HOUSING FINANCE MECHANISMS IN BRAZIL

UN-HABITAT
FOR A BETTER URBAN FUTURE

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IN BRAZIL

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Housing Finance Mechanisms in Brazil

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FOREWORD

At the dawn of this At the dawn of this new urban era, UN-HABITAT research shows that by 2030, two-thirds of humanity will be living in towns and cities. We thus live at a time of unprecedented, rapid, irreversible urbanisation. The cities growing fastest are those of the developing world. And the fastest growing neighbourhoods are the slums. Indeed, the global number of slum dwellers is now at or close to the 1 billion mark. Excessive levels of urbanization in relation to the economic growth have resulted in high levels of urban poverty and rapid expansion of unplanned urban settlements and slums, which are characterized by a lack of basic infrastructure and services, overcrowding and substandard housing conditions.

Yet housing and the services that should be provided with it are one of the most basic human needs. It is enshrined in various international instruments, including the Habitat Agenda. And reducing the number of slum dwellers around the world is a cornerstone of the Millennium Development Goals set to fight poverty around the world. So if we fail to achieve the Goals in towns and cities, we will simply fail to achieve them at all.

It was with this crisis in mind that the United Nations General Assembly decided in its resolution of 26 February 2002 to transform United Nations Commission on Human Settlements into a fully pledged programme. The General Assembly in its resolution called on UN-HABITAT to take "urgent steps to ensure a better mobilization of financial resources at all levels, to enhance the implementation of the Habitat Agenda, particularly in developing countries." It also stressed "the commitments of member states to promote broad access to appropriate housing financing, increasing the supply of affordable housing and creating an enabling environment for sustainable development that will attract investment".

The Habitat Agenda recognizes that housing finance systems do not always respond adequately to the different needs of large segments of the population, particularly the vulnerable and disadvantaged groups living in poverty and low income people. It calls UN-HABITAT to assist member states to improve the effectiveness, efficiency and accessibility of the existing housing finance systems and to create and devise innovative housing finance mechanisms and instruments and to promote equal and affordable access to housing finance for all people.

In our quest to reach as many people as possible, a cornerstone of our agency's new Medium-term Strategic and Institutional Plan is partnerships. We have no choice but to catalyze new partnerships between government and the private sector. This is the only way to finance housing and infrastructure at the required scale – the scale needed to stabilize the rate of slum formation, and subsequently reduce and ultimately reverse the number of people living in life-threatening slum conditions.

It is clear that in the coming 20 years, conventional sources of funds will simply be unavailable for investment at the scale required to meet the projected demand for housing and urban infrastructure. Many countries around the world continue to face deficits in public budgets and weak financial sectors. Local governments have started to seek finance in national and global markets, but this is only in its initial phase.

New mortgage providers have emerged, including commercial financial institutions and mortgage companies. But only middle and upper income households have access to such finance, while the poor are generally excluded. Although social housing is becoming less important in Europe and in countries with economies in transition, the need to provide shelter that is affordable to low income households still exists, including in developing countries.

This is why the exchange of information and knowledge on human settlements finance systems is so important. It is why it receives increased recognition in facilitating the development of human settlements finance systems and in turning knowledge into action for developing practical human settlements finance methods and systems for these pressing problems.

Our Human Settlements Finance Systems series documents the state, evolution and trends of human settlements finance in member states, and examines the factors and forces which drive the development of human settlements finance systems and the roles of different institutions and actors in shaping the systems and trends, and reviews human settlements finance systems. It presents an interesting review of policies, instruments, processes and practices. It examines the strengths and weakness of these systems and practices, their relations to the housing sector and the broad economic and social sectors, and lessons learned from practices.

Indeed, the country review studies we present are a valuable resource for member States because it is a body of work that also shows how human settlements finance systems and models can be applied to local use and thus provide a wider range of options for human settlements finance. The series also serves as guidebooks for policy makers, practitioners and researchers who have to grapple daily with human settlements finance systems, policies and strategies.

Anna Tibaijuka,
Under-Secretary-General, United Nations
Executive Director, UN-HABITAT

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ABBREVIATIONS AND ACRONYMS

BCB -Banco Central do Brasil – Brazilian Central Bank

Bacen-Banco Central do Brasil – Brazilian Central Bank

BRL-Reais – Brazilian Reais

CDB-Certificado de Depósito Bancário - Bank Certificate of Deposit

CEF-Caixa Econômica Federal – CEF Public Bank for Savings and Real Estate Finance

CP-Caderneta de Poupança –Savings Account

CRI-Certificado de Recebíveis Imobiliários - Certificate of Real Estate Receivables

CVM -Comissão de Valores Mobiliários – Brazilian Securities Commission

FCVS -Fundo de Compensação de Variações Salariais - Salary Variations Compensation Fund

FGTS - Fundo de Garantia por Tempo de Serviço - Guarantee Fund for Length of Service - Retirement Institutional Fund

FGV -Fundação Getúlio Vargas - Getúlio Vargas Foundation

IBGE -Instituto Brasileiro de Geografia e Estatística - Brazilian Institute of Geography and Statistics

IGP-M-Índice Geral de Preços-Mercado - General Price Index

INCC-Índice Nacional da Construção Civil - National Construction Costs Index

IPCA -Índice de Preços ao Consumidor - Consumer Price Index

LH-Letras Hipotecárias – CDs dedicated to real estate, anchored in real estate mortgages

LI-Letras de Crédito Imobiliário – Real Estate Securities - Bank CDs, which funds are real estate finance dedicated

MW -Salário Mínimo – Brazilian Legal Minimum Wage

PNH-Plano Nacional de Habitação - Federal programme to promote the production and acquisition of houses

RDB -Recibo de Depósito bancário - Bank Receipt of Deposit (Bank CD)

SBPE -Sistema Brasileiro de Poupança e Empréstimos - Brazilian Savings and Loans System

SFH-Sistema Financeiro da Habitação – Brazilian Housing Finance System

SFI-Sistema de Financiamento Imobiliário – Brazilian Real Estate Financing System

TR-Taxa Referencial - Referential (basic) interest rate utilized on the Brazilian real estate financing system

USD -Dólares americanos – U.S. Dollars

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PART I. THE CURRENT HOUSING FINANCE SYSTEM: STRUCTURE

INTRODUCTION

The real estate credit system used in Brazil for residential housing (known as the Housing Finance System-SFH), was created in 1964. Previously, there was no organized system for housing financing in Brazil. Its structure has changed since then (1964-2009), on matters of formal guarantees, limits and definition of the adjustment of payments. However, the core of the system has not changed and there is no perception of movement, whether from the State or private agents, so that sensitive changes occur in its structure. This system, when in conjunction with market fundraising systems, via targeted instruments to raise conservative savings funds in the market, is known as the Brazilian Savings and Loans System - SBPE.

The SFH was complemented over time with topical rules, and a new parallel system, the SFI, was established in 1997, including rules that facilitate foreclosure in the event of default, and the creation of a differentiated structure of fundraising for the funding of the system, constituting mechanisms, which together are called the Real Estate Financing System-SFI. The SFI has served more like a supplement of the SFH than a system that could replace it in the medium-long term, being used more extensively for commercial real estate, rather than residential.

The SFH is established on a predominant action of the State, and it is acknowledged that the SFI can operate as a fully private system, similar to what is practiced in the USA. The SFH resources, although private, are administered by the State, either by direct and indirect action, this being represented by the systemic function of the Caixa Econômica Federal (CEF).

The transaction of SFI funds occurs fully into the environment of the agents of the private financial system, representing only the normative function undertaken by the Central Bank (BCB) and the Securities Commission (CVM). CEF is a commercial bank, controlled by the State, which has ancillary functions as the managing agent of certain functions in the SFH.

The Central Bank is the manager of Treasury funds, the disciplinary agent and controller of the currency and the manager of all the Brazilian financial system. The Securities Commission has the control and regulative functions on the Brazilian capital market, and has the authority of issuing and circulation of private securities in the market.

SFH and SFI have different funding structures, with different means for adjusting the payments of housing financing in the long term. While the legislation created a "specific currency" to the SFH, SFI operates within the parameters of the financial and capital markets. This condition should be the premise for the SFI to find easier funding, but the weakness of the secondary market for investment vehicles designed in it makes the system not to achieve proper relevance. Therefore, the market focused mainly on the SFH.

