

Working Paper No. 549

Real Estate Policy in Brazil and Some Comparisons with the United States

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December 2015



Stanford

Center for International
Development

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Abstract

Empirical observation suggests that economic development does not stem from historical determinism. Forces that operate in a market reflect institutional factors, and especially public policies. In 2009, the Brazilian government announced an ambitious program of housing development, “Programa Minha Casa, Minha Vida” (PMCMV), with social goals. The growth of the housing market in recent years and its slowdown since 2014 has generated discussion about a possible bubble scenario. This paper seeks to present to the North American public a systematic description of the Brazilian real estate market, its institutional agents, and their housing market roles, impacts and constraints. I examine Brazil’s government real estate programs developed since the establishment of the “Sistema Financeiro de Habitação” (System of Housing Finance, SHF), in 1964 through to the current PMCMV. I also detail the Brazilian real estate credit system. I point out the priorities of each program and the pertinent regulations. Then I discuss two comparisons between the U.S. and Brazilian financial systems that justify my conclusion about the inexistence of the bubble in Brazil: i) the different housing credit policies; and ii) the centralized regulation in Brazil versus the decentralized model in U.S. I emphasize that the main intention of this article is to analyze the Brazilian market, not to offer an original or deeper analysis of the U.S. market.

¹ Stanford Fellowship from October 2012 to January 2013. PhD in Law for Paris-I. Professor in Brasilia. I would like to thank the support received from the Stanford Center for International Development (SCID), especially by Nicholas Hope, and also Roger Noll. I really appreciate the notes made by the economists Fabio Giambiagi, Márcio Garcia and Túlio Ricardo de Oliveira Brant. Finally, my special thanks and appreciation to Liam Walsh for his endless assistance.

Related Literature

There is a vast body of literature on the U.S. financial crisis of 2008 and how its effects reverberated around the world. This paper provides no new analysis of this crisis, but highlights the key points of comparison with the current Brazilian real estate market.

I focus on official documents and websites for my data analysis in both countries. These included the official report of the U.S. Department of Housing and Urban Development's Office of Policy Development and Research and "The Financial Crisis Inquiry Report - Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States" (2011). The main authors I reference are Johnson, S. & Kwak, J. (2011).

With regards to the Brazilian market, several papers of interest were published in the years following the U.S. crisis, expressing concern about market contagion. Papers used for this work are those of researchers from the "Fundação Getúlio Vargas" (FGV), Claudio Borio of BIS (2007), Edmar Bacha, Gustavo Franco, Ilan Goldfaj, Pedro Malan, Armando Castelar (all in 2009); also Dionísio Dias Cerneiro and Marcus Vinícius Valpassos (2003). In the more recent Brazilian real estate boom (2011-2013), concerns were raised by analysts and researchers aware of the dynamics then: C. Krause *et al.* (2012), PWC consultancy (2011) and Lundberg of the Brazilian Central Bank (Bacen) (2011). Since the Brazilian recession starting in 2015 and the slow down of the real estate market, I focused on official data sources for research and statistical analysis, including those of "Ministérios da Fazenda," "Ministério do Planejamento" and "Ministério das Cidades" (The Ministries of Finance, of Planning and of Cities). Data and reports from government banks, "Banco do Brasil" (BB) and "Caixa Econômica Federal" (CEF), are also pertinent as they have been the main bodies implementing the government's real estate financing policies.

1. Introduction

The expansion of housing credit in Brazil between 2009 and 2014, together with the many government subsidies, raises concern over the efficacy of Brazil's national housing policy and its regulatory system. Has Brazil followed a similar path to that in the U.S. leading to the 2008 implosion? Which factors should be analyzed in order to answer this question? This paper proposes that the current Brazilian real estate market's downturn, years after that of the U.S., is not a cause of the country's current recession but more a consequence of it. Therefore, there has been no real estate bubble in Brazil.

The U.S. financial crisis, which spread globally, caused policy makers to review regulations pertaining to financial markets. Several factors contributed to the U.S. crisis, including: the desire to promote credit for home ownership; the decentralization and fragmented supervision of the financial system, and capital market innovation associated with technological advances. Federal, State and local bodies have established rules on the performance and operation of private agents. The volume of credit available in the run up to 2008 harboured the systemic risk of widespread default. The capital market was a major source of funding, the flexibility of which was therefore regarded as essential. The belief in the efficacy of free markets and self-regulation also influenced regulators, to the benefit of those they regulated.

A bubble happens when the price of housing is above what is sustainable based on income levels. Several considerations can be identified to explain the real estate boom in Brazil in recent years and now the retrenchment. Changes in the law on real estate loans and construction, low national inflation, a fall in interest rates, the expansion of government-directed credit, public works programs and incentive programs for home ownership among the low-income population, are the most common explanations for the growth. On the other end of the cycle, many elements have been cited as causing the house market slowdown since 2014: rising interest rates, increasing unemployment, economic uncertainty, plus the reduction in housing subsidies and credit.

This study profiles Brazil's regulation of its property market, with a discussion of the possible existence of a bubble similar to the U.S.'s in 2008. In Section 1, I examine the Brazilian market. I offer a tour of the main government programs developed since the establishment of the SFH in 1964 through to the current PMCMV. I point out the priorities of each program and its regulations, and evaluate the results based on the official data and the literature covering the sector. In Section 2, I review the evolution of the U.S. housing sector and the main influences identified in the literature as relevant to the 2008 crisis. The last Section 3 compares two aspects of the U.S. and Brazilian systems to justify why Brazil is not in the same path as U.S. in 2008. For this, I discuss credit market policy and financial regulation.

2. The Evolution of Real Estate Policy in Brazil

Brazilian real estate policy has passed through at least three different stages. In the first stage, the concept of the regulatory benchmark is described, as well as its context of housing policies along with the laws that supported it. In the second stage, the new phase of the real estate market's development is described, as new financial instruments are created to innovate in the sector. Finally, in the third stage, the housing policies are taken in a new direction, which is especially concerned with social policies, and favors the underprivileged.

2.1 The First Stage of the Brazilian Market

Government intervention in the Brazilian real estate market began later than in the U.S. It was not until the 1960s that a regulatory framework for the real estate market emerged in Brazil. Social pressures caused by housing shortages as urban spaces were used up worsened and, as is still the case, the demand for housing from the poorest strata of the population particularly increased. This pressured the government to intervene.² The Law # 4.357/64 allowed the use of savings in the real estate financing system.³ This regulation improved the financing system for the purchase of property, creating the “Banco Nacional da Habitação” (BNH), the “Sociedades de Crédito Imobiliário” (SCI), the “Letras Imobiliárias” (LI), and the “Serviço Federal de Habitação e Urbanismo”(SFHU).⁴

This was the starting point for federal housing policies. The goal was to bring the housing shortage to an end in four-years. The supply deficit was then estimated to be 8 million houses. BNH started working slowly. In 1966, the resources from the “Fundo de Garantia por Tempo de Serviço” (FGTS) were incorporated into the system and the “Sistema Brasileiro de Poupança e Empréstimo” (SBPE) was also implemented. Thus, the “Sistema Financeiro de Habitação” (SFH) was formed.⁵ Before that, Brazilian housing financing was in short supply and could not be compared to the U.S. in terms of the incentives for private agents.

Over the years, BNH was transformed from a governmental agency into a government bank. In a short period, the investments in urban infrastructure, especially in the area of basic sanitation, became increasingly dominant, until they overtook investments made in housing from BNH. In

² Although some policies date to the 1930s, only after 1960 was the market substantially organized. Azevedo, S. “Vinte e dois anos de política habitacional popular (1964-1986): criação, trajetória e extinção do BNH”. *Rev. Adm. Públ.* Rio de Janeiro, RJ. 22(4): 107-119. Out/Dez. 1988. Available at <http://bibliotecadigital.fgv.br/ojs/index.php/rap/article/viewFile/9391/8458> Last accessed February 2015.

³ Supplemented by Law # 4.380/1964, which provided for the inflation adjustment in the real estate contracts of social interest. In addition to these factors, social exclusion plagued the country to the extent that almost 40% of the population was excluded from the financial system. For more details: Silva, M.S. O. *A questão habitacional no Brasil*. Câmara dos Deputados, Brasília, 2001. Pp 5-12.

⁴ *National Housing Bank, Real Estate Credit Societies, Housing Financing Notes, Federal Service of Housing and Urbanism*, respectively.

⁵ *Workers Severance Guarantee Fund; Brazilian Savings and Loans System; Housing Financing System*, respectively.

this frame, the “Plano Nacional de Habitação Popular” (PLANHAP) was created in 1973.⁶ This program’s goal was to develop a financing system for popular housing, or “Sistema Financeiro da Habitação Popular” (SIFHAP). This was delivered via the housing companies, or “Companhias de Habitação” (COHAB).

In spite of the regular creation of new programs, the challenge of providing the underprivileged with housing was not solved. That was largely because costs were still high for financially fragile buyers. The various programs were also heavily impacted by the financial crisis that affected the SFH in the early 1980s. At that time, the house financing system had been scaled back suffering from the anti-inflationary measures adopted by the federal government. The economic recession in Brazil in this period was reflected in a decrease in the number of financings, while wage restraint policies reduced borrowers' capacity to repay, resulting in default or in the questionable granting of indiscriminate subsidies by the government.⁷ BNH was shut down in 1986 and its operations were transferred to the “Conselho Monetário Nacional” (CMN)⁸, the Central Bank of Brazil (BACEN), and particularly to the “Caixa Econômica Federal”(CEF).

