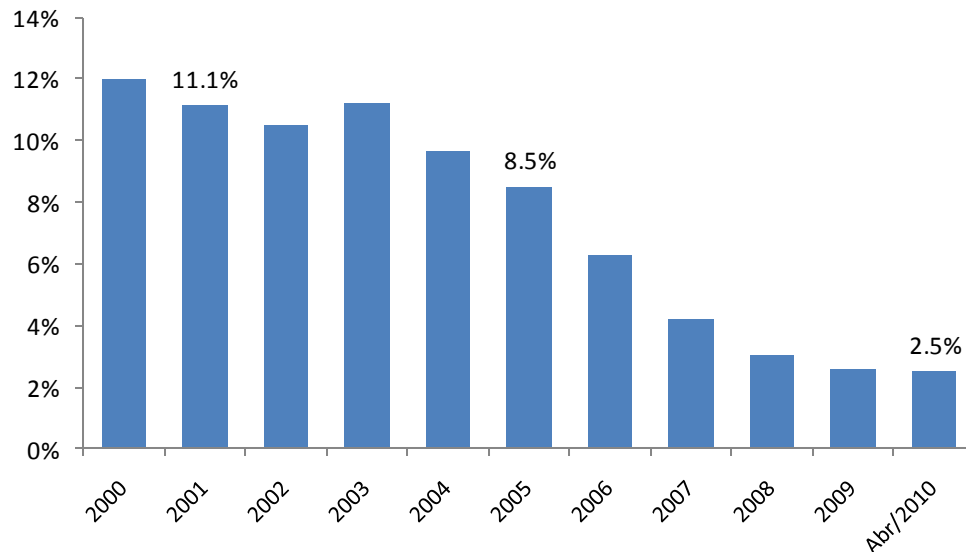
markets instead of having residential loans on their balance sheets until maturity. The main **securitization instrument** created was the Certificates of Real Estate Receivables (*Certificado de Recebíveis Imobiliários*, “CRI”) examined in details in the next chapter (Sistema de Financiamento Imobiliário (SFI) n.d.).

The housing finance system was shaken in 1999, when the largest construction company, ENCOL, went bankrupt and left more than 700 unfinished buildings. The **legal security** was then ensured with the introduction of the ***Deed of Trust***, a form of guarantee to lenders which grants fiduciary title in the sale of real estate assets. In other words, the title to the real estate being financed is held by the lender as fiduciary until the borrower pays their obligation in full. Once that is done, the title ownership shifts to the borrower. In case of a default, the lender has the right to repossess the property in a non-judicial process, thus avoiding going through the time consuming and costly Brazilian judicial system by which the property would be repossessed and sold at a public auction. This initial procedure was standard market practice under the SFH and the results of these auctions were always somewhat uncertain. This explains the limited reach of SFH towards private sector lenders and the concentration of the market in the hands of Caixa.

Since the creation of the Deed of Trust, which became fully operational in 2004, there has been a sharp decrease in the delinquency rate of home loans, and investors finally became interested in the housing market. There has been an increase in the number of real estate loans which resulted in more competition between private players. As a consequence, the last four years

have been characterized by longer loan terms and lower mortgage rates, which have fueled the mortgage market resulting in a sharp increase of property prices.

Graph 11: Delinquency Rate of Home Loans (ABECIP).



3.4 SFH's and SFI's Funding Sources

The funds for the **SFH** come primarily from the workers' severance fund (*Fundo de Garantia do Tempo de Serviço, "FGTS"*) and the citizens' savings accounts ("*poupança*") (Brazil - Housing Finance Market Overview 2010).

- The **FGTS** is a fund that works as a mandatory savings account in which employers deposit 8% of the employee's monthly wages in an account held with Caixa in the name of the employee. The main investment category funded with these resources is Residential Housing. Investment allocations from this pool are established by the Ministry of Planning, Budget and Management (*Ministério do Planejamento, Orçamento e Gestão, "MPOG"*) and executed by Caixa.

- The Brazilian Savings and Loan System (*Sistema Brasileiro de Poupança e Empréstimo*, “**SBPE**”) is a system of tax-free savings deposits in banks. The most important funding sources are **Savings Accounts**, which are voluntary deposits held by individuals and corporations with members of the SBPE. Members, large universal banks for the most part, are required to use a percentage of these deposits for mortgage loans at a set rate over and a special inflation index, and are subject to Central Bank monitoring. Over the past seven years the growth rate of the aggregate savings deposit balances has slightly outpaced the reference rate (TR) to which their remuneration is linked.

Members of the SBPE are required to direct 65% of savings deposits balances into real estate loans and of this, 80% must be under the SFH. From the remaining 35%, 15% have to be deposited at the Central Bank as reserve requirement, as shown in the table below.

Table 5: Central Bank Requirements (UqBar).