The SFH funds its operation in private savings resources in Cadernetas de Poupança (CP), which are savings private accounts, used by medium income families to preserve their savings and are fully Federal Government

guaranteed. The system, for low income housing, uses funds deposited monthly in private accounts of all employees by the employers, constituting the Fundo de Garantia por Tempo de Serviço (FGTS), designated to be a retirement fund under government administration.

Generally, the construction finance is done by using the CP funds, the mortgages for medium and high income uses the CP resources, and the FGTS funds have the destination of low income mortgage funding.

The SFI is funded trough investment instruments that securitize mortgages, called Certificados de Recebíveis Imobiliários (CRI). In this system, which is very inexpressive, when compared to SFH, for construction, the banks use regular funds to finance and the proceedings of CRIs placement with investors (pension funds in majority) to finance the acquisition of the homes.

SISTEMA FINANCEIRO DA HABITAÇÃO-SFH FUNDING

Fundraising Instruments

In order to raise funds in the SFH system, its operators, which are banks with real estate finance and credit portfolio, mostly private, rely on two sources of conservative savings funds- i). deposits in savings accounts (Cadernetas de Poupança - CP), and ii). Letras de Crédito Imobiliário (LI), being savings, by far, the most important instrument for fundraising. The Brazilian banking system favors the concept of multiple banks that operate portfolios, for which specific licenses are obtained from the Central Bank: commercial banking, investment banking and housing finance banking. Thus, for a bank to integrate the SFH, it must obtain specific authorization to operate its portfolio of housing finance banking and authorization that extends from the uptake in CP or LI to financing the production and purchase of residential and commercial properties using the resources raised. Among the biggest players in Brazil SFH are banks controlled by the Federal Government: Caixa Econômica Federal, Banco do Brasil e Nossa Caixa. There are also several private banks operating in the SFH.

Savings Accounts (Cadernetas de poupança - CP)

The savings accounts (CP) are savings instruments with free deposit and withdrawal, unlimited scope and bearing an important incentive in the market - their income is exempt from income tax. CP represents the easier access to financial markets and are used by the majority of the population able to make savings, especially the middle-income strata. The balances of the CP are guaranteed by the Federal Government, without limitation. The CP pay interests that are ruled by law. Therefore, there is no competitiveness to be pursued by banks to increase their fundraising level. The interest rate paid for CP savers has always been 0.5% month, plus an "index" that represents the inflation, which means that CP pays an effective 0.5% month of interest.

Real Estate Securities (Letras de Crédito Imobiliário -LI)

The LI are debt securities with fixed-term, monthly income and free depreciation system issued by financial institutions and intended to capture savings as a regular CD. These are not instruments used in large amounts, because they collide with the CP market, which has a simpler structure of operation. LI is used to raise funds for qualified investors who, according to the instructions of the Brazilian capital market, have a significant portfolio of investments in the market for which investment products are designed, being the minimum unit value 300,000 BRL (USD 166.667)[1] . LIs can be used for fundraising by banks that do not have a widespread network of agencies, because they can pay free interest,

1 Exchange rate:1.00 BRL (Brazilian Real) – 1.80 USD (U.S. dollars)

allowing reaching qualified investors, with greater savings potential. However, given the knowledge that the market already have of the CP and that the housing finance business is operated primarily by major Brazilian banks, which holds a high penetration branch network, the LIs are used moderately and do not represent a significant vector of funding for the system.

TABLE 1**: SAVINGS ACCOUNTS (CP) AND LETRAS DE CRÉDITO IMOBILIÁRIO (LI)**

Year	Saving Volume in CP	LI Issuing	CP in Total Fund Raising
	BRL Million	BRL Million	%
1996	59,419	6,131	90.6%
1997	80,250	7,666	91.3%
1998	88,538	8,627	91.1%
1999	90,438	7,126	92.7%
2000	91,430	8,131	91.8%
2001	97,146,	9,967	90.7%
2002	112,423	10,005	91.8%
2003	115,258	12,671	90.1%
2004	126,853	12,320	91.1%
2005	135,412	10,911	92.5%
2006	150,413	9,585	94.0%
2007	187,827	8,851	95.5%
2008	215,400	9,991	95.6%

Sources: SBPF-SFH, BACEN

The Application of Sistema Financeiro da Habitação-SFH Resources

The housing financing banks in Brazil finance the construction and acquisition of houses using a particular source of funding of the CP associated with the revenue stream of returning acquisition funds that are already in repayment. The return flow of housing finance represents a stable contribution to the funding of the system, but deferred in the end. Any procedure with the securitization of mortgages would advance this contribution, which would use resources from outside the SBPE, gaining volume in the medium term. Through securitization of mortgages, one can access domestic savings in pension funds, for example, as is the strategy of market systems to spread throughout more developed economies. Working, however, with the mortgages internalized in the portfolio of banks, the housing finance system in Brazil operates with zero leverage.

Funding for purchase of the residence follows the construction and does not need to be done within the same agent. The rules of the system allow some banks to specialize in financing the construction and others to deal with mortgages only. What is perceived as the main intention in this industry is to finance mortgages, not the construction, being noted that private banks do finance production without desire, but only as a mechanism for generating mortgages.

The regulatory mechanisms of the SFH-system commands to collect, from the values raised:

- to the Central Bank a compulsory 20 percent. Central Bank pays to the banks the same interest rate that is paid to the savings accounts, meaning that, for the banks, that part has is a zero profit operation;

- 65 percent has to be directed to housing finance. From this part, the application of 52 percent is normalized by SFH for low and middle income housing (interests, loan to value and length) being the remaining 13 percent free (unregulated as interests, loan to value and length) to be used either in production or acquisition, for medium or high income;

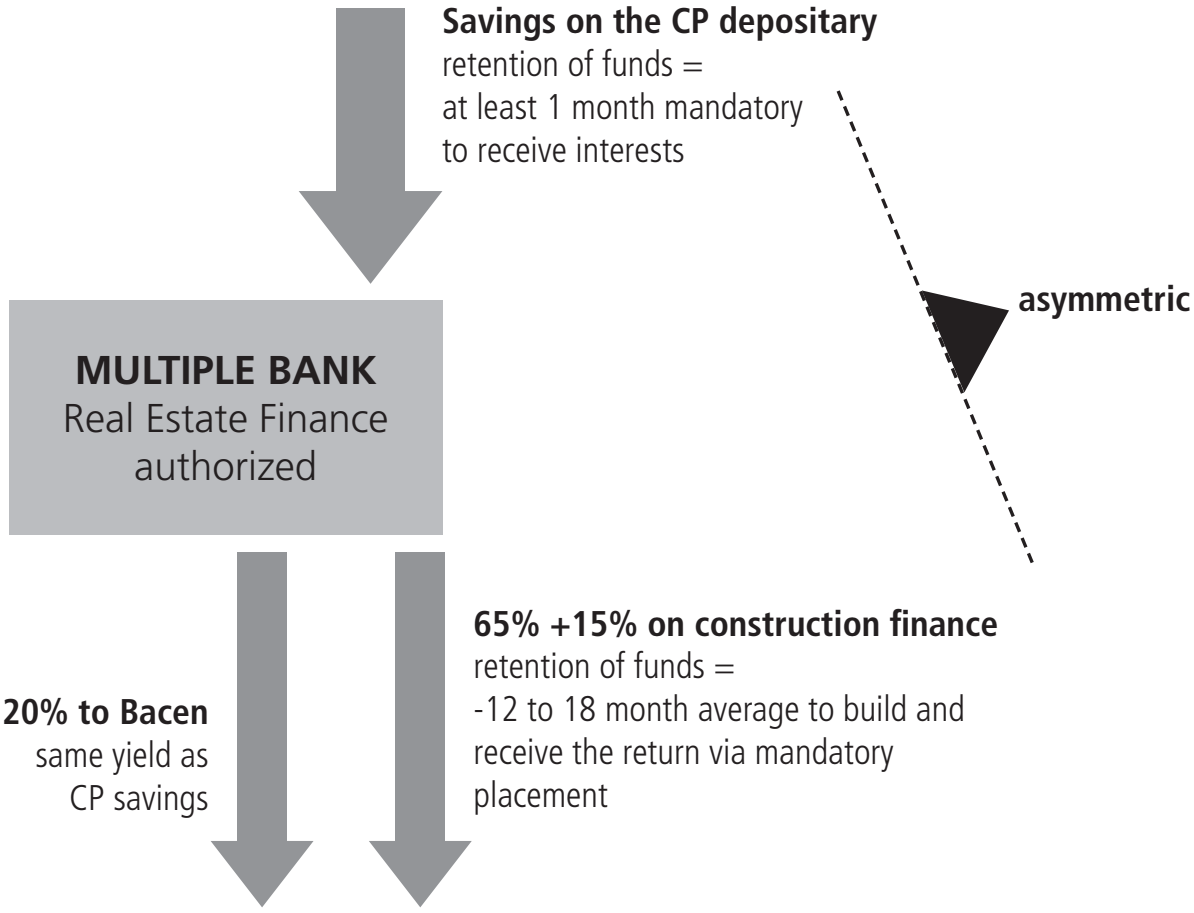
- that leaves the remaining 15 percent of funding free to apply the operating banks, but targeted at companies in the real estate, credit derivatives or investment derivatives in the sector, or even in government securities. It is noteworthy that, due to high interest rates practiced in Brazil, in the remuneration of public bonds (rate), the arbitration between the yields paid to CP against income from bonds would tend to cause a passive implementation of this part of the raised funds.