Combined, at least three factors were deficient in the BNH policy: the purchase price of land ended up too high, inadequate infrastructure development and the weak purchasing power of buyers.⁹ The elimination of COHAB and BNH was not enough to solve the fundamental market problems. Indeed, the SFH crisis worsened due to the country's precarious social and economic condition: rising unemployment decreased tax receipts and increased FGTS withdrawals; high inflation and the increase in interest rates made housing finance all the more expensive; and the cycle reduced borrowers' capacity to repay their debts. During the years following the closure of BNH, especially with administrative reforms undertaken by the former president Fernando Collor de Mello, the housing sector was under stress, with a great number of institutions delivering conflicting, and often harmful, performances. The many housing programs of the period proved inadequate to assist the poor.

The 1980s was marked by international turbulence, starting with the second oil shock, when oil prices doubled. There was an international credit contraction due to the U.S. dollar devaluations and the Brazilian development model, which was based on external savings, was directly affected. Brazilian export prices dropped while inflation soared. Austerity plans were adopted in Brazil to contain inflation and they affected real estate financing both for those of high and low incomes as salaries’ purchasing power was eroded. Thus, during the decade (especially from

⁶ *National Plan for Popular Housing.*

⁷ Azevedo, S. *Op. Cit.* pp. 112-116.

⁸ *Brazilian Monetary Council*

⁹ In fact, of the total of about 4.4 million financing granted, only about 1.1 million units targeted the population with a monthly income of up to 5 minimum wages, i.e. a quarter of the total. This without taking into account that, in terms of resources involved, the average value of loans to the higher income customers corresponds to three times the average amount of funding provided to said income levels of social interest. For more details: Azevedo, S. *Op. Cit.*

1980 to 1984), SFH's real estate financing power severely contracted.¹⁰ Given the loss of borrowers' repayment power many changes were implemented by SFH to sustain the system's liquidity and to prevent the real estate financing from contracting. Among those changes were: the replacement of the SAC Table for the Price Table; provision of subsidies for borrowers, when nominal wage increases did not keep up with monthly payment adjustments; and the renegotiation of contracts through the adjustment of monthly payments and indices, and of periodicity.

While the housing sector was losing financing sources due to the economic decline in the 1980s, the payment flow not only decreased with the debt renegotiation, but it was also jeopardized by real losses arising from inflation and debt de-indexation. The initiatives to guarantee the continuity of payments by borrowers proved highly costly, generating mismatches between debts and credits. It pushed BNH into bankruptcy and extinction in 1986, exhausting SFH's resources to the point that it could not fund a significant portion of financial agents in the 1990s.

The private sector, meanwhile, could not act alone due to the same macro-economic conditions. From 1990 to 2003, there were practically no public or private financing sources for either the construction or acquisition of real estate. Construction companies had to play the role of banks, financing their clients from 36 up to 40 months. This model still largely operates in Brazil.¹¹

2.2 The Second Stage of the Brazilian Market: Modernization and the Creation of “Sistema Financeiro Imobiliário”

The “Sistema Financeiro Imobiliário” (SFI) was created in 1997.¹² It proposed new sources of private market financing for houses. The SFI is a set of regulations about the participation of financial institutions (savings banks, commercial banks, investment banks, mortgage loan companies, and savings and loan associations) and non-financial (securitization companies). Supported by SFI, these institutions finance residential and commercial real estate, with an effective guarantee of return on borrowed capital.

Created by Law # 9.517/1997 under the former president Fernando Henrique Cardoso, the “Sistema Financeiro Imobiliário” (SFI) was designed to stimulate real estate credit and incentivize new construction. This goal was addressed by the introduction of a new funding instrument, offering more market liquidity. It was inspired by the U.S. real estate financing system and was created because of the SFH's inability to provide enough credit for the real estate market. Under SFI, besides being an instrument of regulated funding, use of household savings also generated a term mismatch between debts and credits in the financial institutions. Under this

¹⁰ Ibid.

¹¹ PWC *O Setor de Incorporação Imobiliária e urbanização no Brasil*. Last modified 2014. Available at http://www.pwc.com.br/pt_BR/br/publicacoes/setores-atividade/assets/engenharia-construcao/f122-folder-incorporacao-14.pdf

¹² *The Real Estate Financing System*.

approach, savings have a destination (65% for the real estate market and 80% of these for housing financing); also a yield rate (0.5% a month plus TR - reference rate) previously set, diminishing investors' appetite for other investments. Funding is short term, counting on voluntary deposits from both natural and legal persons, and their destination is long-term investments, i.e., the real estate financing. SFI was not only for houses (which is also provided by the SFH), but also for commercial establishments. Within the new system, rates are free and agreed on by the parties (i.e., there is no government imposition of rates at lower returns for financing agents). Moreover, SFI does not depend on a government or government-directed funding, as it raises its resources from the stock market itself.

In this context, legal instruments were created in order to subsidize the new types of operations. In the Capital Markets, they are: “Certificado de Recebíveis Imobiliários”(CRIs), created by the Law 9.514/1997 and “Cédulas de Crédito Imobiliário (CCIs)”. In the Banking Market, they are: “Letras de Crédito Imobiliário” (LCIs), “Letras Hipotecárias” (LHs) and “Cédulas de Crédito Bancário” (CCB), as created by the Law 10.931/2004. The SFI law also created real estate credit securing companies, and reinstated chattel mortgages in the real estate market. Furthermore, SFI changed some of the existing instruments, such as debentures, mortgage notes, and banknotes.

These new instruments for real estate lending can be described as follows:

- a) “Certificado de Recebíveis Imobiliários” (CRI): Nominative debt instrument that is freely negotiable in the stock market and guaranteed by real estate credit and promise of payment. The securing company exclusively issues it, but the credit-originating company can guarantee it;
- b) “Cédulas de Crédito Imobiliário” (CCI): Debt instrument that represents rights to real estate credits through installment payments. They can't be traded in the stock market; nevertheless, they may be used as a guarantee for the issuance of “Certificados de Recebíveis Imobiliários” (CRI's);
- c) “Letras de Crédito Imobiliário” (LCI): Debt instrument, that can be guaranteed by real estate credits and is backed by mortgage or by “Alienação Fiduciária.”¹³
- d) “Letra Hipotecária” (LH): Notes issued by financial institutions authorized to grant real estate credits. They are backed by mortgages;
- e) “Cédulas de Crédito Bancário” (CCB): Notes issued representing a promise of payment, which derives from a credit operation of any kind.

As set forth by the Law # 9514/97, the main financial institutions that may grant real estate credit are the CEF, commercial banks, investment and securitization companies, financial cooperatives, mortgage companies and credit companies.

¹³ *Deed of Trust.*

2.3 The Third Stage of the Brazilian Market: In Search of an Identity

In 2003, under the former president Luiz Inácio Lula da Silva, the “Ministério das Cidades” (*Ministry of Cities*) was created and the “Política Nacional de Habitação” (PNH) was approved.¹⁴ These measures signaled a wider effort to deal with the challenges of urban development, and in housing in general.¹⁵

The PNH integrated actions at three government levels (local, state, and federal). PNH is distinguished by two approaches: the National Housing System of Social Interest (“Sistema Nacional de Habitação de Interesse Social”, SNHIS), which address the population whose income is between 0 to 5 of the minimum wage; and the Market Housing System (“Sistema de Habitação de Mercado”, SHM), which mainly addresses the population whose income is between 5 and 10 times minimum wages.¹⁶ The SNHIS covers activities such as the delivery of basic infrastructure to favelas and the relocation of families from risky areas. The resources used come from “Fundo de Garantia por Tempo de Serviço” (FGTS), the “Fundo de Amparo ao Trabalhador”(FAT), the “Fundo de Desenvolvimento Social” (FDS), the “Fundo de Arrendamento Residencial” (FAR), the “Fundo Nacional de Habitação de Interesse Social” (FNHIS), and the “Orçamento Geral da União” (OGU).¹⁷

The Law #11.124/2005 established rules relating to the SNHIS, creating also the managing council of the FNHIS. Its objective was to help the underprivileged gain access to adequate housing through programs and policies implemented by institutions and organs responsible for the housing sector.¹⁸

The SHM supports the higher-income level population through promoting the construction and marketing of groups of buildings. It may also service the popular market (i.e. the lower income segment). In order to finance these initiatives, the government stimulates the use of resources from the funding of “depósitos de poupança” (SBPE), of “Consórcios Imobiliários”,¹⁹ of

¹⁴ *National Housing Policy*.

¹⁵ The IPEA shows the reduction of Housing deficit from 2007 to 2012. Through the note Technical DIRUR # 1, May 2013, it showed estimates of the housing deficit in 2007-2011 calculated from data of the PNADs 2007, 2008, 2009 and 2011, reconsidered from the 2010 IBGE Census (Brazil Institute Brazilian Geography and Statistics, 2012). The IPEA results could be accessed at:

http://www.ipea.gov.br/portal/images/stories/PDFs/nota_tecnica/131125_notatecnicadirur05.pdf Last accessed March 2015.

¹⁶ For more details: Ministério das Cidades. Programa Minha Casa, Minha Vida. Last modified August 18, 2015. Available at <http://www.cidades.gov.br/index.php/minha-casa-minha-vida>

¹⁷ In English: *Workers Severance Guarantee Fund, the Worker Support Fund, Social Development Fund, the House Leasing Fund, the National Housing Fund of Social Interest, and the Federal Budget* respectively.

¹⁸ Law n.11.124 / 2005 predicted that FNHIS resources were applied in a decentralized basis, with the Federal States, the Federal District (DF) and municipalities. For more details: KRAUSE L.et al. *Minha Casa Minha vida, nosso crescimento: onde fica a política habitacional?* Texto para discussão n. 1853 / Instituto de Pesquisa Econômica Aplicada-IPEA. Rio de Janeiro: Ipea, 1990. P. 10 Available at http://www.ipea.gov.br/portal/images/stories/PDFs/TDs/td_1853.pdf Last accessed March 2015.