Investment	Available Resources
SFH Loans	52.0%
Loans at Market Rates	6.5%
Other Real Estate Financing Operations	6.5%
Central Bank Reserve Requirements	20.0%
Discretionary Lending	15.0%

The **SFI**, on the contrary, does not have any specific funding mechanisms required. Since this system was created with the legal framework for securitization, the goal was that the capital markets would be the primary source of funding. In this system, there are two main originators of real estate loans and their main sources of financial resources are commercial bank funding and equity:

- **Financial institutions such as commercial banks, multiple banks and mortgage companies** generally hold this type of assets on their balance sheets, occasionally after being repackaged as CRI, and funded with the bank's pool of liabilities and equity. They are usually large and highly capitalized in the banking system so they have few or none capital constraints. Therefore, residential real estate loans will probably continue to be held on their balance sheets, and bank funding will keep its role as a relevant source of SFI liabilities.
- **Equity Finance: real estate developers and homebuilders** have had an important role as financial agents in the residential real estate market. They used to hold sizable portfolios of real estate receivables on their balance sheets. Funding for these assets is a mix of the companies' own capital and third party financial obligations. In 2007 alone, more than twenty companies went public and had their initial public offerings (Sistema de Financiamento Imobiliário (SFI) n.d.). A large part of the amounts raised have been invested in land banks that are being transformed into finished products and lastly into mortgage portfolios that are targeted for sale. These companies started turning to securitization and bank markets to buy the real estate credits they originate.

After decades in which real estate developers and construction companies had to offer financing in order to sell their products, things have started to change. Real estate companies are acknowledging the fact that their value added is in development and construction and that financial institutions are better off in offering financing services. In fact, they have a clear preference for not acting as a financing agent and many of them have formal policies restricting this activity (An Introduction to The Brazilian Real Estate Finance and Securitization Markets 2008).

3.5 Concluding Remarks: A Need for Real Estate Funding

The recent real estate valuation in the country is a reflection of the revival of the industry in the last four years after a period of about 20 years of stagnation caused by inflation and high interest rates. The stability of the economy, the expansion of the middle class, the increase in credit availability and better conditions of real estate credit, and the existence of a housing shortage in the country have resulted in a growing demand for real estate credit and the subsequent expansion of housing prices.

Data from the Brazilian Association of Real Estate Credit and Savings (*Associação Brasileira das Entidades de Crédito Imobiliário e Poupança*, “Abecip”) suggests that there will be a lack of money for housing in 2014 if the current pace of business continues, with more investments than fundraising. Securitization of real estate receivables has been considered as the major outlet for this possible lack of resources. This market has expanded significantly in the past years and is the subject of the next chapter (Standard and Poor's Ratings Services 2007).

4 Securitization of Real Estate Receivables in Brazil

4.1 Introduction

Securitization, in a nutshell, is the creation of value. It is nothing more than packaging and transferring receivables from one company to another.

Despite the sub-prime mortgage crisis in the US and the misconception that securitization currently brings, this process can offer important benefits to Brazil. For instance, it is argued that securitization can develop financial markets, mitigate sovereign risk, improve the resilience of markets in periods of stress, and provide a source of funding for the housing finance system (Valadao and Porto 2008). This chapter aims at providing an overview of the securitization of real estate receivables in Brazil, including aspects of the legal and regulatory framework, the financial structures used and the roles and responsibilities of the market participants. Following this explanation, a brief analysis of the process of credit enhancement is provided in order to show how securitization reduces risk and makes assets more attractive to investors.

4.2 Legal & Regulatory Framework

The first securitization operation in Brazil took place in the 70's, when credit enhancement started to spread in a very limited way (Luxo 2007). Nowadays, there are three categories of securitization companies in the country: (i) companies in the real estate segment enacted with Law 9.514/199; (ii) companies in the financial segment created with Resolution CMN 2.686/2000; and (iii) the ones in Agribusiness, in accordance with Law 11.076/2004

(Companhias Securitizadoras de Crédito n.d.). The focus of this work is on the first type of securitization companies.

It all began in 1995, when ABECIP started studying a new system aimed at providing financing options for the real estate sector. Two years later, these studies resulted in the implementation of Law 9.514 which established a secondary mortgage market and the creation of the first Brazilian Securitization Company (*Companhia Brasileira de Securitização*, "CIBRASEC").

This Law and the subsequent regulations by the Central Bank and the Securities and Exchange Commission of Brazil (*Comissão de Valores Mobiliários*, "CVM") represent the legal basis of nearly all transactions that have been done in the securitization market (Rossi - Investor Relations 2010). Together, they established the specificities of the financial instrument called CRI, which are investment securities backed by real estate receivables or mortgage loan contracts (Neto 2005). Law 9.514 requires that the obligor of real estate credits be identified along with the nominal value of each credit backing a CRI, as well as identifying the real property to which it is linked.

Public offerings of CRI are regulated by CVM's Instruction 414, amended by Instructions 443 of December 8th, 2006 and Instruction 446 of December 19 2006. Pursuant to these Instructions, if the aggregate issue amount is less than R\$ 30 million, CRIs can be **issued** by Real Estate Securitization Companies that are non-financial institutions organized as corporations and registered as publicly held companies with the CVM. These companies are responsible for "packaging" the mortgages and turning them into CRIs. Otherwise, they require the involvement of an intermediary such as a securities dealer. The goal of this requirement is to

restrict the distribution of CRIs to high net worth individuals and institutional investors.

Instruction 443 increased transparency in the market by making prospectuses obligatory and establishing minimum content requirements that include information on the receivables, originators and borrowers.