Figure1 shows the flow of funds for construction finance on the real estate finance of the Brazilian private banks.

In Figure 1 it is noted the movements in financing the construction, highlighting the temporal asymmetry between the two flows of resources. The CP depositary is free to redeem each month and the construction finance, where the funds are allocated, has a higher length of liquidity cycle, considering that the construction finance is paid with the issuing and placing of mortgages.

As for the imbalance that might occur there is no mechanism to hedge the bank and should be supported with other resources from the bank cash flow, which can cause asymmetry of yield, generating operating losses. In the case of funding with the issuing of LI, even though this is an insignificant stratum of the market that banks tend to ignore, the asymmetry could be lower, given the possibility of issuing LI in conjunction with construction financing.

FIGURE1: **FLOW OF FUNDS FOR CONSTRUCTION FINANCE ON THE REAL ESTATE FINANCE OF THE BRAZILIAN PRIVATE BANKS**



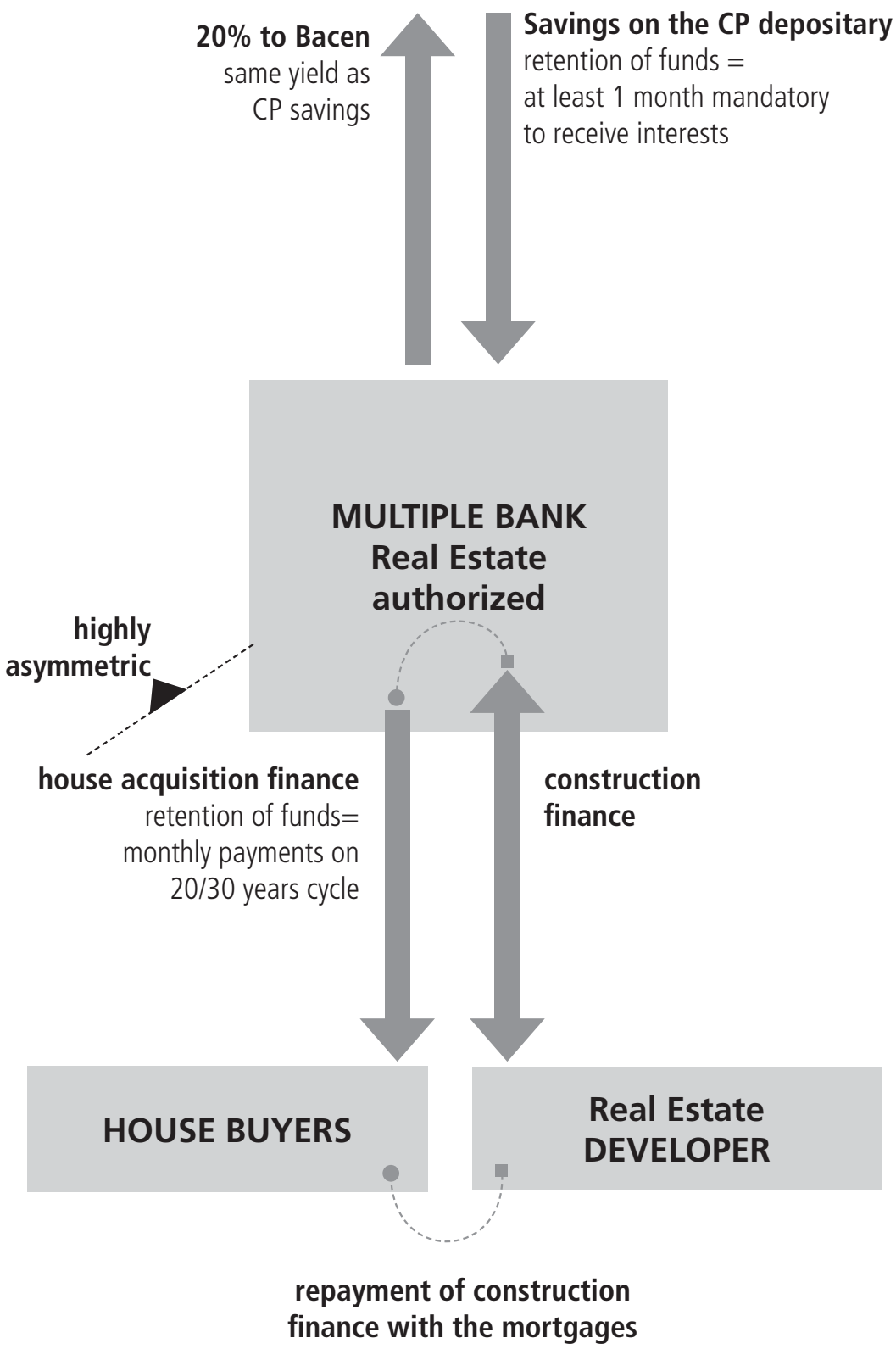
Source: Author

A Multiple Bank showed in this Figure 1 regards the banks structure in Brazil. The Central Bank gives particular operations authorization for the different banks operations as commercial banking, investment banking, real estate finance, leasing, international trade, etc. A multiple bank is a bank that has multiple activities, in this Figure including real estate.

In Figure 2, it is shown the full construction financing circuit, with the creation of mortgages, highlighting the pronounced temporal asymmetry that can be hedged via securitization instruments or mortgages transfers to the system administered by CEF. It should be noted, however, that mortgages securitization instruments in Brazil are used scarcely due to almost non-existent secondary market liquidity.

The contracts of construction finance are assigned at interest rates that vary between 11% and 15% year, plus the inflation adjustment. The funds are liberated monthly, according to the completion of the construction phases, should be paid in full (principal and interests) at the end of the construction, what is made by the placement of the mortgages generated trough the acquisition finance. The guaranties required for the construction finance are the land and construction as collateral.

FIGURE 2**: FLOW OF FUNDS FOR MORTGAGE GENERATION ON THE REAL ESTATE FINANCE OF THE BRAZILIAN PRIVATE BANKS**



Source: João da Rocha Lima Jr. (2010)

GUARANTEE FUND FOR LENGTH OF SERVICE-FGTS (RETIREMENT INSTITUTIONAL FUND)

CEF has, almost alone in the market, the role of housing finance for the classes of lower middle to low income, and compete with the private financing for middle-income classes. For the funding for low-income and urban infrastructure, CEF can use the resources managed by itself in connection with the payments to the Guarantee Fund for Length of Service – Fundo de Garantia por Tempo de Serviço (FGTS).

The FGTS was created at the origin of the SFH, as an instrument of employment policy, but linked to the housing finance system, involving the urban infrastructure and housing.

Employers in the whole country should collect 8 percent of monthly salary paid to each employee to a private employee's account with the FGTS. This fund builds, then, a compulsory savings for the employee, anchored by his employer and resources of each individual account are blocked until retirement (30 years) and can be accessed in exceptional circumstances, for example, for housing acquisition, or early retirement due to health conditions. The employee does not collect any amount from his monthly wage to his FGTS account.