¹⁹ *Savings accounts and Housing Consortiums*, respectively.

“Certificados de Créditos Imobiliários”, and other corporate or personal investments.²⁰ In addition, the new Law # 10.931/2004 instituted “Patrimônio de Afetação” and other measures to encourage growth and to bring more security to the market.²¹

From 2009, the PMCMV promotes the construction of new housing units geared to the low-income population, providing significant benefits, especially for those earning 0-3 times the minimum wage. Properties previously inaccessible at this income level can now be purchased with subsidies up to 88% of the property value. The program completely finances house purchase payments for families whose monthly income is less than or equal to BRL 1,600, and subsidizes payments for families whose monthly income is greater than BRL 1,600 and less than or equal to BRL 5,000.²² In order to participate in the selection, families must fit pre-determined income qualifications. Selecting beneficiaries is a role of the city halls. Every family with a monthly gross income of up to BRL 5,000 can take part in the program if they neither own a house nor are financing one in any state of the federation, nor have previously received housing benefits from the federal government.²³

There is an increase in subsidies and access to financing contracts especially by the two main agents' banks of the government in the market, *Banco do Brasil* (BB) and *Caixa Econômica Federal* (CEF). The CEF and BB analyze and approve construction company projects, in accordance with the guidelines of the Ministry of Cities. In addition, funds from the Ministry of Cities are passed on to the CEF to subsidize the financing contracts of those interested in purchasing a house, both in the urban and rural areas. Municipalities are then responsible for building external infrastructure, and some public facilities, such as schools, hospitals, and nurseries.

The PMCMV was conceived to have three phases. Since the program's inception in 2009, 3.75 million housing units have already been commissioned.²⁴ The first stage of PMCMV, between

²⁰ FGV. *O crédito imobiliário no Brasil - caracterização e desafios*. São Paulo, 2007. Available at http://www.abecip.org.br/imagens/conteudo/publicacoes_e_artigos/trabalho_fgv.pdf Last accessed March 2015.

²¹ *Designated Property*.

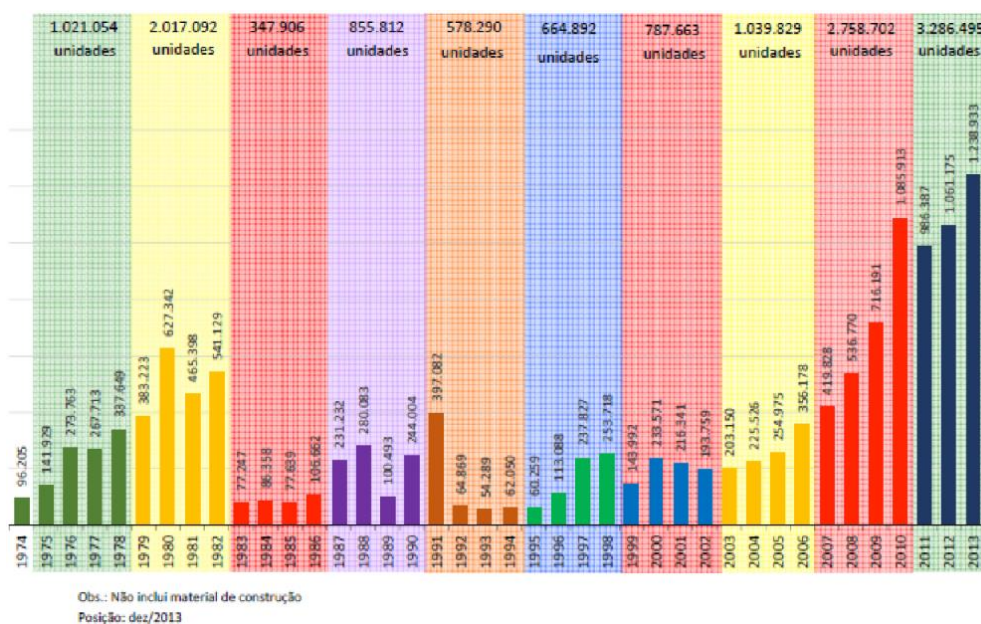
²² For this, the federal government provides, in the second stage of the program, a total of R \$ 125.7 billion between subsidy and credit lines. For more details: Ministério do Planejamento. Notícias. Last modified May 27 2015. Available at <http://www.planejamento.gov.br/assuntos/investimento-e-pac/noticias/minha-casa-minha-vida-2-tera-dois-milhoes-de-novas>

²³ a) Track 1 - Families with a gross monthly income of up to R \$ 1,600.00; b) Track 2 - Families with a gross monthly income of up to R \$ 3,275.00; c) Track 3 - Families with gross incomes above R \$ 3,275 to \$ 5,000. For more details: official data from the Brazilian government. Portal Brasil. Programa *Minha Casa, Minha Vida, terá nova faixa de renda*. Last modification July 06, 2015. Available at <http://www.brasil.gov.br/economia-e-emprego/2015/07/minha-casa-minha-vida-3-tera-nova-faixa-de-renda>

²⁴ Official data from the Brazilian government. Portal Brasil. Programa *Minha Casa, Minha Vida, terá nova faixa de renda*. Last modification July 06, 2015. Available at <http://www.brasil.gov.br/economia-e-emprego/2015/07/minha-casa-minha-vida-3-tera-nova-faixa-de-renda>

2009 and 2011, achieved the government's goal of providing one million homes.²⁵ During the second phase of the PMCMV, a funding of R\$ 125.7 billion was targeted and another 2 million homes by 2014 was promised. In fact, only 1.7 millions houses were delivered until now.²⁶ President Rousseff in July 2014 announced that the goal of the third stage was to build more than another 3 million units by 2018.²⁷

Figure 1: Number of Housing Units Financed (CEF + market), 1974-2013



Source: Blog de Fernando Nogueira. *Aula sobre desenvolvimento urbano, crédito imobiliário e securitização*. Last modified April 7, 2015. Available at <https://fernandonogueiracosta.wordpress.com/2014/04/07>

²⁵ According to Court of Auditors' report (TCU), 100.4% of the program's goal was realized or, one million contracts for housing units, had already been signed until 2010. However, at that time, only 238 000 of houses (23%) were delivered. Criticism of the program and the result of it, can be found at (in Portuguese): Observatório das metrópoles. Instituto nacional de ciência e tecnologia. *Desafios para a política habitacional: 2ª etapa do programa Minha Casa, Minha Vida*. Available at http://observatoriodasmetropoles.net/index.php?option=com_content&view=article&id=1695%3Adesafios-para-a-politica-habitacional-2o-etapa-do-programa-minha-casa-minhavid&catid=43%3Anoticias&Itemid=114&lang=pt Last accessed October 2015.

²⁶ Brazilian Government. *Balanco do PAC 2- Minha Casa, Minha Vida*. Last modified Janvier 6, 2015. <http://www.brasil.gov.br/infraestrutura/2015/01/balanco-do-pac-2-minha-casa-minha-vida> See also: Brasil Econômico. *Sem data para começar, Programa Minha casa, Minha Vida 3 terá foco nas grandes cidades*. Available at <http://economia.ig.com.br/2015-01-30/sem-data-para-comecar-minha-casa-minha-vida-tera-foco-nas-grandes-cidades.html> Last accessed January 30, 2015.

²⁷ Brazilian government. *Minha casa, Minha Vida 3 terá nova faixa de renda*. Last modified July 06, 2015. Available at <http://www.brasil.gov.br/economia-e-emprego/2015/07/minha-casa-minha-vida-3-tera-nova-faixa-de-renda>

3. The Evolution of the U.S. Real Estate Policy

U.S. economic regulations pertaining to real estate have evolved in different historical stages. The government had an active market intervention model from the 1930s through the 1970s, which was partly reversed under President Reagan in the 1980s. It returned to intervention during the first term of the Obama administration. We can describe the development of U.S. regulations in four periods: the first, from 1870 to 1930, when federal and local rules and regulations were first systematized; the second, from 1930 to 1970, was marked by the New Deal and significant State intervention, especially under Roosevelt; and the third, from 1970 into the 1990s, which saw the return of laissez-faire, especially under Reagan. Finally, recent interventions under Obama should be added, with new regulations in the U.S. market.²⁸

3.1 Regulation and Evolution of the U.S. Market

The Wall Street crash of 1929 was a trigger for a restructuring of the U.S. financial system with consequences for the real estate market. It caused an important policy shift at a time of social and economic crisis. Strong intervention policies in U.S. real estate occur after the beginning of the Great Depression in 1929.²⁹ Many families, which had mortgaged their properties, could no longer service their mortgages. Loans were renewable and, for a short-term repayment, frequently involved high interest rates and refinancing costs. Financing institutions became vulnerable and many went bankrupt.

In response to the Housing Finance System (HFS) crisis, the U.S. government implemented important recovery measures and took actions to stimulate the economy. The first of them were the Federal Home Loan Act (1932) and the Home Owners Loan Act (1933). These two measures aimed at liquidating the debts of defaulters and financing credit institutions, most of which were savings and loans that were having insolvency problems. Despite the apparent success of the Acts, they also proved problematic, as they exposed both, institutions and debtors to moral hazard risk. They demonstrated that, in the end, the government would act to resolve debts and provide credit to the system.