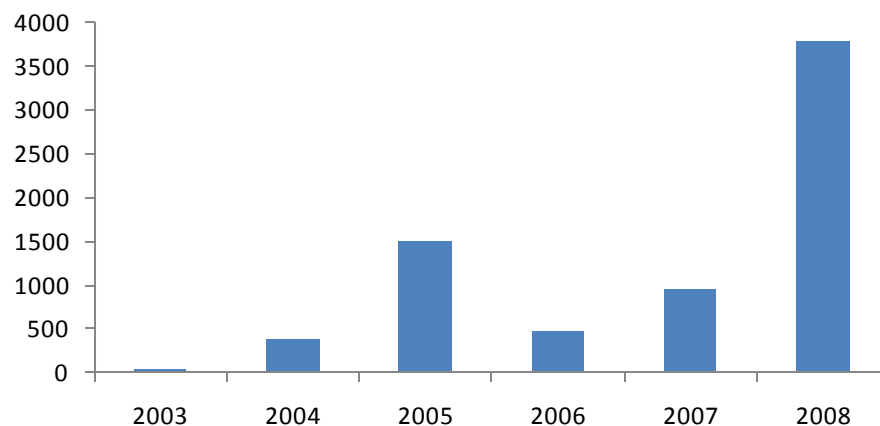
In sum, CIBRASEC was designed in 1997 to play the role of Fannie Mae and Freddie Mac, purchasing real estate credits and receivables from mortgage companies, banks, real estate credit companies, savings banks and savings and loan associations and issuing CRIs or other securities backed by such credits and receivables.

4.3 Financial Instruments

To comply with the securitization requirements put in place by the Brazilian government, banks can offer four types of financial instruments:

- Mortgage Notes (*Letra Hipotecária*, “**LH**”): created by Law 7.684/1988. These are usually long term loans, so there is a high risk associated with this instrument.
- Certificates of Real Estate Receivables (*Certificado de Recebíveis Imobiliários*, “**CRI**”): following its approval in 1997, the first issuance of CRI took place in 1999 and totaled US\$ 9 million.
- Real Estate Notes (*Letra de Crédito Imobiliário*, “**LCI**”) & Real Estate Credit Bills (*Cédula de Crédito Imobiliário*, “**CCI**”): created by Law 10.931/2004.
- CRIs and CCIs are the instruments more commonly adopted by the financial agents (Wilson 2009) and since the volume of CCI issued is very small, this section is focused on CRI, the main financial instrument used.

Graph 12: CCI's Deposited at CETIP, R\$ million (UqBar).



CRI's are **offered directly** by securitization companies, or through banks in issuances that need coordinators for their placement. Investment Banks and Securities Brokers and Distributors may also offer this product. Usually the investment is made through a financial institution and it can be done directly through the purchase of CRIs or through Real Estate Investment Funds.

CRIs acquired by investors enable funds to be channeled to originators so as to allow them to renew their working capital and to back new real estate projects that are going to be launched. They are fixed-income securities freely negotiable and backed by real estate receivables (sale, rental, etc.). These receivables belong to what is called an Affectation Patrimony of the issuer, which means they are managed by a **securitization company**, but belong to investors (fiduciary).

The **minimum investment amount** is usually BR\$ 300 thousand due to market access issues. There is a possibility that this value is reduced, but there have not been any smaller offers in the market. An individual may invest less than BR\$ 300 thousand through a Real Estate Investment Fund which has CRI's assets (Gallo 2011).

As for **terms and rates**, CRIs are usually long term since they mirror the credits they are backed against; the average term is five years. With regard to interest rates, the average is 8.0% pa plus an index that can be the IGPM (general Brazilian price index) or the IPCA (consumer price index), but each CRI has its own characteristics and risks, which directly influences the rate being offered. They may not be indexed to foreign currencies (Garcia 2010).

CRIs have either Residential or Corporate Collaterals. **Residential** are those which collateral are credits generated by the sale of properties over time, where the debtor are the buyers of the property. These are loan portfolios which together form the basis for the issuance of CRI's that have very fragmented risk, reduced further by the subordination of the junior tranches.

Corporate are those that generally have a single loan where the debtor is a company.

Graph 13: Collaterals Are Real Estate Receivables, Residential or Commercial (UqBar).

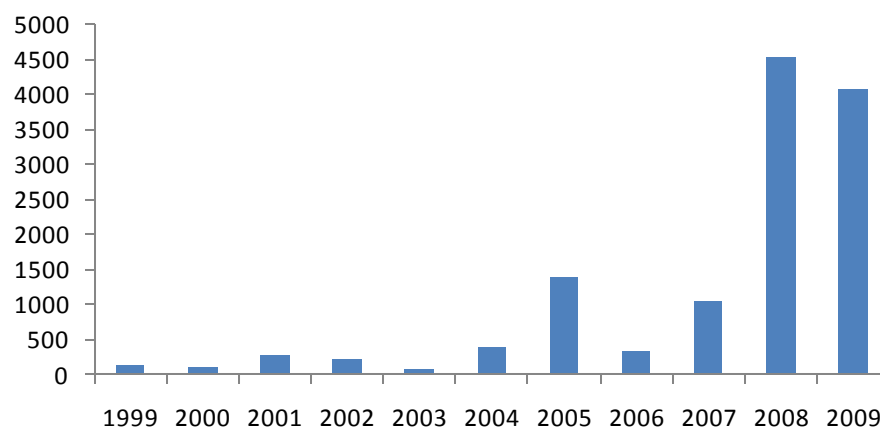


CRI are usually issued in series with a **junior and a senior tranche**. The junior is subordinated or liable for losses and bad debt until its total amount is used up, guaranteeing the quality of the senior tranche. They are usually titles that have as collateral: (i) a fiduciary regime of the

property that originated the loans, (ii) an additional Reserve Fund in cash, (iii) emissions are usually under Fiduciary Regime which eliminates the risk of issuing the paper.