The FGTS is administered by CEF and can provide resources, as a second-tier bank, in the purchase of mortgages generated by first-tier banks in the financing of housing whose income levels the council fund manager regularly sets. The Federal Government, being the driver of CEF and controller of the board of the fund, ends up directing resources to meet their policies for housing, especially for families with lower incomes.

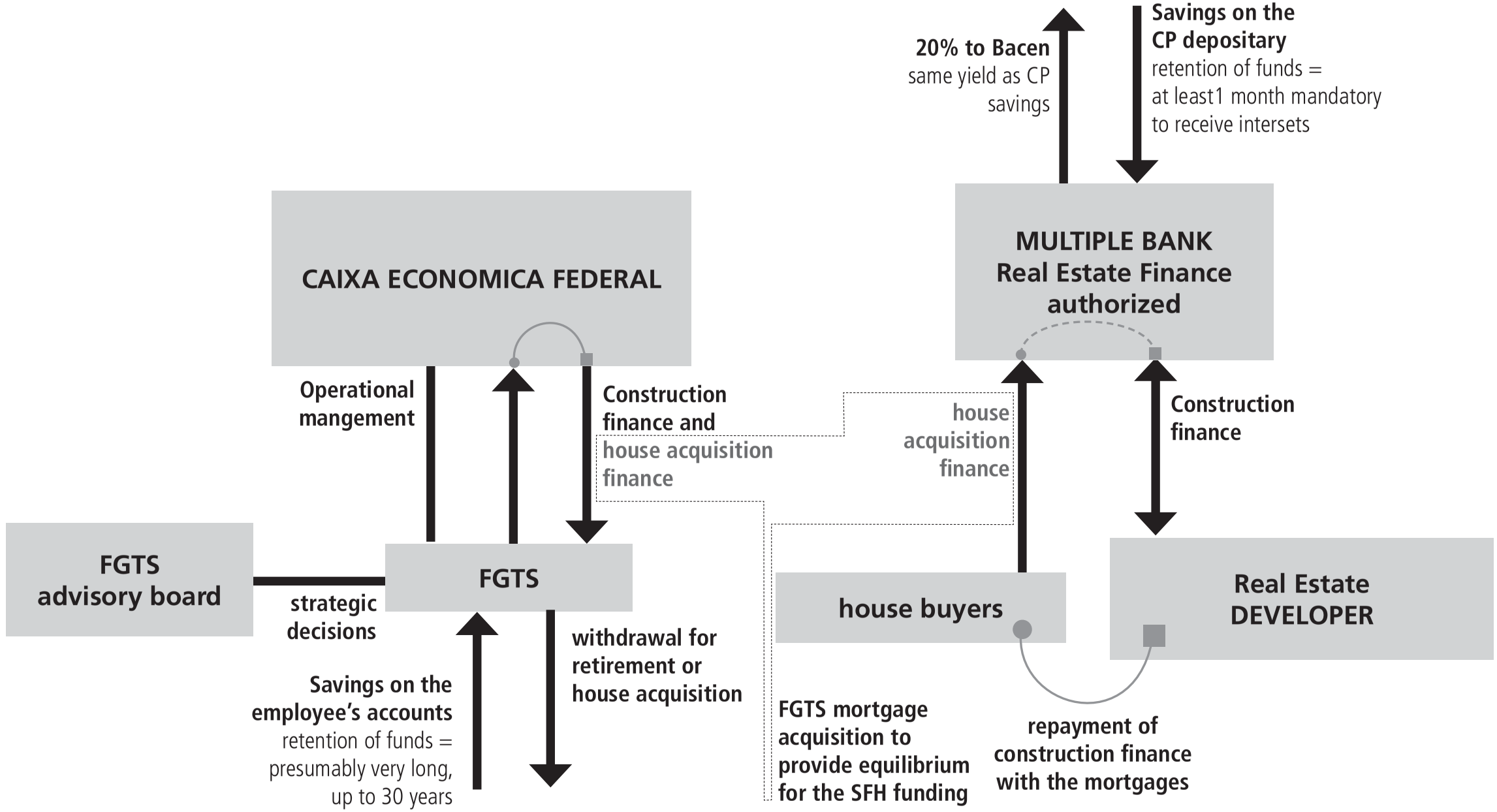
Figure 3 shows the overall funding structure of the SFH in Brazil, at the production and acquisition, noting that the system can only maintain a certain degree of balance when one takes into account the reallocation of resources collected by FGTS to tackle falls in savings balances, whose resources are tied up in buildings or mortgages.

LEVERAGE IN THE SISTEMA FINANCEIRO DA HABITAÇÃO-SFH

As can be seen, the SFH system is locked and has no leverage, in the sense that the returns of the payment of house financing restore funding to run the system. In housing finance systems found in most advanced economies, mortgages are the subject of securitization, which advances receivables to re-fit the system of financing the construction and purchase of houses with the intrinsic benefits and risks of this routine.

In Brazil, the SFH funds the production system providing a moderate rate of growth, to maintain a structure of the organic stream. This is done with compulsory collection of resources in the voluntary fund and CP, which tends to increase following virtuous movements of the economy, but is stabilized in its potential, or even goes in critical cycles of decline of the economy. The SFH of course, recycles their finances with the flow of loan payments internalized in mortgages, but in its natural speed of cash flow origination (20 to 30 years), the flow can be directly impacted by defaults.

FIGURE 3: **FUNDING SYSTEM OF SFHAND FGTS FUNDS APPLICATIONS**



Source: João da Rocha Lima Jr. (2010)

SISTEMA FINANCEIRO IMOBILIÁRIO-SFI FUNDING

In 1997, there was an attempt to reverse the SFH to a system relying solely on capital market mechanisms, having been established in Brazil the SFI (Real Estate Financial System). The most important attribute of the system is that the SFI unlocks legal problems of foreclosures in Brazil, which is slow and unwieldy, because foreclosures are done within the judiciary. The SFI is designed to operate as liens on property, making it easier to foreclose on the defaults, thereby serving to transfer lower risk instruments for securitization of mortgages generated based on the rules of SFI.

Funding for Production

The funding for production is not ruled by means of its own instruments, i.e. mortgage companies and securitization companies. Together with the commercial banks in their lending to companies, comprises all the financial agents, which will use the funding market, using the instruments utilized in the regular funding of business (e.g. debentures) and banks (certificates of deposit, for example), and the financing to build granted at market interest rate. It should be noted that in SFH, in view of the fund raising cost (income of CP), 52 percent of applications are mandatory for financing housing for low-income families. Mortgage companies, authorized by the Central Bank to operate only in real estate lending by the SFI, can raise funds from qualified investors through Letras Hipotecárias (LH), which are mortgage securitization instruments.

Housing Acquisition Mechanism

Funding for acquisition of housing might be done directly by the entrepreneur, without mortgage, but with the concept of fiduciary disaffection. The flow of receivables (installments) derived from this contract is sold to the securitization companies, asset against which these companies may issue Certificates of Real Estate Receivables (CRI), which in turn work like any instrument of mortgage securitization in the international market (CMO, for example). It is intended that the CRI have a market with institutional investors, but, in view of an almost non-existent secondary market, such investments must remain within the portfolio of investors by the time of funding (20 to 30 years), which restricts its placement.

For enterprises for higher income classes, whose funding may be made at shorter intervals (5 to 7 years), the CRI has a greater chance of use, but this represents a small market segment. In another sense, this legislation which authorizes a certain amount of CRI that has been issued, is bound to flow from rentals (usually 5 to 7 years) in commercial investment in the model build-to-suit. There are CRIs issued to securitize future flow of locations in shopping centers, but these instruments are very specific and niche markets. Since they are being used in very specific strata markets (high income, build to suit and shopping centers), the investment vehicles that would serve to leverage the CRI did not acquire the necessary strength, so that the large residential market continues to operate without leverage, anchored especially in the SFH.