Under President Hoover (1929-1933), the Federal Home Loan Banks (FHLBanks) were created, based on the Federal Home Loan Act and the Home Owners Loan Act. The goal was to provide

²⁸ U.S. Department of Housing and Urban Development. Office of Policy Development and Research. Préparé par : Integrated Financial Engineering, Inc. 22 Octobre 2004. Modifié le 31 mars 2006. *Évolution du Système de financement du logement des États-Unis: rappel historique et leçons tirées pour les marchés hypothécaires émergents*. Available at http://www.huduser.gov/portal/publications/pdf/US_evolution_Fre.pdf Last accessed on December, 2015. See also Johnson, S. & Kwak, J. "13 bankers: the Wall Street take over and the next financial meltdown". Vintage Book. New York: 2011. E-book version. Loc. 1373.

²⁹ For chronological and synthesized description about laws and government acts on U.S real state market see: Federal Home Finance Agency - Office of Inspector General. *A brief history of the housing government-sponsored enterprises*. Available at <http://fhfaig.gov/Content/Files/History%20of%20the%20Government%20Sponsored%20Enterprises.pdf> Last accessed February 2015.

resources to support real estate financing, as relief to proprietors and financial institutions undergoing hardships. This measure was more local in scope and effect.³⁰ New measures were taken under Roosevelt (1933-1945). This time, they had national scope. There were three important innovations: 1) the creation of the Federal Housing Administration (FHA) through the National Housing Act - NHA (1934) (this agency aimed to secure mortgages against insolvency; 2) the introduction of a new kind of loan that had fixed interests rate, a low downpayment (20% of the purchase price) and long-term monthly mortgage payments (20-years or longer repayment); and 3) the authorization for private mortgage associations to issue bonds and buy mortgages in the primary market. Together the measures aimed at widening the real estate market and encouraging the entrance of new agents in the system.³¹

By the end of the 1930s, private companies were limiting their participation in this newly formed mortgage market; the Federal National Mortgage Association (Fannie Mae) was created in 1938 to fill the gap. The government's objective was to create a secondary market for mortgages secured by the FHA, by obtaining credit in areas in which it was supposedly abundant, and redistributing it into areas where it was scarce.³²

The Federal Deposit Insurance Corporation (FDIC) was created in 1933 to secure deposits in commercial banks, followed by the Federal Savings and Loan Insurance Corporation (FSLIC) in 1934, which secured deposits for savings and loans institutions.³³ Taken together, the measures enacted throughout the first stage of restructuring the U.S. real estate market fostered a huge expansion in the mortgage and construction markets.³⁴ From the late 1960s through the 1980s the U.S. real estate market started the innovation of securitization.³⁵ One should remember that

³⁰ U.S. Department of Housing and Urban Development. Office of Policy Development and Research. Préparé par : Integrated Financial Engineering, Inc. 22 Octobre 2004 Modifié le : 31 mars 2006. *Évolution du Système de financement du logement des États-Unis: rappel historique et leçons tirées pour les marchés hypothécaires émergents*. Available at http://www.huduser.org/publications/pdf/US_evolution_Fre.pdf Last accessed on January 2015.

³¹ *The Financial Crisis Inquiry Report - Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States*. Official Government Edition. U.S. Government Printing Office. Washington, DC, January, 2011. pp.29-37. Available at <http://www.gpo.gov/fdsys/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf> Last accessed on January 2015.

³² Ibid.

³³ In 1989, Congress passed savings and loan bailout legislation revamping the regulatory structure of the industry. FSLIC was disbanded and its insurance activities were assumed by a new agency, Savings Association Insurance Fund (SAIF), a unit of the Federal Deposit Insurance Corporation (FDIC). Responsibility for insolvent institutions previously under FSLIC's jurisdiction was assumed by another newly created agency, Resolution Funding Corporation (REFCORP).

³⁴ *The Financial Crisis Inquiry Report. Op. Cit.* p. 29.

³⁵ "Securitization" can be defined as "the process of making a loan or mortgage into a tradable security by issuing a bill or exchange or other negotiable paper in place of it. In *Dictionary of Banking & Finance*. – 3 edition. P.H.Collin. Bloomsbury, London 2003. "Securitization was one of the most brilliant financial innovations of the century," (...) "It freed up a lot of capital. If it had been done responsibly, it would have been a wondrous thing because nothing is more stable, there's nothing safer, than the American mortgage market (...). It worked for years. But then people realized they could scam it." Cited by *The Financial Crisis Inquiry Report. Op. Cit.* p.10. This

during this time, the country underwent major economic and political events including the Vietnam War, high inflation (as high as 15% per year), two 1970s oil shocks, and accompanying high interest rates. These in turn directly affected the savings and loans system, which was based on short-term deposits and long-term loans with fixed interest rates ("borrow short, lend long") shrinking the operators' profits. Finally, there was the momentous creation of Money Market Mutual Funds (MMMFs).³⁶ In order to heat up the real estate system, the government adopted three major initiatives. It revoked "Regulation Q"³⁷, it diversified the products of the savings and loans system in order to hedge against floating interest rates, and it split Fannie Mae in 1968, all as a part of the Housing and Urban Development Act. Part of Fannie Mae was converted into a government-sponsored enterprise (GSE), which, as a consequence, engendered confidence that the government would never allow it to collapse, an obvious moral hazard.

Since Fannie Mae's privatization, it purchases conventional mortgages, i.e. those not secured by the FHA. The other half of the agency was still under government control and was named the Government National Mortgage Association (Ginnie Mae). Originally Ginnie Mae provided only insurance for bonds issued by the FHA and the Veterans Affairs (VA) loans in special affordable housing programs. Today, Ginnie Mae securities are the only mortgage-backed securities (MBS) that enjoy the "full faith and credit" guarantee of the United States government.³⁸ Hence, Fannie Mae was stripped of involvement with mortgages for the underprivileged, which freed the institution to promote mortgage transactions.³⁹ In 1970, the U.S. Congress created the Federal Home Loan Mortgage Corporation (Freddie Mac), another GSE. Freddie Mac was tasked with fostering a secondary market for mortgages primarily sold by Savings and Loans. Freddie Mac also developed the first Mortgages Backed Security (MBS), which become known as a Participation Certificate (PC).

Mortgage securitization started with MBS's in the early 1970s and grew through the 1980s.⁴⁰ This financial innovation fostered integration between the stock and the mortgage markets, allowing for the increase of mortgage-related funds.⁴¹ Macroeconomic, technological, regulatory and other factors generated a huge expansion in the securities market, promoting the creation of

quotation is attributed to James Rokakis, in interview to FCIC, in November 8, 2010. Also more explicative development of operations in securitization at the *pp.38-45*.

³⁶ A MMMF is "A money market fund is a type mutual fund that is required by law to invest in low-risk securities. These funds have relatively low risks compared to other mutual funds and pay dividends that generally reflect short-term interest rates. Unlike a "money market deposit account" at a bank, money market funds are not federally insured". For more details: U.S. Securities and Exchange Commission. *Money Market Funds*. Last modified January 2013. Available at <http://www.sec.gov/answers/mfmmkt.htm>

³⁷ "Regulation Q" was "A Federal Reserve Board regulation that prohibited banks from being able to pay interest on deposits within checking accounts. Federal Reserve System. Boards of Governors. *Regulation*. Last modified July 27, 2015. Available at <http://www.federalreserve.gov/bankinforeg/reglisting.htm>

³⁸ GinnieMae. *Who we are. What we do. Why it makes a difference*. Last modified November 18, 2015. <http://www.ginniemae.gov/pages/default.aspx>

³⁹ *The Financial Crisis Inquiry Report. Op.Cit. pp. 38-46.*

⁴⁰ *Ibid.*

⁴¹ *Ibid.* See also Johnson, S. & Kwak, and J. *Op. Cit. Loc. 1424-1459.*

multiple classes of MBS's known as Collateralized Mortgage Obligations (CMOs) and Real Estate Mortgage Investment Conduits (REMICs), catering for demands from different funds. The creation of CMOs and REMICs had a broad impact on the U.S. stock market, as they raised participation from pension funds, mutual funds, insurance companies, and international investors. As of the early 1970s, the seed of the current secondary mortgage market based in MBSs had been planted.⁴² By the end of the 1980s, and particularly in the 1990s, in every economic sector, automation and technology gained momentum and it was no different with the financial sector.⁴³ The security of and speed of operations increased dramatically, which was a decisive driver in the development of the mortgage market in the USA.⁴⁴

For the U.S. HFS, the largest contribution made by technology was the creation of automated underwriting systems (AUS's),⁴⁵ which allowed for an increase in the scale of mortgage issuance.⁴⁶

3.2 The Innovation of the U.S. Market

There is an intertwining between property acquisition by private citizens, the U.S. real estate credit system, and the expansion of the secondary capital market. Purchase of property using mortgages is transformed into assets vendible in the capital market instead of simply generating bank assets (loans). These assets do not remain on each bank's balance sheet, but work as intermediary instruments between borrowers and mortgage fund sources, which are primarily pension funds.

In the primary market, banks and savings institutions originate mortgage credit and, due to term mismatch, these institutions sell these credits to the secondary market. Before these assets get to private and institutional investors, they pass through insurance companies known as 'conduits'.⁴⁷ These securitization trusts may be structured by government-sponsored enterprises as well as by private entities that may offer credit enhancement features to mitigate the risk of prepayment and

⁴² Ibid.

⁴³ U.S. Department of Housing and Urban Development (Office of Policy Development and Research. Préparé par : Integrated Financial Engineering, Inc. 22 October 2004 Modifié le : 31 mars 2006. *Évolution du Système de financement du logement des États-Unis: rappel historique et leçons tirées pour les marchés hypothécaires émergents*. Available at http://www.huduser.org/publications/pdf/US_evolution_Fre.pdf Last accessed February 2015. See also Johnson, S. & Kwak, and J. *Op. Cit.*

⁴⁴ Ibid.