Negotiations are conducted by one of the two central **securities depositories** systems, the Brazilian Clearing and Depository Corporation (*Companhia Brasileira de Liquidação e Custódia*, “CBLC”) or the OTC Clearing House (“CETIP”) (Companhias Securitizadoras de Crédito n.d.).

Graph 14: CRIs Deposited at CETIP, R\$ million (UqBar).



In terms of **liquidity**, due to the fact that it is a relatively new market and a very competitive paper in comparison to other investment opportunity, the secondary market is not very developed. The entry of real estate investment funds in the market of CRI's should promote this market, and increase its liquidity. Some issuers have also started operating as market makers by selling and buying CRI's issued by themselves, which will surely bring more liquidity to the CRI's (Rossi - Investor Relations 2010).

To encourage the real estate finance market individuals that invest in CRIs are tax exempt. As for corporate **taxation**, it follows the same rates of fixed income products, starting with rates of 22.5% for investments for 180 days and up to 15% for periods of more than 720 days.

The **risk** associated with CRI is the risk of default on loans that are used as collateral. Therefore, the risk of a residential CRI is diluted in several loans. In addition, the junior tranche is usually subordinated around five times to the average default rate of the portfolios they are backed against. The risks of default are also reduced in light of the guarantees that CRIs normally have, which were previously mentioned (Gallo 2011).

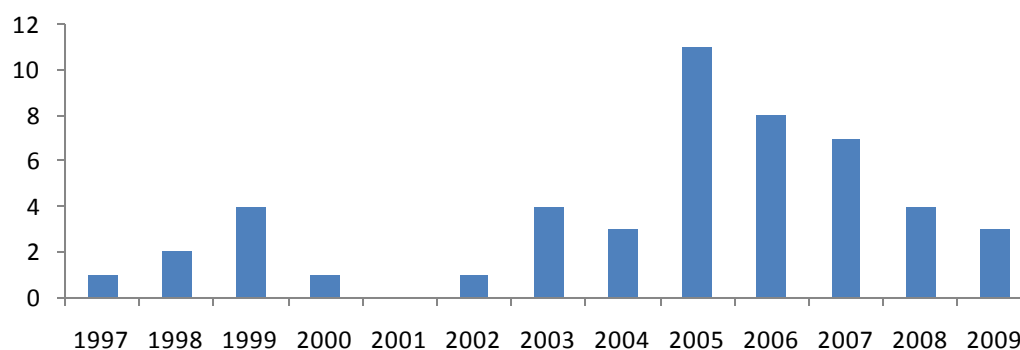
4.4 Market Participants

There are three main players in this market: securitization companies, originators and investors (Year in Review - 2010: Brazilian Real Estate Finance and Securitization 2010).

Issuers: Real Estate Securitization Companies

At the end of 2009, there were 49 real estate securitization companies in the country as a consequence of the boom in real estate credit. However, there were only 12 companies that issued CRI during that year and more than 45% of the issuance was concentrated in the hands of four companies.

Graph 15: Real Estate Securitization Companies Registered at CVM (UqBar).



Investors

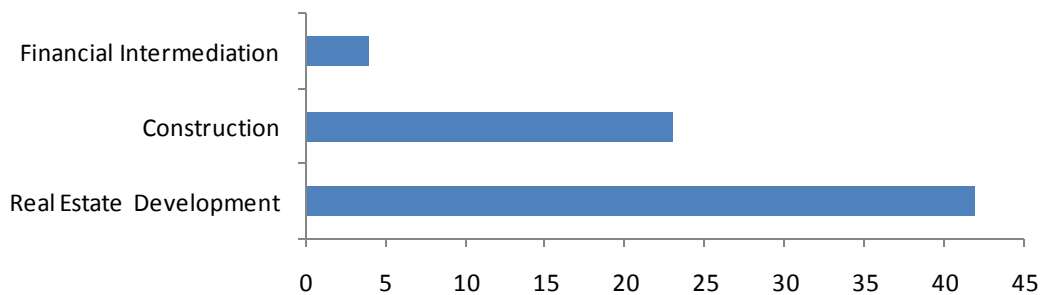
Historically, CRI investors have been highly concentrated in the financial institutions sector as a result of a regulatory benefit. Member institutions of the SBPE can credit certain securities held in their portfolios toward the mandatory lending requirements that are calculated on the basis of their savings deposit balances. Furthermore, in the case of CRI, a multiplier of 1.2 can be used to calculate the amount of the credit use toward their regulatory requirement, which is greater in the case of CRI than in the case of the real estate credits that collateralize the same CRI. Therefore certain financial institutions prefer to transform their real estate credits into CRI, making them investors in these securities. (Year in Review - 2010: Brazilian Real Estate Finance and Securitization 2010)