THE CURRENCY OF THE SYSTEM

Long-term debt in Brazil has been structured with the support of virtual currencies. The high inflation periods suffered by the Brazilian economy, which is still mindful of the financial and capital market and led to nominal currency swaps in the past until the sedimentation of the Real in 1994, has not added confidence to investments in long-term financial instruments, which balances are not adjusted for any inflation-tied index. Since its inception until 1991, SFH had worked with its own currencies (UPC, OTN, ORTN and BTN), all of them with adjustments arbitrated by the Federal Government, tied with inflation rates but differentiating from there, with the creation of a short-term indexing currency, linked with the interest offered for fixed-income from financial markets.

The systems structured with virtual currencies along this period (1964-now) converts the real applications (savings) or the real debts (finance) in a certain virtual currency and applies interests in the balances considering the virtual currency. Each payment or investment redeem is converted in reais at the transaction moment. All the transactions are based in reais, but all the accounting is based on the virtual currency. The conversion rate of the virtual currency and the real is regularly (monthly or even daily in certain critical moments in the past) defined by the Government, based on a certain inflation index, or an inflation based index how it is today.

The Experience of the Fundo de Compensação de Variações Salariais-FCVS on the Sistema Financeiro da Habitação-SFH

SFH had always suffered from the issue of inflation adjustment, especially in the 1964-1994 cycle, in which it seemed to crumble completely when an insurance system for inflationary adjustments was created, through the Salary Variations Compensation Fund (FCVS) whose risk was supported by the Federal Government. It was always understood that the primary sources of funding (CP and FGTS) should first be protected from the losses caused by inflation and then remunerated (3 percent per year in the FGTS and 0.5 percent per month on CP). Therefore, funding for the acquisition of residences should undergo adjustment of the balance through the same rates applied to sources of funding, to impose the required symmetry of the SFH system.

It was evident that in times of inflation crisis, the wages of borrowers of housing loans did not keep with the curves of monthly inflation, which boosted the default. Federal government then decided to counter the symmetry, by adjusting the debit balances of contracts through the same inflation rates that adjusted the sources of funding (CP and FGTS), monthly, but not the installments and the payments of buyers that was adjusted through indexes that reflected the adjustments of salaries, every six months.

A fund, the FCVS, was created, and its resources should cover the debit balances outstanding funding agreements, recorded at the end of the payment due to the lack of symmetry of inflation adjustment. Buyers had to contribute to the formation of FCVS, following a set fee applied on the value of the monthly payment. This insurance plan was ill defined and calibrated, resulting in a debt of the Federal Government, which has been settled gradually, but that was in default for a few years and which amount exceeded USD 100,000 million.

The SFH had even been through a period of inaction, caused by this default of the FCVS, with the banks that held the mortgages with outstanding balances and any benefits already paid. Banks had an uneven balance between its obligations to the CP and the perceived benefits of the financing contracts, whose stability was only recomposed with the release of claims against accounting FCVS,

but that does not reflect cash flow, if there were any strong pressure of looting in CP, or the obligations to the FGTS. This cycle ended in the transition to the twenty-first century, with the assumption by the Federal Government of a program for settlement of claims against FCVS and enhancing the SFH, the CP and the FGTS.

The Recasting of the Sistema Financeiro da Habitação-SFH, with the Introduction of Taxa Referencial-TR

In 1991 which was a period of high inflation in Brazil, where economic plans succeeded often by looking at the change of currency, it had already withdrawn the correction for inflation of two action lines of the SFH (funding and debt financing). It introduced the concept of the TR (a basic rate defined specially for the system – fund-raising and lending are TR referenced), which brings closer to the financial market system, in monthly regimen.

This concept is sustainable for the uptake in CP, but maintains the same instability previously found with respect to the balance between the setting of wages and the provision of funding for the purchase of houses. Through the TR, the most new currency of the SFH was created, based on resource revenues in time deposits (bank certificates of deposit CBD and bank receipt of deposit RDB) offered by commercial banks, and no longer in inflation rates.

The TR is calculated daily by the Brazilian Central Bank, is valid for a month and is based on the average of a basket of returns offered by CDB and RDB market, applied a reducer (deflator), which seeks to deduct the inflationary component and the differential taxation of tax income from a financial investment in those instruments and the application in CP.

As this virtual currency (TR index) is selected in short-term applications, the long-term debt and investments of SFH end up functioning as a chain of short-term applications and debt, which in the macroeconomic sense means an asymmetry, because it perpetuates the short term, that should move following higher interest rates than those attributed to long-term and conservative applications, as are the CP for savers and as is the mortgage for banks.

The non-significance of TR with respect to inflation is evident in Figure 4, showing that the TR in the long run, as a marker of savings and conservative cycle of funding for housing, has been losing its reference against inflation since 2001. In this Figure 4, GPI – gross prices index is the IGP M (general prices index), CPI – consumer prices index is the IPCA (consumer prices index) and the CCI – construction costs index is the INCC(national construction costs index).

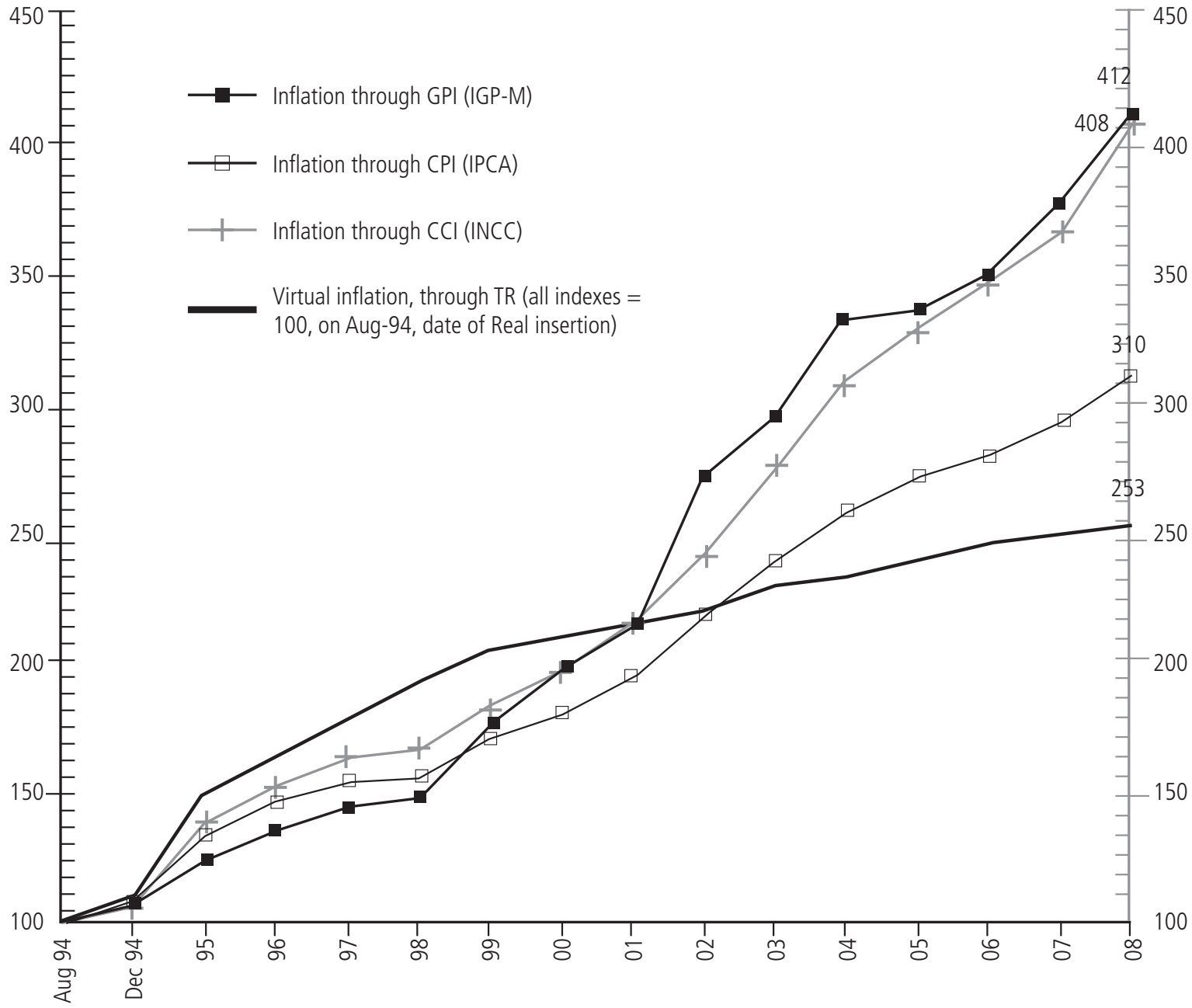
Table 2: shows the TR variation and the CPI (IPCA) variation in the last years.