⁴⁵ Ibid.

⁴⁶ According to Johnson, "The government insures mortgages within the limit secured of the FHA/VA. In this case, they are a 'conventional' or 'conforming' mortgage and do not exceed the mortgage limit established by the GSEs. If a mortgage exceeds the limit established by the agencies, it will be insured by private agents (insurance companies), and are known as a 'conventional nonconforming mortgage'. After a mortgage issuance, it may be secured in a secondary market, in an operation known as 'pass-through'." *Op. Cit.* Loc. 2052-2117.

⁴⁷ Elmer, Peter J. *Conduits: Their structure and risk*. FDIC Banking Review. Available at https://www.fdic.gov/bank/analytical/banking/1999dec/2_v12n3.pdf Last accessed September 2015.

default associated with mortgages.⁴⁸

The inclusion in the mortgage market of clients who previously hadn't had access to credit represented a significant shift. Many of these new mortgage customers couldn't satisfy the terms traditionally set by the public and private institutions, and couldn't afford traditional amortized monthly payments. In some cases, they didn't even provide proof of income, job, or assets consistent with their mortgage application. Ultimately, an avalanche of payment defaults created a domino effect across the capital market and the economy in general. Loans offered to this population were normally 'subprime' in nature: they were usually long-term (30 years) with hybrid payments consisting of an initial short term (from two to three years), in which the mortgage recipient paid monthly payments with relatively low fixed interest.⁴⁹ In the following 27-28 years, the monthly payments and the interest were stepped up and adjusted in relation to market rates. In addition, another financial instrument used to encourage the acquisition of mortgages by the subprime segment were the "interest-only loan" contracts. In this type of contract, the taker paid interest only, therefore leaving the payment of the face amount (principal) to future years.

These types of contracts characterized the dynamic nature of the financial system, covering part of the population that previously had little access to credit. This development fostered a cycle of highly speculative purchases and sale of property. Property was acquired purely with the intention to sell based on its future value. The financial instruments already discussed allowed property refinancing that added to the feeding frenzy. According to the studies produced about that period, securitization, financial innovations and incorporation of a new segment of consumers in the real estate market, allowed for an accelerated expansion of real estate assets, and consequently, of their prices.⁵⁰ The engine that allowed for the extension of real estate credit was securitization of subprime credits. As described before, financial institutions operated through the origination and distribution system, i.e. they originated mortgage credit and passed it on to institutional investors.⁵¹ The danger of this securitization was the wholesale packaging of securities connected to high-risk assets: that ended by unleashing a systemic contagion, when

⁴⁸ Jonhson, S. & Kwak, J. *Op. Cit.* Loc. 2369-2401.

⁴⁹ The "subprime mortgage" is a type of mortgage that is normally made out to borrowers with lower credit ratings. For more details see Bernanke, Ben S., "Challenges in Housing and Mortgage Markets," Speech given at the Operation HOPE Global Financial Dignity Summit, Atlanta, GA, November 15, 2012. Available at <http://www.federalreserve.gov/newsevents/press/bcreg/bcreg20070629a1.pdf> Last accessed April 2015. See also Jonhson, S. & Kwak, J. *Op. Cit.* Loc. 2165-2182.

⁵⁰ U.S. Department of Housing and Urban Development (Office of Policy Development and Research. Préparé par : Integrated Financial Engineering, Inc. 22 October 2004 Modifié le : 31 mars 2006. *Évolution du Système de financement du logement des États-Unis: rappel historique et leçons tirées pour les marchés hypothécaires émergents.* Available at http://www.huduser.org/publications/pdf/US_evolution_Fre.pdf Last accessed February 2015. Jonhson, S. & Kwak, J. *Op. Cit.* Loc. 2484-2542.

⁵¹ Borio, C. *The financial turmoil of 2007? a preliminary assessment and some policy considerations.* BIS Working Papers No 251. March 2008. P. 4. Available at <http://www.bis.org/publ/work251.pdf> Last accessed January 2015.

eventually asset quality was questioned.⁵² Indeed, this collapse in confidence in real estate asset values was what triggered the crisis of 2008.⁵³

Instruments, connecting the real estate market to the financial market, created a mechanism to transform physical assets into liquid financial instruments. Assets were also traded as if secured by the U.S. government. As a consequence, demand for these assets increased substantially. Institutional investors were also looking for low-risk assets,⁵⁴ so they were added to the balance sheets of numerous institutions, financial and non-financial, while the regulatory apparatus was unable to keep pace.⁵⁵ Reliance on the self-regulation of private agents is also an important element that allowed the rapid emergence of the subprime sector, which had collapsed by 2008, bringing down the broader market in 2008.

Finally, the excessive reliance on self-regulation of the private agents is also identified as an important element that allowed the evolution of the subprime frame, resulting in the explosion of the market in 2008. Reform proposals from Henry Paulson, President Obama, and the U.S. Congress merged into the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010.

4. Some Comparisons

When comparing the Brazilian and the U.S. markets leading up to the 2008 crisis, at least two policy aspects must be considered. The first aspect is the policy for credit; the second concerns the regulatory structure of the financial market and the agents' performance.

4.1 Credit Policy

Arguments about a housing bubble in Brazil have been centered on the boost in house prices and their recent slowdown; and the expansion of credit in the market. However, despite the increase in loans, the total volume of credit allied to conditions to access it, have never been the same as the U.S. market facilities. The cost of credit and restrictions on access to it are the main differences.

⁵² The regulatory reform promoted shortly after this collapse intended to fill some of the regulatory gaps in the complex and capitalized U.S. market, reducing some conflicts of interest and, among other measures, concentrating the control and financial regulation responsibilities from the banks to the Fed.

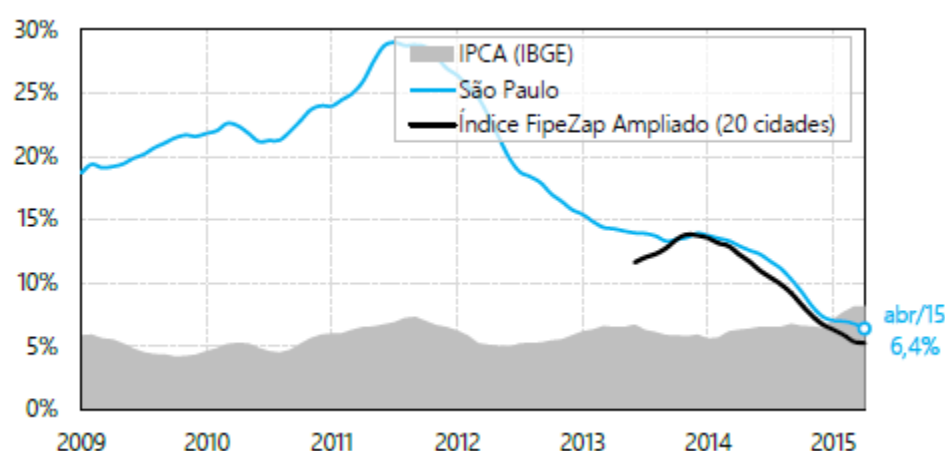
⁵³ U.S. Department of Housing and Urban Development (Office of Policy Development and Research. Préparé par : Integrated Financial Engineering, Inc. 22 October 2004 Modifié le : 31 mars 2006. *Évolution du Système de financement du logement des États-Unis: rappel historique et leçons tirées pour les marchés hypothécaires émergents*. Available at http://www.huduser.org/publications/pdf/US_evolution_Fre.pdf See also Jonhson, S. & Kwak, J. Op. Cit. Loc. 1459-1505.

⁵⁴ Jonhson, S. & Kwak, J. Op. Cit. Loc. 2517- 2549.

⁵⁵ Jonhson, S. & Kwak, J. Op. Cit. Loc. 2491- 2517.

The *FipeZap Index*, which tracks the sale price of real estate in 20 Brazilian cities, recorded an increase of 5.25% in the 12 months ended in April/2015.⁵⁶ It was the fourth consecutive time that the price rise was less than inflation, thus allowing for a new real drop in prices. After April 2015, the FipeZap Index Expanded recorded an accumulated growth in this year of 1.08%. In the same period, the inflation expected for the IPCA (IBGE) is 4.55%. Thus, the announced average price per square metre (m2) for sale in the 20 cities surveyed experienced a real drop of 3.47% in the first 4 months of 2015. During the year, all 20 cities that compose the Index registered price variations lower than inflation. The cities Niterói, Brasília and Curitiba showed nominal falls in the same period. The city in which m2 is most expensive is still Rio de Janeiro, followed by São Paulo. The two cities that had the lowest prices were Contagem (SP) and Goiania (GO).⁵⁷

Figure 2: Housing Price Index



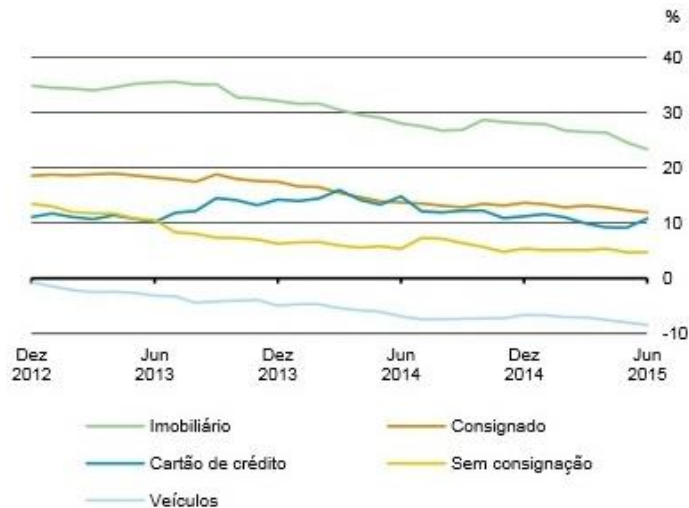
Source: FIPE. *Preço dos imóveis mantém trajetória de queda em abril.*