Sellers: Originators

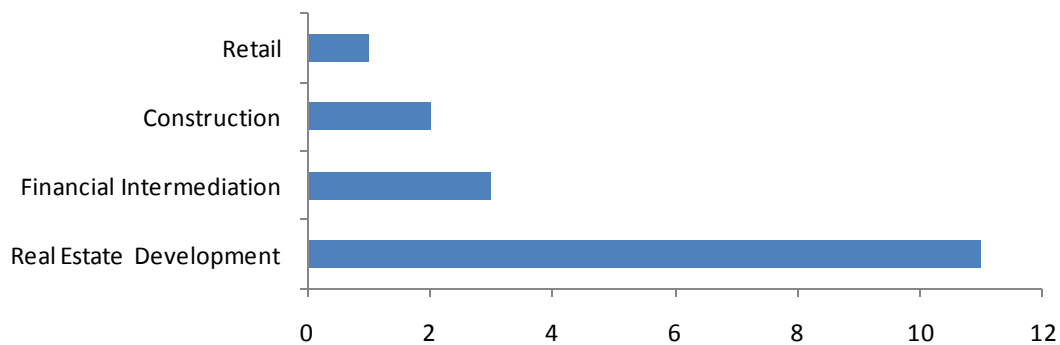
The main originators of collateral for real estate securitizations are homebuilders, real estate developers and financial institutions. In spite of the need that homebuilders and real estate development companies have to sell their credit portfolios in order to finance new projects, the

number of participants in the securitization market is a small fraction of the number of companies active in the sector. The tiny participation of financial institutions is a clear indication that the market's commercial banks have not begun to securitize their portfolios on a meaningful scale.

Graph 16: Sellers of Residential Collateral by Economic Activity in 2009 (UqBar).



Graph 17: Sellers of Corporate Collateral by Economic Activity in 2009 (UqBar).



4.5 Credit Enhancement

The quality of an operation of securitization of receivables is directly linked to the quality of the receivables because one of the goals of securitization is to issue titles that mirror the initial credit relationship. Therefore, the diversification of a portfolio risk is essential to create an

asset that is attractive to investors (Vedrossi 2009). However, most of the times, the quality of the receivables themselves is not enough to ensure the payment of the investor. Therefore, it is necessary to provide structures or additional guarantees that will enhance the credit of the operation. The securitization process thus provides two layers of credit: the quality of the receivables themselves and the credit enhancement.

Credit enhancement may be obtained through the following instruments:

- Dependants on the originator: joint liability and additional volume;
- Structural: subordination structure; and
- Dependant on third parties: letter of guarantee and insurance.

Each structure of credit enhancement adds a certain level of quality and incurs a cost, and the issuer with the aid of the rating agency should evaluate each case, and choose the best option. By using subordination structures, for example, there is no risk of bankruptcy of the originator or issuer that would compromise the quality of credit enhancement, as would happen in the case of joint liability. In this case, extra precaution is necessary so that the bankruptcy of the originator or issuer does not produce the opposite effect, such as contaminating the issuer (Mafra 2006).

4.6 Developing a Secondary Market

Macroeconomic stability coupled with falling interest rates and the new regulatory framework especially adopted to leverage the construction sector in 2004, served as a kick start for the rapid expansion of real estate credit. These factors have established the initial and essential

condition, but not sufficient, for creating a secondary mortgages market in Brazil (Wilson 2009). The government is slowly adopting measures to encourage this type of operations, such as the shortening of the structuring term, which used to be extremely long (Silva 2010).

Another recent change took place in January 2011. The National Monetary Council (CMN) announced a modification in the rules that control the channeling of savings deposits to mortgages. In addition to encouraging the securitization of real estate credit, this measure also aims to increase the share of resources that are directed to housing finance (Costa 2011). As of March 1st, 2011, banks will be allowed to undertake the securitization of mortgage portfolios through CRI without compromising the requirement of directing 65% of their portfolios to housing finance. With this new rule, the financial institutions that are part of the Housing Finance System will be able to give loans to securitized assets and deduct this portfolio from the requirement over three years.

While the Brazilian economy's prospects indicate a positive 2011 in terms of securitizations, there are important obstacles to advancing Residential Mortgage-Backed Securities ("RMBS") (Positive outlook on new securitization, but RMBS to still lag in 2011 2010). Considerably, one of the main constraints to growth is real estate credit origination. This issue is being addressed by the traditional originators, commercial banks, real estate developers and home builders that already have a strong presence in the market, as well as new entrants such as foreign groups and small to medium sized Brazilian banks.

There are technical hurdles that make the structuring of mortgages a little complicated. Many banks that act as originators are required to keep the junior tranche of the operation in their

portfolios, in some way to show that they believe in the underlying assets. By holding subordinated tranches they do not receive the benefit of capital relief that would result from securitization. In addition, there are legislative and market risk obstacles. Although new laws to ease repossession have been approved and this process is getting easier, there are few cases that indicate in practice how easy it is to evict sitting tenants and auction properties. There is also a basis risk as securitized instruments have fixed-income assets and floating liabilities. That risk is mitigated through swaps, but the market has not been tested do a drop in liquidity (Rumsey 2007).

Another difficulty is a substantial lack of long-term capital market options for securitization markets. For many years the central bank required that banks use 65% of their savings deposits on real estate lending. As securitization takes mortgages off balance sheet and these investments cannot be counted towards the requirement, banks are reluctant to securitize portfolios. A positive note mentioned before is that the government has announced in December 2010 a change in its policy in a series of measures meant to stimulate long-term funding in Brazil. One of the changes is the fact that banks will be allowed to account RMBS toward this requirement.