	%	%
	Per year	Per year
1996	9.6%	22%
1997	9.8%	9.6%
1998	7.8%	5.2%
1999	5.7%	1.7%
2000	2.1%	8.9%
2001	2.3%	6.0%
2002	2.8%	7.7%
2003	4.6%	12.5%
2004	1.8%	9.3%
2005	2.8%	7.6%
2006	2.0%	5.7%
2007	1.4%	3.1%
2008	1.6	4.5%

Sources : SBPE, SFH/BACEN,IBGE

Figure 4 shows the discrepancy between the inflation indexes and the "virtual inflation" that supposes to be reflected in the TR definitions made by the Government.

FIGURE 4: **INFLATION INDEXES AND TR SIGNIFICANCE AGAINST INFLATION**



Sources: IPCA (IBGE-Brazil); IGP-M and INCC (FGV-Brazil) TR and Exchange Rate (Bacen)

Figure 4 shows the evolution of main inflation indices used in Brazil linked with the business of real estate, in comparison with the variation of the TR:

- IGP-M = General Price Index FGV Fundação Getúlio Vargas. It is the index mainly used to reflect the loss of purchasing power of the Real within the environment of the Brazilian economy. The IGP-M is measured monthly and associates movements of wholesale prices (60 percent) variation in the cost of household budgets (30 percent) and construction costs (10 percent).
- IPCA = Consumer Price Index (expanded concept) Brazilian Institute of Geography and Statistics-IBGE. The IPCA is measured monthly and reflects the movements of the cost items that make up the household budget, (from household monthly income from 1 up to 40 minimum wages - MW)[2] in the proportions of distribution of national income by families and by region. The IPCA is used by the Central Bank as controller of the inflation target in the conduct of monetary policy.

2 MW = 465.00 BRL (USD 258.00) from May, 2009 to May, 2010.

- INCC = National Index of Construction Costs FGV is the monthly index, national average, which seeks to reflect the evolution of costs in the construction industry. The INCC has a good grip on the movement of production costs for households, so that to maintain stable margin result, entrepreneurs tend to use it in the setting of prices offered and tuning of the payments of financed sales price of houses.

Whereas interest payments to CP of 6.17 percent per year and deflating the currency, the 15 year horizon depicted in Figure 4, the balances of savings accumulated by the IPCA index still presents an effective rate of 4.23 percent per year already counted after income tax for the saver, very impressive, considering international investment standards.

A funding by the price system, with the interest of 12.00 percent per year. + TR have cost 13.26 percent per year + IPCA due to the mismatch of TR in 2001, a period of higher incidence of interest and more moderate repayment flow. The good thing about making this adjustment by the TR is the leverage through debt securitization of mortgages, as the currency system does not conflict with the interest rates prevailing on the financial market.

Still, the market although able to leverage by its own means, hasn't done that, indicating that banks tend to internalize the mortgages, which are placed at advantageous rates against the uptake in CP and at the cost of funds from FGTS, making a hedge of funds obtained from savings with a very comfortable spread. Funding for production is provided at interest rates between 10 percent and 12 percent per year + TR against the funding cost of 6.17 percent per year + TR in CP and 3.0 percent per year + TR + spread (1 percent to 2 percent per year) in FGTS. The acquisition financing is offered at rates between 8 percent and 12 percent per year + TR, when anchored on the resources of CP and between 6 percent and 12 percent per year + TR when anchored in the FGTS.

The Sistema Financeiro Imobiliário- SFI Currency

SFI financing for housing acquisition tends to be indexed by inflation rates with monthly application, both IPCA as IGP-M, which facilitates the assignment of the CRI, which is the result of the securitization of the flow of receivables from the financing of residential properties acquisition. There is not, as in the SFH, the obligation of applying the TR, but is allowed to use this indexer.

On the conceptualization of the SFI, there was concern and expectation that conservative foreign funds, with expertise in the application in credit derivatives, migrate to the real estate market, which would increase the potential for funding at a more moderate cost than the investment resources of the local market, which tend to be more speculative, even because of the provision of basic interest rate in very high levels.

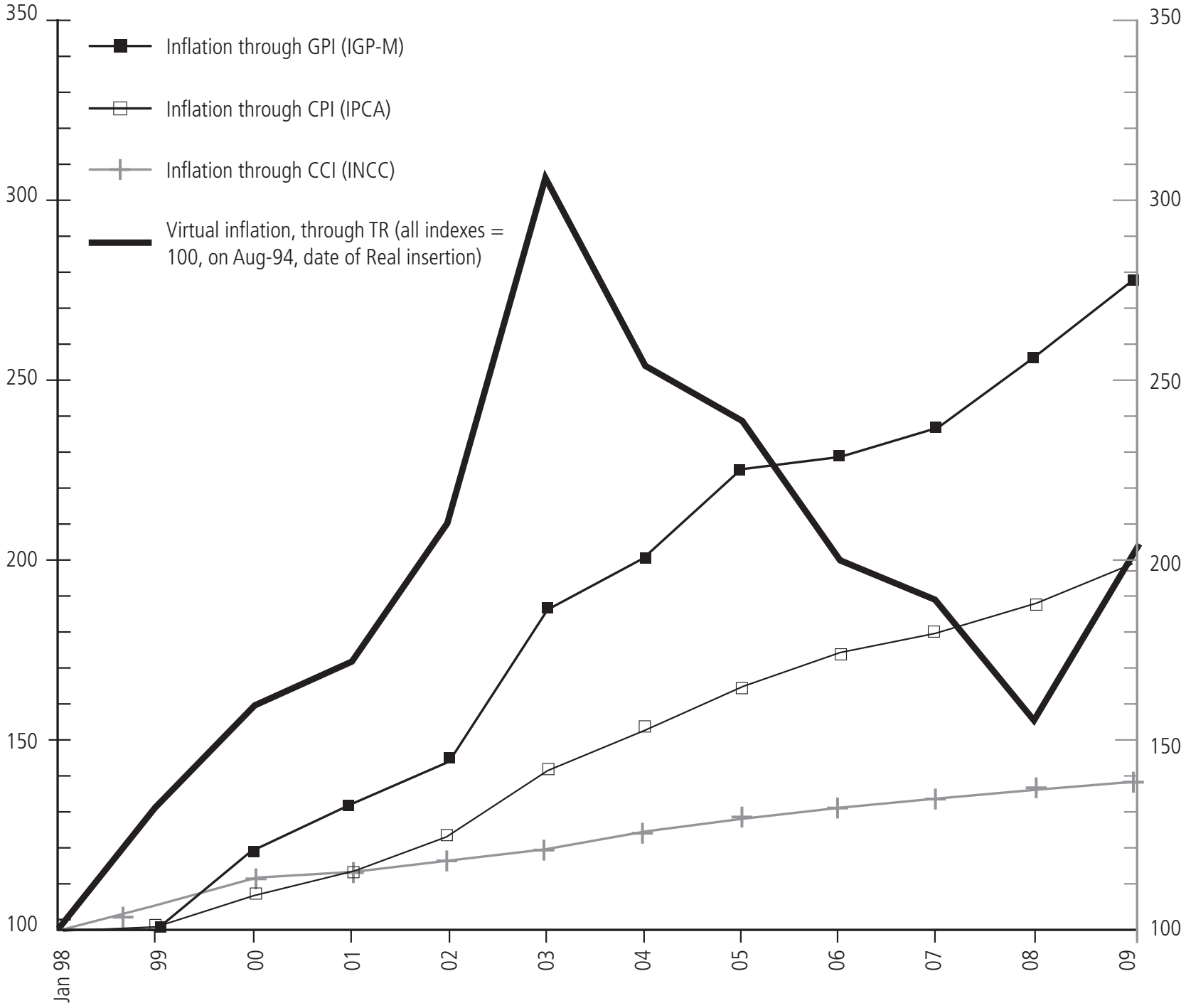
To verify this hypothesis, with no risk of open exchange to investors in foreign currency, there would be the need to count on a chain of transactions in foreign currency, since the funding for acquisition of housing up to the generation of CRI securitization. However, Brazilian law only allows the pricing of housing finance and emissions of CRI, to be made in national currency (Real) with adjustments made with the use of TR or inflation rates, like IPCA and IGP-M. This setting has permanently inhibited and inhibits the entry of conservative investment resources for credit funding, unless exchange hedge derivatives against inflation over the very long term are made possible, which is not in sight.