The credit for houses grew rapidly since the PMCMV. In addition, with the economic stabilization of the “Plano Real”, since 1994, as noted in the previous section, a series of reforms enabling macro-economic stability of the country were implemented. The combination increased credit availability. The creation of a secondary mortgage market also emerged. So, new sources of financing houses appeared increasing availability of mortgages and reducing their cost. The top green line in the graph below represents the growth of housing credit from 2012 until 2015:

⁵⁶ Fipe (federal institution of prices, in Brazil) and the ZAP Real Estate portal develop the FipeZap Index. It is calculate by File and monitors the average price of m2 apartment in 20 municipalities based on ads from Internet. The methodology used to calculate the index FipeZap is available at http://downloads.fipe.org.br/indices/fipezap/metodologia/FipeZAP_RevMetodologia_v20140218.pdf. Last modified February 2014

⁵⁷ FIPE- Fundação Instituto de Pesquisas Econômicas. *Preço dos imóveis mantém trajetória de queda em abril.* Last modified Abril 2015. Available at <http://www.fipe.org.br/Content/downloads/indices/fipezap/releases/%C3%8Dndice%20FipeZAP%20%20Divulga%C3%A7%C3%A3o%20201504.pdf>

Figure 3: Annual Credit Growth



Source: ABECIP. *Indicadores*. Last modified October 2015. <http://www.abecip.org.br/#>

The sources of real estate credit in Brazil can currently be divided into three: government, banking market and the capital market. Public funding is represented by disbursements of FGTS and the federal government transfers. The banking market is represented by the SBPE (System Brazilian Savings and Loan) and issuance of letters. The letters for financing houses are Real Estate Credit Notes (LCI) and Letters Covered (LH). Finally, for capital markets, sources can be subdivided into 3 subgroups: in the fixed income market, where debentures are issued; in the equity market, using stocks and real estate shares; and the securitization market, which employs Real Estate Receivables Certificates (CRIs), Funds Investment in Credit Rights (FIDC) and Credit Notes Real estate (CCIs). These various papers have been described in the previous section.

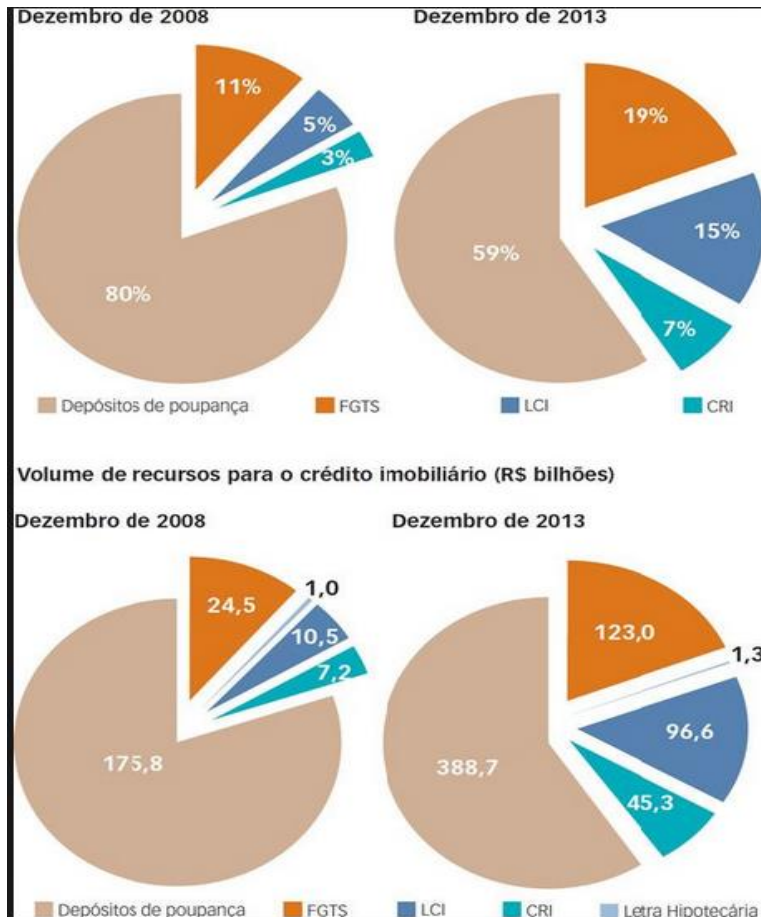
Since December 2008, savings have provided more than 80% of the credit for housing. New funding sources for mortgage financing, besides the savings account, have gained ground in recent years. From 2008 to 2013, the Fund of Guarantee for Time of Service (FGTS) share in the real state funding almost doubled, as well as Real Estate Receivable Certificates (CRIs). The Real Estate Credit Bonds (LCIs - Tetras de Creditor Imobiliário) tripled their share. The FGTS funds participation in financing increased from 11% to 19% during the same period, from R\$24.5 billion in 2008 to R\$123 billion in 2013.⁵⁸ However, according to data provided by the Brazilian Central Bank, despite the growth of savings account deposits, the savings accounts share in mortgage financing fell from 80% to 59%. Some specialists predict that this market will

⁵⁸ PINIWEB Construção-Mercado. *Cresce a participação de fontes alternativas de recursos, como FGTS, CRI e LCI, na origem do financiamento imobiliário. Por outro lado, fatia da poupança é reduzida, modificando o perfil do funding brasileiro*. Last modified September 2014.

Available at <http://construcaomercado.pini.com.br/negocios-incorporacao-construcao/158/artigo326567-4.aspx>

grow in the future. This is mainly because of the recession in Brazil. Professor Márcio Garcia of PUC-Rio, in an interview, sees signs, however, that the Brazilian System of Savings and Loans (SBPE) will be insufficient to meet demand. Thus, new sources of financing will be needed to satisfy housing needs.

Figure 4: Mortgage Financing Sources in Brazil, 2008 and 2013

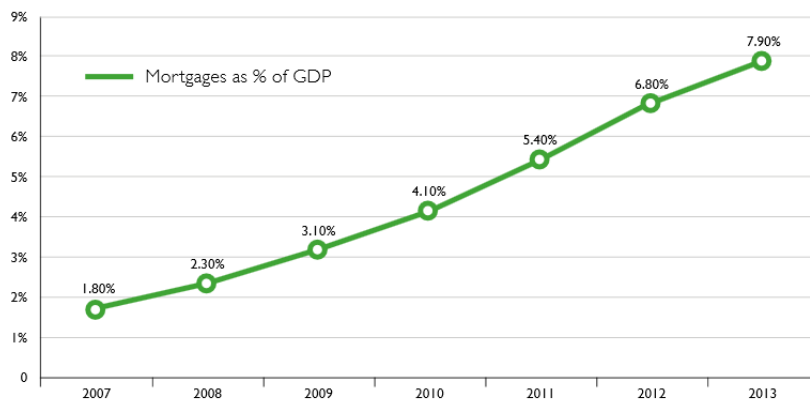


Source: PINIWEB Construção-Mercado. *Cresce a participação de fontes alternativas de recursos, como FGTS, CRI e LCI, na origem do financiamento imobiliário.* Available at <http://construcaomercado.pini.com.br/negocios-incorporacao-construcao/158/artigo326567-3.aspx>

Despite Brazilian housing demand growth and stimulatory measures until 2013, the availability of credit for real estate purchases in Brazil has not approached the share of GDP that is observed in the U.S.

However, the mortgage market is still in very early stages compared with many other emerging economies. For instance, in Chile, this ratio is 20% and in Mexico, the ratio is 12%. The difference is much bigger when compared to the majority of the developed Western economies. In the UK, the ratio is 81%, in Sweden 60.4% and in the United States 73%.

Figure 5: A Developing Mortgage Market in Brazil



Source: Ritz-G5. *Brazil Economic & real estate report*. Spring 2015. Available at <http://www.ritzproperty.com/files/economic-real-estate-report-rg5-dg-290415-LR.pdf>

Among the factors that explain this, the report of the Bacen mentions two characteristics as key differences with the U.S. market. The first is that down payments on a property purchase averages 30% of the price. This fact improves the debt (liability) to asset ratio. The second is the use of the constant amortization system (SAC) that repays debt (mortgages) faster than in the U.S. By comparison, borrowers in the U.S. could finance the entire price of a home during the real estate boom.⁵⁹ This did not happen in Brazil.