Finally, another major problem is that real estate credit is dominated by Caixa, a federal bank that subsidizes its loans, affecting their average coupons and driving down spreads, such that they do not look particularly attractive to investors. In 2010, CEF was responsible for approximately 75% of new mortgage originations. The bank has been seeking new funding

sources, after receiving capitalizations from the government, and announced a plan in July 2010 to securitize loans that total BR\$ 300-400 million (US\$ 180-241 million).

4.7 Concluding Remarks: A Very Slow Process

A crucial factor for the growth of the securitization market in Brazil is the growing domestic and international demand by investors in this type of operation. The existence of a liquid market with strong demand for assets contributes to creating an opportunity for new credit origination businesses. There are many foreign groups actively examining the Brazilian market with a view to establishing mortgage banks in the country. Not only foreign players, but also small to medium sized Brazilian banks have started to exploit this opportunity and are formulating and testing residential mortgage finance products. These banks already have the positive experience of originating personal loans and selling them either to large commercial banks or to the securitization market. Their goal now is to replicate this success in the real estate finance businesses they are preparing to launch.

The transparency of operations and tax incentives have been critical factors that proved to be effective in the exponential growth of the market, but the real boost that is still missing in order to achieve a more sustainable growth is the decrease in interest rates. In a market where the interest rate has always been in double digits, investing in other fixed income operations other than fixed income does not make much sense, since it provides the investor a low risk and high return on invested capital.

5 Conclusions & Policy Recommendations

The Brazilian banking market is known worldwide for its sophistication, best practices in risk management, strong prudential regulation and constant innovation. More over, the momentum of the Brazilian economy expected for the coming years is an achievement of a process of macroeconomic stabilization initiated in the early 1990s with the opening of trade and inflation stabilization. This good momentum will drive the growth of the Brazilian real estate market, given the high latent demand for residential properties and the growth of the economically active population. In this sense, the development of alternative funding for real estate financing, such as the securitization of real estate assets through CRIs or Real Estate Investment Funds is welcome and will play an important role in reducing costs to borrower and providing funding to support this strong growth.

The US experience shows, however, that the lack of regulation and the creation of unbalanced incentives can foster a dangerous speculative process, creating a housing bubble that feeds a bubble of consumption beyond the capability of saving and investment in the country. Brazil starts the development of the real estate assets securitization market with good practices such as the registration of all securities with the CVM and in centralized custody and settlement systems as well as the restriction that only Real Estate Securitization Companies are allowed to act as Underwriters in the system (Ferreira 2010).

In order for the growing real estate financing market and the accompanying increase in the issuance of CRIs happen in a healthy manner, it is important that the market regulators and the main players take note of some takeaways from the US financial crises.

A simple but important measure is the maintenance of good practices when providing credit. It is very important that **indicators such as LTV (Loan to Value) and DTI (Debt to Income) remain at healthy levels**. In addition to that, the securitization of a real estate asset is already risky by nature so it would be prudent for the CVM to **define limits for the re-securitization of these assets**. This measure would inhibit the creation of exotic securities that would exploit the structure of senior and junior tranches to generate new securities, of poorer quality in the receivables portfolio, but with tranches that reach investment grade by rating agencies.

In regards to rating agencies, they should provide investors more detailed information about the health of the mortgages in the receivables portfolio. Average data on demographics and issues relating only to structuring fees and items such as insurance have proven to be insufficient. One suggestion would be to create a national credit score, provided by the Credit Bureaus already established such as ACSP and SERASA, which could be applied to each individual borrower. These individual credit scores could be included in the rating report. This point, however, depends on the approval by the National Congress of a law that allows the creation of Credit Bureaus with positive data. There is a misunderstanding of some sections of the Brazilian society that the disclosure of positive credit history could be interpreted as a breach of bank secrecy. This has stalled the progress of this legislation.

Another aspect related to rating agencies is **the requirement that a securitized asset have a rating generated by an agency**. This creates a perverse effect on the quality of the analysis done by the investors who tend to focus their decision making on the rating given to the asset,

relaxing their responsibility as investors to perform a deeper analysis of the fundamentals involved.

An additional recommended measure would be to create rules and incentives for **pension funds to invest more resources in real estate assets**. Given the greater professionalism and transparency that already exist in the management of large pension funds, when compared to hedge funds and proprietary desks of investment banks, it is expected that these funds would require a higher level of disclosure and auditing of the originators and underwriters, thus increasing transparency in the system.

In terms of **taxation**, the government should **avoid providing subsidies on mortgages**, such as discounts when filing income tax (Blodget 2010). The US experience shows that this benefit leveraged the home-equity market and changed the whole dynamic in the provision of credit to the consumption of nondurable goods, significantly increasing the leverage of the credit system, as well as feeding the real estate asset bubble.

Another important issue is the necessary balance that must exist between the needed innovation in Real Estate financing products and the health of the system. The US experience shows that ARMs (Adjustable Rate Mortgages) with teaser rates and no interest and principal payments in the early years of the contract, which actually generated negative depreciation in case of no appreciation of property value, did not contribute to the health of the system. A recommendation would be for the **Central Bank to approve the new forms of mortgage contracts**.