Figure 5 shows, since 1998 (starting year of full operation of SFI) until the end of 2008, the breakdown movements of the exchange rate of USD against the Brazilian Real (BRL), which supports the argument that it is not reasonable to expect the inflow of conservative resources in foreign currency into this market.

The foreign exchange market in Brazil is free, so that the foreign currency is quoted as a commodity, without relying on your referral purchase power parity, which causes movement of the exchange rate linked with the supply and demand of USD and other speculative variables, not in mutual inflationary movements between the economies issuing the currency.

As an example of unbundling of rates, a foreign investment in the cycle depicted in Figure 5, made in national currency, with interest rate: i. 12.00 percent per year + TR would have grown 3.12 percent per year in USD; ii. 12.00 percent per year + IPCA would have grown 5.88 percent per year in USD; iii. 12.00 percent per year + IGP-M would have grown 9.68 percent per year in USD.

FIGURE 5: **INFLATION INDEXES, TR AND EXCHANGE RATE USD FOR 1 BRL**



Sources: IPCA (IBGE-Brazil); IGP-M and INCC (FGV-Brazil) TR and Exchange Rate (Bacen)

Note that the Brazilian trade balance and the high volume of investments made by foreign investors in Brazil (financial instruments in BRL at very high rates, stocks and new companies) produced a depreciation of the USD against the BRL in the 2003-2008 cycle.

PART II. LOW INCOME HOUSING

INTRODUCTION

The residential properties that the market denominates "economic" or "popular", designed for the strata of the lower middle and low-income families in Brazil, sums up a deficit estimated by the Federal Government of around 7.2 million units. It should be noted that this estimate is the result of a methodological adjustment to the measurement of the housing deficit. The João Pinheiro Foundation holds the most respected studies in Brazil on issues related to the housing deficit. While revising their studies, building estimates for 2007, based on census data from Brazil (Brazilian Institute of Geography and Statistics - Federal Government) they set the deficit at 6.4 million units by changing the method of calculation, discounting from the deficit secondary cohabiting families (families housed under one roof), computed before on the calculation of the Brazilian housing deficit.

The estimated deficit for 2007 is composed of 1.5 million poor households, 2.5 million family in cohabitation, 2.0 million houses with excessive rent and 0.4 million houses in excessive density (over occupied regarding its size). The real estate market traditionally offers products only for the higher segment of the public, in volume that does not meet the vegetative growth demand, so the deficit has grown significantly and it focuses wantonly in big metropolitan cities and their surroundings, causing growth of the occupations of land for sub-housing in slums. Examples of some of the major Brazilian cities like Sao Paulo, Rio de Janeiro and Recife are noticeable.

Government Programmes (Federal, State and Municipal) to meet the lower income levels, whose housing products are not viable from a business point of view, requiring subsidized costs, use resources from FGTS. These funds are applied at the lower interest rates of the system and generate impressive default rates, which are not officially released, but end up being known in part. This constitutes a passive cycle, which has been rolled and it only does not cause serious impacts on the economy of the FGTS, because the fund has a curve evolution of organic growing, given that the wages in Brazil is growing.

With the economy growing, even at moderate rates, in comparison with developing countries, large numbers of jobs are generated; causing the cash flow is positive FGTS. However, no information is available to support the claim that the economic condition of FGTS is healthy and it is necessary to measure the degree of the present default and the corresponding value of the collateral of mortgage, plus the deficits caused by funding infrastructure granted to state bodies and unpaid.

In order to organize the housing programs, federal government stratifies the low-income classes, with monthly household income ranges of [i. up to 3 MW], [ii. 3 MW to 6 MW], [iii 6 MW to 10 MW]. MW stands for minimum wage, adjusted by means of specific legislation, usually near the IPCA inflation in May of each year. From May 2009 until April 2010 1 MW equals 465.00 BRL (USD 258.00), so the intervals are equivalent to: [i. up to 775 USD], [ii. from 775 to 1,550 USD], [iii. in 1,550 to USD 2,583].

Studies developed by the Real Estate Research Group at the Polytechnic School of USP show that it is not possible to validate new developments in the low income range [i] using the current market parameters, costs, interest, taxes, even considering compressed return margins. The Brazilian government has been busy building houses for this market segment, which has appeared ineffective, in view of the bureaucracy that dominates the procedures needed to develop real estate projects through entities operating into the locks of the state.

There is a number of entrepreneurs in Brazil that produce housing for the [iii] segment, with some modest inserts in the [ii] range. It is clear that the housing deficit is concentrated more "bottom up" and in view of the action in business ventures for low-income focus "top down" and do not penetrate the full [i] range, we see no means to meet the deficit, or even stop their growth, giving coverage to the organic growth of demand.

In this sense, this is a theme of urban policy, housing and income distribution, traditionally treated lightly in Brazil, and with no guidelines for medium and long term. The actions have been topical and uneven; between what is needed in the three hierarchies of pubic power (Federal, State and Municipal) and what each government included in its action plans.

Recently (April-June 2009) the Federal Government enacted a legislation, already approved by Congress and signed into law (Law 11.977/09), setting up a housing plan, with no target date, but with commitment of resources advertised as able to meet the production of 1 million houses, being 400,000 for the interval [i], 400,000 for the [ii] and 200,000 for the [iii].

THE FEDERAL GOVERNMENT SUPPORT PROGRAM

The Federal program to promote the production and acquisition of housing for low-income (PFH) includes a goal of building 1.0 million residences in the country, to a deficit estimated by the Federal Government of 6.4 million. The goal is timeless, in the sense that there is no deadline to achieve it, but linked to the resources provided by the PFH, which ends when the allocated resources are exhausted.

Using the IBGE indicators, one can conclude that the demand for new housing in Brazil is around 580,000 per year in income range of up to 3 MW and 83,000 per year in the range of 3 MW to 10 MW, only to cover expected population growth. Thus, the PFH is not able to cover the vegetative growth of a single year in the lower income segment, having no practical effect in reducing the recorded deficit, which will actually grow in the absence of complementary actions in housing provision. In the segment [3 MW to 10 MW] its contribution to reducing the deficit is a little more evident, although the incentive to purchase houses in this range is much more modest in the PFH.

Several Brazilian States and some municipalities build housing for low income through Urban Development companies or Residential Construction companies, mainly using funding resources directed from FGTS. The PFH is complementary to this action, seeking to encourage entrepreneurs to operate in this market segment, which they had never done before..

If the PFH program is shy in its scale, the promotion through direct subsidies on the payment of the price of the houses, made available to purchasers is more effective than the alternative of tax waivers, which has been used in Brazil as policy development in different segments of economy. The PFH establishes that part of the price is paid directly by the Government (see Table 4).

Especially at this critical juncture in the global economy of which Brazil is not isolated and suffering significant impacts on employment and income, the Federal Government has been practicing tax waiver policy on the automotive and appliances, realizing that the reduced tax serves to improve the margins of industries, not fully reflecting the fall in prices. In the past, Brazil, at different times, sought to encourage construction of housing for low-income offering tax benefits on the sale of raw materials for construction, procedures that would never have produced striking effects, representing palliative movements, lightly reflecting on marginal issues in the sector, as the reform of housing and self-construction.

The development program that is being implemented also cuts taxes for entrepreneurs, as well as relieving the costs on some construction materials and other marginal costs to buyers, such as insurance and real estate registry. The perception is that: i. the PFH focuses comprehensively on the issue of production costs for low-income housing and ii. the option to promote the acquisition through grants to pay the price ensures efficiency in the transfer of state resources to the market that should benefit from this. What is vague in PFH is the land and infrastructure costs, seen here provided with utilities (electricity, water, sewer, communication), but also the integration of urban developments to be built on the basis of PFH.