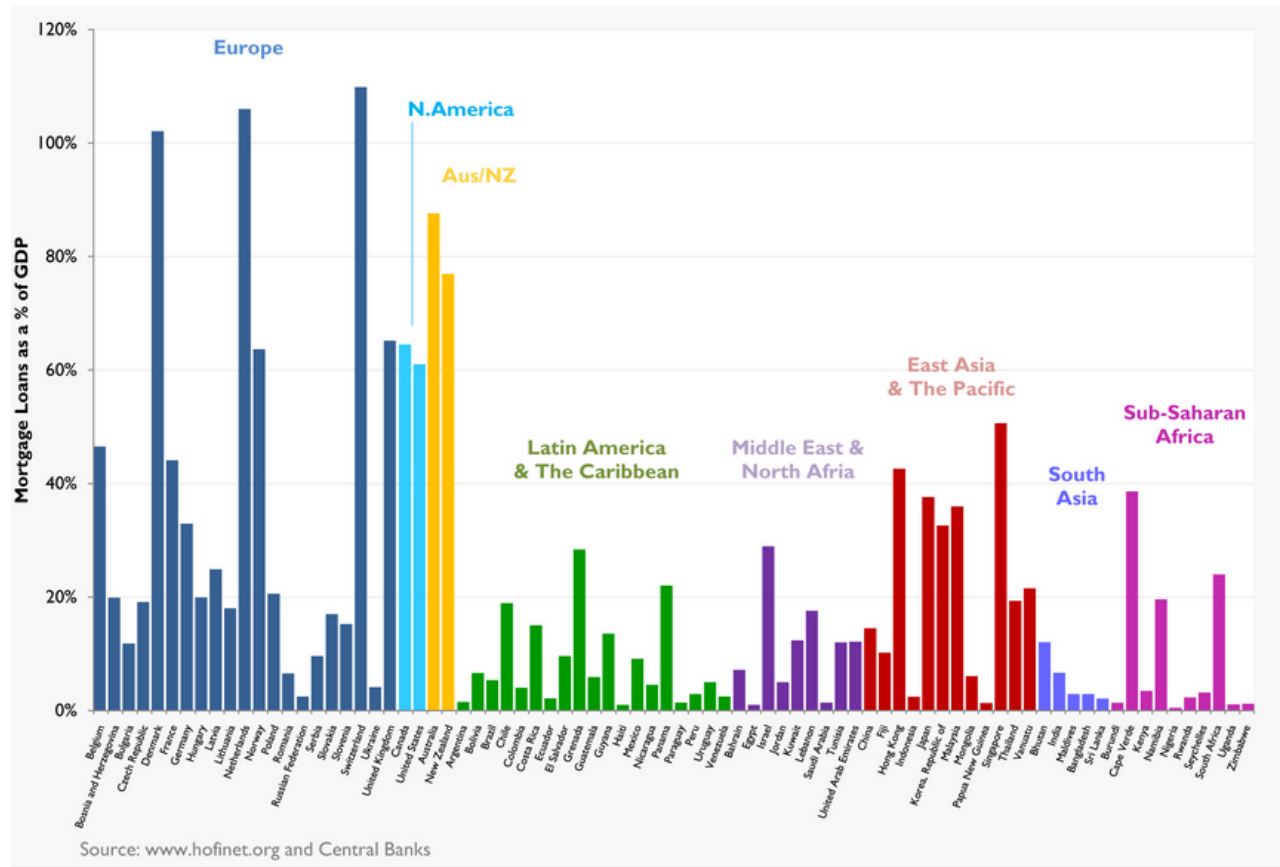
The second distinction between the Brazilian and U.S market is the cost of credit. Mortgage interest rates in Brazil have never fallen below 9% despite the implementation of measures to stimulate the real estate credit market. The report also discusses today's real estate credit market (2014-2015) as reflective of fiscal adjustments underway during Dilma Rousseff's second term as President. It predicts slowing growth and an actual decline in lending. In historical perspective, mortgage and long-term lending in Brazil used to be very scarce, primarily due to very high inflation rates.

Since 2013, the base interest rate has been rising due to Bacen's tighter monetary policy to combat inflation, which rose to a 7.7% rate in February 2015. Meanwhile, taxes have increased and austerity measures have been implemented by the Brazilian Government after the elections

⁵⁹ More details can be found in the "Financial Stability Report" of the Central Bank of Brazil, published March 2014, evaluating the national real estate market. The document is available in Portuguese version at http://www.bcb.gov.br/htms/estabilidade/2014_03/refP.pdf Last accessed September 2015. See also the article in "Folha de Sao Paulo" commenting on the report: <http://www1.folha.uol.com.br/mercado/2014/03/1428294-banco-brasileiro-sobreviveria-a-crise-imobiliaria-superior-a-dos-eua-diz-bc.shtml> March 20, 2015

of October 2014. Recent interest rate increases by Bacen contribute further to the economic tightening.⁶⁰

Figure 6: Mortgage Market Size as a Percent of GDP



Source: House Finance Information Network. *Country Index*. Last modified. October 2014. Available at <http://hofinet.com/countries/index.aspx>

Another factor influencing the price of credit is concentration in the banking sector, which makes access to competitive financing tougher.⁶¹ The small number of agents acting in the financial market, be it commercial banks or investment banks, limits the credit offered to the Brazilian borrower. Again it is important to highlight the impact of government banks on Brazilian real

⁶⁰ Bacen. *Histórico das taxas de juros*. Last modified October 21, 2015. Available at <http://www.bcb.gov.br/?COPOMJUROS> and also: FOCUS- Relatório de Mercado. Last modified February 13, 2015. Available at <http://www.bcb.gov.br/pec/GCI/PORT/readout/R20150213.pdf> Last accessed on February 2015.

⁶¹ Otto, S. & Palmeira, N. *Regulação concorrencial no mercado bancário brasileiro*. Revista De Direito Bancário e do Mercado de Capitais - VOL.49. São Paulo: 2011. Pp. 63-78.

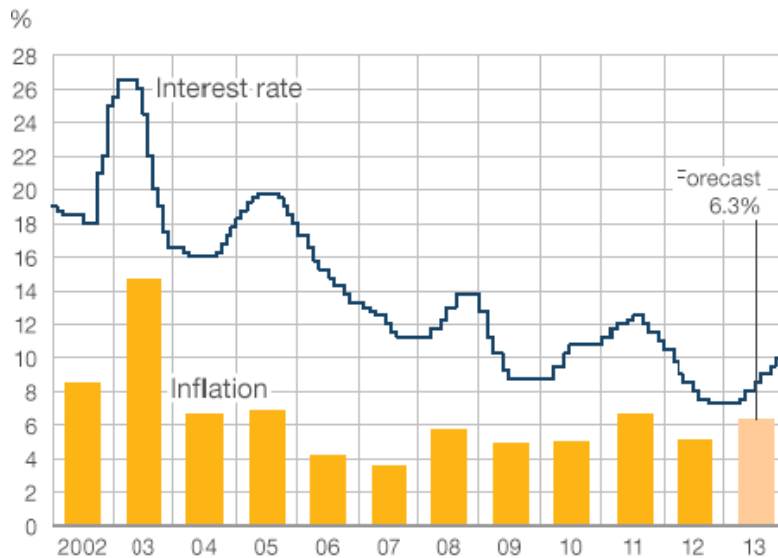
estate policies, especially those stemming from SFH. A CEF is currently responsible for over 90% of real estate contracts in the PMCMV.⁶²

Figure 7: Brazilian Interest Rate Progression, 2006-2014



Source: “Brasil- taxa de juros.” Trading Economics. Last modified October 2013. Available at <http://pt.tradingeconomics.com/brazil/interest-rate>

Figure 8: Brazil’s Inflation and Interest Rate, 2002-2013



Source: Inflation: IMF; Interest rate: Central Bank of Brazil

Source: “Brazil raises interest rate to 10% as it battles inflation.” *BBC News*, November 28, 2013. Available at <http://www.bbc.com/news/business-25132979>

⁶² Caixa Econômica Federal (CEF). *Demanda Habitacional no Brasil*. Brasília, DF. Caixa: 2011.

4.2 Regulatory System and Market Innovation

Bank supervision and control in the United States are complex. While in Brazil the Central Bank is the controlling organ for all bank institutions, in the U.S. control is decentralized among federal, state, and local institutions. Leading to the 2008 U.S. crisis, there were several federal regulatory institutions that had oversight over deposit-taking institutions: the Federal Reserve (Fed), the Federal Deposit Insurance Corporation (FDIC), the Office of Thrift Supervision (OTS) and the Office of the Comptroller of the Currency (OCC).⁶³ Several supervisorial institutions at the state level fulfill the same tasks.⁶⁴ The authority to license commercial banks and their offerings are determined, respectively, by state and federal laws.⁶⁵ During the peak of the 2008 crisis, the primary federal regulating agency was OCC for federal banks, the Fed for member state banks, and the FDIC for non-member state banks.⁶⁶ This decentralization of control and supervision contributed heavily to systemic risk.⁶⁷

Discerning the difference between banks and non-banks became harder. The securitization of more and more asset classes via standard contracts transformed them into generic products, making them easier to distribute. The diffusion of regulatory powers created supervision challenges with agents and their transactional information crossing markets.⁶⁸

Three fundamental characteristics of the U.S. system prior to the crisis were a) lax control over commercial banks and limited restrictions on their operations; b) a fragmented system of supervision; and c) reliance on the virtues of self-regulation. The consequence of this combination was prudential and systemic regulatory weakness.

The Brazilian Central Bank supervises all the financial institutions.⁶⁹ It inspects premises and also monitors institutions remotely. There are no local or state level regulatory agencies. Monitoring consists of audits of the institutions' data to detect abnormal patterns, whether regulatory or risk-assessment related. The goal is to maintain the institutions' financial health, the quality of their

⁶³ The OTS was implicated in a backdating scandal regarding the balance sheet of IndyMac. Reform proposals from Henry Paulson, President Obama, and the U.S. Congress proposed to merge the OTS with the Office of the Comptroller of the Currency. Dodd-Frank Wall Street Reform and Consumer Protection Act mandated merger of OTS with the OCC, the FDIC, the Federal Reserve Board of Governors, and the Consumer Financial Protection Bureau (CFPB) as of 21 July 2011. The OTS ceased to exist on 19 October 2011. Office of the Comptroller of the Currency. U.S. Department of the Treasury. Last modified. March 2015. Available at <http://www.ots.treas.gov/> Last accessed on March 2015.