Besides Caixa, residential real estate finance has been a very small segment of the financial market for decades. As for member institutions of the SBPE, mortgage lending typically corresponds to an insignificant entry on their financial statements. Even though things have started to change, it is a very slow process. It takes time for large financial institutions to analyze and understand this new type of business. Only recently have highly capitalized large banks began to develop and implement different real estate finance strategies in order to increase the size of their credit portfolios. It is very likely that most of the assets they originate from their mortgage lending operations will be held on their balance sheets, at least over the medium term. Therefore, it is necessary to keep regulation developments in parallel with innovations in the market, to the extent that as the traditional sources of funding become more scarce and that market conditions remain attractive, especially long-term interest rates low, inflation under control, economically active population and per capita income growing, the Securitization of Real Estate Receivables will be an important element in the Brazilian real estate finance market.

6 Bibliography

- Acioli, Renata. "Sparksheet." January 24, 2011. <http://sparksheet.com/brazil%E2%80%99s-middle-class-takes-flight-qa-with-tam%E2%80%99s-manoela-amaro/> (accessed February 1, 2011).
- Aleman, Eugenio J. "Early Challenges Await Dilma, Brazil." January 2011.
- An Introduction to The Brazilian Real Estate Finance and Securitization Markets. Sao Paulo: Uqbar, 2008.
- Bevilaqua, Afonso and Werneck, Rogerio. "Delaying Public-Sector Reforms: Post-Stabilization Fiscal Strains in Brazil." January 1998.
www.iadb.org/res/laresnetwork/files/pr43finaldraft.pdf (accessed October 15, 2010).
- Blodget, Henry. *Yahoo Finance*. October 18, 2010. <http://finance.yahoo.com/tech-ticker/the-government's-housing-subsidies-are-screwing-families-and-homeowners-says-peter-schiff-535514.html?source=patrick.net> (accessed November 7, 2010).
- "Brazil - Housing Finance Market Overview." *Housing Finance Network*. 2010.
<http://www.housing-finance-network.org/index.php?id=281> (accessed 11 18, 2010).
- "Brazil GDP Growth Rate." December 2010.
<http://www.tradingeconomics.com/Economics/GDP-Growth.aspx?Symbol=BRL> (accessed February 3, 2011).
- "Brazil poised to elect its first woman president." *Latin American Data Base / Latin American Institute*. September 24, 2010.
<http://www.thefreelibrary.com/Brazil+poised+to+elect+its+first+woman+president.-a0240864419> (accessed January 28, 2011).
- "Companhias Securitizadoras de Crédito." *Cosif*.
<http://www.cosif.com.br/mostra.asp?arquivo=securitizacredito-constitui> (accessed February 2, 2011).
- Costa, Fernando Nogueira da. "Possibilidade de Destravar o Mercado de Securitização." *Fernando Nogueira da Costa*. January 03, 2011.
<http://fernandonogueiracosta.wordpress.com/2011/01/03/possibilidade-de-destravar-o-mercado-de-securitizacao/> (accessed January 26, 2011).
- Daniel de Souza, Porter Leslie, José Luis González Pastor and Carol Strulovic. "Private Equity in Brazil: Entering a New Era." *Knowledge@Wharton*. January 26, 2011.

- <http://knowledge.wharton.upenn.edu/article.cfm?articleid=2685> (accessed January 27, 2011).
- Eder, Gregor. "Brazil: Stability Pays off – Strong Growth, but also Major Challenges Ahead." *Allianz*. June 21, 2010. https://www.allianz.com/static-resources/en/economic_research/images_english/pdf_downloads/working_papers/v_1277125165000/brasilien2010e.pdf.
- Ferreira, Gabriel. "O papel das MBSs (Mortgage Backed Securities) na crise de crédito americana de 2007-2008 e os aprendizados para o desenvolvimento do mercado de Securitização de Ativos Imobiliários no Brasil." 2010.
- "Fundo de Compensação de Variações Salariais - FCVS." *Ministerio da Fazenda*. http://www.stn.fazenda.gov.br/divida_publica/downloads/fcvs.htm (accessed Julho 16, 2010).
- Gallo, Ricardo. "Entenda o que é um CRI." *IG*. January 28, 2011. <http://colunistas.ig.com.br/ricardogallo/2011/01/28/entenda-o-que-e-um-cri/> (accessed February 3, 2011).
- Garcia, Goossens, Kimura, Lucas & Perera. "Investing in Brazilian Securitization Instruments." March 28, 2010. <http://www.sergeandjoao.com/Presentations/FDICAmsterdamApr10V2.pdf> (accessed November 14, 2010).
- Gomes, Adriana. "Anos 80: década perdida?" http://www.almg.gov.br/revistalegis/Revista42/adriana_gomes.pdf (accessed December 12, 2010).
- IADB. "BNH, trajetória de cooptação." www.iadb.org/res/laresnetwork/files/pr43finaldraft.pdf (accessed October 10, 2010).
- "Latin America Monitor." *Business Monitor*. December 2010. <http://www.adiex.es/es/images/pdf/BrasilConeMonitorDiciembre2010.pdf> (accessed January 2011).
- Luxo, José Carlos Augusto. "O Impacto da Securitização de Ativos nos Indicadores Financeiros e no Beta das Empresas." May 07, 2007. <http://www.teses.usp.br/teses/disponiveis/12/12139/tde-04072007-115118/pt-br.php> (accessed June 06, 2010).

- Machado, Camilla D. *Securitização de Ativos Imobiliários no Brasil: Análise Comparativa com o México*. Master Thesis, Rio de Janeiro: Fundação Getúlio Vargas, 2009.
- Mafra, Fabio Dieguez Barreiro. "Classificação de Risco dos Certificados de Recebíveis Imobiliários - Estruturação de um Processo de Rating da Perda Potencial da Carteira Securitizada." 2006.
http://www.realestate.br/images/File/arquivosPDF/DST_FabioMafra.pdf.
- Mike Evangelist, Valerie Sathe. "Brazil's 1998-1999 Currency Crisis." *University of Michigan*. November 4, 2006. <http://www-personal.umich.edu/~kathrynd/Brazil.w06.pdf> (accessed October 17, 2010).
- Moody's. "Positive outlook on new securitization, but RMBS to still lag in 2011." December 31, 2010.
- "Mortgage Lending in Brazil."
http://www.housingfinance.org/uploads/Publicationsmanager/SAmerica_MortgageLendinginBrazil0.pdf (accessed November 14, 2010).
- Neto, Alexandre Assaf. *Mercado Financeiro*. 3rd Edition. Sao Paulo: Atlas, 2005.
- Philip Rauber. "Private Consumption Drives Brazil's Growth." *CreditSuisse*. May 17, 2010.
<https://emagazine.credit-suisse.com/index.cfm?fuseaction=OpenArticle&aoid=281946&lang=en> (accessed February 1, 2011).
- Risso, Thiago Santos. "A Securitização de Recebíveis Imobiliários: Estudo Comparativo Entre as Opções de Investimento de Base Imobiliária no Mercado de Capitais Brasileiro." 2007.
<http://www.google.com/url?sa=t&source=web&cd=5&sqi=2&ved=0CEAQFjAE&url=http%3A%2F%2Fwww.lume.ufrgs.br%2Fbitstream%2Fhandle%2F10183%2F24210%2F000598334.pdf%3Fsequence%3D1&ei=rMLgTOCjHcO78gabufWZDw&usg=AFQjCNEsGasvISwQKn74EOLVRzC2TzsDow&sig2=FpdosI8w8o7Nud4>.
- "Rossi - Investor Relations." June 29, 2010.
http://www.mzweb.com.br/rossi2008/web/conteudo_en.asp?idioma=1&tipo=16877&conta=44&v=0 (accessed February 1, 2011).
- Rumsey, John. *Securitisaton Markets Open Wide*. July 2007.
<http://johnrumsey.co.uk/article.php?cd=46> (accessed October 19, 2010).
- Sicsú, João. "A URV e sua função de alinhar preços relativos." *Revista de Economia Política*. April-June 1996.

- http://www.ie.ufrj.br/moeda/pdfs/a_urv_e_sua_funcao_de_alinhar_precos_relativos.pdf (accessed July 08, 2010).
- Silva, Macêdo, Veras & Vasconcelos. *Securitização: Uma Alternativa Viável Para a Redução das Despesas Financeiras das Empresas Brasileiras*. Qualit@as Revista Eletrônica, 2010.
- "Sistema de Financiamento Imobiliário (SFI)." *Newton Freitas*.
<http://www.newton.freitas.nom.br/artigos.asp?cod=256> (accessed September 11, 2010).
- Slawson, Alex. *The High Cost of Borrowing*. Master Thesis, Boston: The Fletcher School, 2010.
- "Sports frenzy fuel Brazil's housing boom." *Global Property Guide*. December 21, 2009.
<http://www.globalpropertyguide.com/Caribbean/Brazil/Price-History> (accessed February 2, 2011).
- "Standard and Poor's Ratings Services." 2007.
- Tatiana Bautzer, Gabrielle Coppola. "Real Estate Boom Fuels Surge in Property Bonds: Brazil Credit." *Bloomberg Businessweek*. September 23, 2010.
<http://www.businessweek.com/news/2010-09-23/real-estate-boom-fuels-surge-in-property-bonds-brazil-credit.html>.
- "The World Factbook." *CIA*. <https://www.cia.gov/library/publications/the-world-factbook/rankorder/2186rank.html> (accessed February 2, 2011).
- Valadao, Marcos, and Nara Galeb Porto. "Brazilian Update: Securitization in Brazil, Tax Reform, and International Trade Issues." *HeinOnline*. 2008.
<http://heinonline.org/HOL/LandingPage?collection=journals&handle=hein.journals/lbramrca14&div=14&id=&page=> (accessed November 13, 2010).
- Vedrossi, Alessandro Olzon. "Construção e Mercado." April 2009.
<http://revista.construcaomercado.com.br/negocios-incorporacao-construcao/94/real-estate-a-securitizacao-de-recebiveis-imobiliarios-residenciais-e-132969-1.asp> (accessed November 10, 2010).
- Wilson, Peter Edward Côrtes Marsden. *Influência das Taxas de Juros e do Canal de Crédito na Formação de Um Mercado Secundário de Hipotecas no Brasil*. Master Thesis, Sao Paulo: Fundação Getúlio Vargas, 2009.
- "Year in Review - 2010: Brazilian Real Estate Finance and Securitization." *UqBar*. March 2010.
<http://uqbar.com.br/english/Publications/YearInReview2010.jsp> (accessed January 15, 2011).

Ziegler, Maria Fernanda. "O impeachment de Collor." *Aventuras na História*.
<http://historia.abril.com.br/politica/impeachment-collor-435681.shtml> (accessed
December 12, 2010).