⁶⁴ Jonhson, S. & Kwak, J. *Op. Cit.* Loc. 1795- 1811.

⁶⁵ Jonhson, S. & Kwak, J. *Op. Cit.* Loc. 1588- 1624 and 1653- 1671.

⁶⁶ More details can be found in the “Financial Stability Report” of the Central Bank of Brazil, published March 2014, evaluating the national real estate market. The document is available in Portuguese version at http://www.bcb.gov.br/htms/estabilidade/2014_03/refP.pdf Last modified on January 2015. See also the article in “Folha de São Paulo” commenting on the report : <http://www1.folha.uol.com.br/mercado/2014/03/1428294-banco-brasileiro-sobreviveria-a-crise-imobiliaria-superior-a-dos-eua-diz-bc.shtml> Accessed on March 2015.

⁶⁷ Jonhson, S. & Kwak, J. *Op. Cit.* Loc. 1875-1890.

⁶⁸ Jonhson, S. & Kwak, J. *Op. Cit.* Loc. 2744- 2776.

⁶⁹ Bacen. *Supervisão*. Last modified on February 2015. Available at <http://www.bcb.gov.br/?SOBRESUPERVISA0>

assets and the profitability of their operations.

Brazil has also adjusted the capital requirements of those financial institutions exposed to risk spread. The country went through this adjustment in the mid-1990s with the implementation of the Real Plan (“Plano Real”), which introduced a new currency that brought economic stability to the country. Ever since, the health of the Brazilian banks has been tested. Although the Real Plan brought economic stability, it also exposed gaps and weaknesses. One of the areas of concern was the soundness of banks, which operated with weak balance sheets due to high inflation rates that threatened their default. The PROER and PROES were the two major official bank-restructuring programs, under which banks were recapitalized.⁷⁰ These measures were similar to those the Obama administration implemented after the 2008 crisis to address the capital deficiency of U.S. banks.⁷¹

International measures implemented in the Brazilian market should also be mentioned. The Basel Accords (II and III), about capital rules, have been incorporated in the Brazilian prudential and systemic measures.⁷² Brazil adopted the rules in 1998 ahead of the implementation deadline of 2004.⁷³ The Brazilian financial market's operational rules have made it more difficult to open and run banks. Brazil also successfully encouraged the participation of international banks in its market.⁷⁴

At the end of the 1990s, once again within the context of the Brazilian currency stabilization and financial market modernization, Law # 9.447/97 widened the powers of the Central Bank so that it could enforce transparency and consistency across the financial system.⁷⁵ Its Article 5,

⁷⁰ The “Program of Incentives for Restructuring and Strengthening the National Financial System (PROER)” and the “Program of Incentives for the Reduction of the State Role in Banking Activity (PROES)”.

⁷¹ For more details see: LUNDBERG, E. *Saneamento do sistema financeiro: a experiência brasileira dos últimos 25 anos*. BACEN, Brasília, 2011. Available at <http://www.bcb.gov.br/ftp/saneamento.pdf> Last accessed March 2015.

⁷² It is known that at the end of December 2012 operations with earmarked resources totaled a share of 22% in total loans, which shows that the share of directed credit absorbs a considerable part of the funds for loans. Taking the financial system as a whole between 2003 and 2010, the growth rate of credit to housing stood at 17% per annum (pa) against the general average (which includes other activities such as industry, rural credit, trade, individuals and other services) of 12% pa. In the case of public banks, the average rate of credit expansion to housing was 19% pa. More recently, considering the Brazilian System of Savings and Loans (SBPE) from January 2008 to October 2012, there was a dramatic increase in the balance of mortgage loans – by 328% in real terms, while between August 2010 and October 2012 the change was 86.4%. Source:

http://www.ipea.gov.br/portal/images/stories/PDFs/nota_tecnica/131125_notatecnicadirur05.pdf Op.Cit. Last accessed, December 2014. Also see “Financial Stability Report” of the Central Bank of Brazil, published March 2014, available at http://www.bcb.gov.br/htms/estabilidade/2014_03/refP.pdf Last accessed on January 2015.

⁷³ For more details: Lunderberg, E. *Saneamento do sistema financeiro: a experiência brasileira dos últimos 25 anos*. Bacen, Brasília, 2011. Available at <http://www.bcb.gov.br/ftp/saneamento.pdf> Last accessed March 2015. See Also: Bacen. *O Banco Central e as novas técnicas de saneamento do Sistema Financeiro Nacional após a estabilização monetária*. Last modified December 31, 2001. AVAILABLE at

<http://www.bcb.gov.br/htms/livrosfn.asp?idpai=ARTREGESP#destino3> Last accessed February 2015.

⁷⁴ Otto, S. & Palmeira, N. *Regulação concorrencial no mercado bancário brasileiro*. Revista de Direito Bancário e do Mercado de Capitais - VOL.49.São Paulo: 2011.

⁷⁵ Important information and statistics could be checked in the official website of Bacen: <http://www.bcb.gov.br/?INTER> Last accessed on February 2015.

regarding intervention, administrative liquidation, or temporary special administration, bestowed powers upon the Central Bank allowing it to demand a company's recapitalization, to determine the transfer of controlling interest or even to establish the foundations for corporate reorganization.⁷⁶ In case the measures are not complied with per the terms given by the Controlling Authority, it can impose an administrative special regime. In addition, Article 6 from the same Law bestows upon the intervener, the liquidator or to the administration council, in the best interests of the public economy, of the depositors and of the investors, and through previous, express authorization from Bacen powers to: i) transfer assets, rights, and obligations pertaining to the company under the special regime; ii) sell or assign assets and rights to third parties; and iii) proceed to corporate reorganization, including through incorporation, amalgamation or divestiture, aiming at allowing for the continuance of the business, even if partially.

Under measures set forth by Article 5 from Law # 9.447/97 to solve the problems, the Controlling Authority shall adopt one of the special regimes in a final effort to rescue the company or, when this option is not feasible, allow for its closure, attempting to limit the effects of this action upon other institutions and upon the market in general.⁷⁷ The special regimes supplement the protection network to the financial system and can be regarded as interventionist instruments at the State's disposal in order to act upon the financial system. When one of the special regimes is adopted, the State takes control of the financial institution, seeking first to safeguard the public interest; i.e., to keep the financial system healthy. Secondly, these mechanisms aim to protect the interests of these institutions' creditors. The special measures must seek to promote a healthy and competitive system at the lowest possible cost.

Some weaknesses of the Brazilian system are: a) the effectiveness *versus* the cost of direct control of the banks; b) the lack of legal autonomy of the President of the Central Bank; and c) the lack of the Central Bank's legal authority over banks, causing a conflict with the judicial branch. Regarding Bacen's failed bank interventions, new legislation is proposed. One important element to be addressed is Bacen's "de facto" autonomy. The Brazilian President can remove the head of the Central Bank at any time. This affects its institutional credibility. Another important concern is jurisdictional conflicts between the regulatory authorities and the courts. One example of this is the authority of Bacen to comprehensively battle inflation. The Central Bank's position has been that commercial banks acted correctly regarding the savings yield for Brazilian consumers after the currency in circulation was changed. This was still being reviewed by the

⁷⁶ Important information and statistics could be checked in the official website of Bacen: <http://www.bcb.gov.br/?INTER> Last accessed on February 2015.

⁷⁷ Bacen. *O Banco Central e as novas técnicas de saneamento do Sistema Financeiro Nacional após a estabilização monetária*. Last modified December 31, 2001. Available at <http://www.bcb.gov.br/htms/livrosfn.asp?idpai=ARTREGESP> Last accessed on February 2015.

Supreme Court as of October 2015 to determine if banks need to pay consumers an estimated BRL 21 billion in compensation.⁷⁸

5. Conclusion

Despite recent cycles of real estate credit expansion, the Brazilian market still has significant structural differences compared to the U.S. The amount of mortgage credit in Brazil is still low, as described. Though there have been advances in the innovation of Brazilian real estate financing from 1997 to today, comparatively it remains very restricted compared with the situation observed in the U.S.

Measures to encourage and support housing credit are still very conservative, reflected in high interest rates and the small amount of available capital in relation to GDP. The capital market in Brazil lacks the scale and diversity of the U.S. market, as well as its regulatory freedom. The complexity of decentralized U.S. common law contrasts with the highly centralized Brazilian civil law model, which impacts regulatory and supervisory powers.

The conclusion of this paper is that there is no housing bubble in Brazil. Despite the expansionary measures since 2003, and especially since 2009 under Dilma Rousseff, the current President, the Brazilian real estate market is still under-delivering and heavily regulated. What's happening in 2015 represents an interruption of modest growth. Nevertheless, the Brazilian contraction, though serious, is of nothing like the same severity as the one that economically shattered the U.S. in 2008. The crash of the U.S. real estate market directly led to the economic crisis of 2008 in the U.S. In Brazil, the cooling of the real estate market is more a consequence of its economic contraction than a cause.

⁷⁸ This value was initially estimated at R\$ 450 Billions. The Supreme Court changed this number in 2014. Revista Exame. *Julgamento de planos econômicos pode ficar para 2015*. 21/07/2014 <http://exame.abril.com.br/brasil/noticias/julgamento-de-planos-economicos-pode-ficar-para-2015>. See also RBA Rede Brasil Atual. Planos Econômicos. *PGR deve entregar hoje recálculo sobre lucro dos bancos em expurgos nas poupanças*. Last modification July 21 2014. Available at <http://www.redebrasilatual.com.br/economia/2014/07/pgr-entrega-ate-segunda-feira-recalculo-sobre-lucro-dos-bancos-em-expurgos-nas-poupancas-dos-brasileiros-8097.html> Last accessed January 2015.

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