Development projects, whose unit price is small, are validated for entrepreneurs when presented in large-scale, able to carry the solutions to the periphery of the large metropolitan centers, where the low-income housing shortage is most aggressive. The cost of the adequacy of land to receive new developments (physical infrastructure), the existence of adequate transportation to work and the insertion of urban equipments (education, health, services and leisure) are factors that will indicate the feasibility of each development. There is no doubt that there are no land, at adequate cost for low-income housing, in the periphery of the large metropolitan areas in Brazil, like São Paulo, Rio de Janeiro, Belo Horizonte and Recife. Therefore, it is possible that the program will spread out the medium and small cities in Brazil, maintaining the actual unsolved situation in the large metropolitan areas.

The price limits for houses into the PFH and the level of subsidies that the PFH offers are enough evidence that these land attributes cannot be considered as cost of the entrepreneur. Thus, in order that PFH does not result in the proliferation of small-scale enterprises in small cities in Brazil, abandoning the whole idea of treating the acute problem of sub-housing in major metropolitan cities, the supply of land should be a contribution of the State for projects, representing an additional indirect subsidy as important as the financial subsidies provided for in PFH.

The land issue, however, is not directly tackled in the PFH, figuring only as incentives to target subsidized resources for municipalities that contribute to the land for the projects directed to the lower income range [up to 3 MW].

Subsidies for Housing Acquisition

The PFH divides economic housing market into three segments for Brazil, for which subsidies will be offered in different concepts, as indicated in tables 1 and 2.

For the PFH funding, a certain amount of resources was allocated, with the provision of subsidies given the goal of building 1.0 million houses. There is an apparent contradiction between the two factors, which leads to the perception that the resources will be depleted before they reach the goal. Studies from the Real Estate Research Group at the Polytechnic School of USP allows us to conclude that, using the construction technologies now applied in Brazil, with their costs, the resources that the Federal Government will make available for achieving the PFH goals will not be sufficient, unless the construction of housing to be concentrated within the country, ignoring the call to the problems of metropolitan areas, which are those with the most acute impact of the housing deficit, which secretes a substantial portion of low-income population in slums.

Since the law that supports the implementation of PFH defines volumes of resources of the Federal Government that will go to grants, only other law may perpetuate the system to solve the problem for low-income housing, as envisaged. Clearly, the PFH does not anchor a system, but rather functions as a stand-alone plan, with a definite end, marked by the consumption of resources allocated.

The relevant subsidies from PFH are summarized in Tables 1 and 2, on which we make the following comments:

i. In the income range [i], which has the largest deficit and which is more complex the validation of private investments, the Federal Government provides a large subsidy for the acquisition. The price of house for families of lower income (up to 3 MW per month) is transformed into 120 monthly payments, in which each installment may not exceed 10% of the monthly income of each family benefiting from the plan, each payment limited to 50 BRL. This amount, at the current value of the MW, accounts for 10% of a monthly income at 1.08 MW.

Simply put, at the family income range of 1 MW to 3 MW, the price of the house is settled in 120 monthly instalments, equivalent to 10% of household income buyer, with the remainder of price being a subsidy given by the PFH, with sinking funds of the Federal Government, administered by CEF.

TABLE 3: **CLASSES OF INCOME AND SUBVENTIONS OF PFH - I**

Monthy Family Income		**Major subvention**	
MW	**USD**		**APR**
upto 3	775	i. residential price= 120 monthy installments each oneequivalent to 10% of RFM ii. with a minimum value of R $50 = USD 23.9	
3	775	i. Mortgage finance in 360 months ii. Price limit considers monthly installment equal to 20% of RFM iii. Subvention on price	5.00% +TR
4	1,033		5.00% +TR
5	1,292		5.00% +TR
6	1,550		6.00% +TR
6to 10	Top = 2,583		8.16% +TR

Sources: CEF and 11.977/09 Law

ii. Also in the income range [i], the operational procedure sets the entrepreneur free form interest and marketing expenses, because the PFH provides that CEF buys and sells houses to families. At this time, the CEF is registering families for the purchase of houses and some constructors are validating their projects. The evidence is that projects only validate on very low cost land, enabling to offer the maximum price to be paid by the CEF (table 2), with the minimum specifications required, leading to a single-family residence around 35 sqm and apartments around 42 sqm.

iii. The highest price accepted by the CEF for apartments in the metropolitan areas, such as São Paulo, the largest deficit in the country, is 52,000 BRL (USD 28,889). Considering the limit of the monthly payment on 10 percent of income for the highest income band, and the interest rate of 5 percent per year, and not considering the cost of insurance and other costs added to the monthly payment, the family could obtain financing from 13,219 BRL (USD 7,344). The implicit subsidy would be 38,781 BRL (USD 21,545).

The production quota for the region of 165,600 households, of the target of 400,000 of PFH for the range [i], thus requiring subsidies from BRL 6.4 billion, (USD 3.56 billion) around 46% of the BRL 14.0 billion (USD 7.78 billion) allocated for the whole country. With land at no cost, no financial cost and with low taxes, the margin of income for the entrepreneur at that price will be between 7 and 8 percent of the price, with a high default risk.

TABLE 4: **CLASSES OF INCOME AND SUBVENTIONS OF PFH - II**

Monthy Family Income		Subvention on price		Market Price Limit	
MW	**USD**	**BRL**	**USD**	**BRL**	**USD**
upto 3	775			52,000	28,889
3	775	23,000	12,778	75,636	42,020
4	1,033	16,000	8,889	86,181	47,878
5	1,292	9,000	5,000	96,726	53,737
6	1,550	2,000	1,111	96,677	53,709
6to 10	Top = 2,583			128,327	71,293

Sources: CEF and 11.977/09 Law

iv. In the range [i], the accepted price limit for housing is BRL 52,000 (USD 28,889) in the city of São Paulo, ranging from BRL 37,000 (USD 25,555) and this limit, depending on the region in Brazil.

v. In the range of monthly income [ii] 3 to 6 MW price is fully financed in interest rates indicated in table 1, that in those currently practiced by CEF, make a full allowance of around 1 percentage point per year in interest rate.

vi. In this range [ii], the price is paid in 360 monthly installments equivalent to 20 percent of family income and PFH pays an allowance in price, as indicated therein, given that CEF only funds projects to the price limit indicated.

PART III. HOUSING FINANCE STATISTICS IN BRAZIL

MACROECONOMIC ISSUES AND THE SBPE

In order to better contextualize the housing finance system in Brazil, it is adequate to compile some information regarding the Brazilian macroeconomic performance, starting from the late 80's and going through the 90's until the first half of 2009. In parallel with the macroeconomics, set SBPE performance for the same period allows us to understand the connections and constraints of the housing finance with the macroeconomic scenario experimented by Brazil in this era.

For the evaluation of macroeconomic fluctuations and its comparison with the performance of the housing sector, the following indicators were chosen: evolution of the Gross Domestic Product (GDP), price developments in the national economy, through the General Prices (IGP M) from FGV Getúlio Vargas Foundation, and the Consumer Price Index (CPI) of FIPE-Institute of Economic Research of São Paulo University. For the cost of money in the economy, we choose the rates on Interbank Deposit Rates, called Interbank Deposit Certificates (CDI).

The analyses are for the period from 1988 to 2008. Looking back at the recent economic history of the country, a first analysis of the data indicates large macroeconomic turbulences in restricted periods, with distortions and reflections with their own characteristics in the behavior of economic agents.

The year 1989 is characterized by stagflation - high inflation and falling GDP (Figure 6); from 1990 the economic environment is characterized by a sharp decrease in the level of economic activity, reflected in the decline of GDP, with inflation indices also in decline, albeit at very high levels.

Since 1992 the GDP started to grow at the same the rate with inflation, a situation that lasted until the Real Plan. The Real Plan was set by Federal Government with the intention of cutting inflation to one-digit values. The plan incepted a new currency, the present Brazilian Real, designed, at that moment, to be par to the USD.

Since the Real plan installation it is possible to characterize two distinct phases. The first, mid-1994, the date of its implementation, until the end of 1997, whose main characteristics are low levels of inflation, GDP growth and high interest rates, whose levels show a declining trend since the beginning of this phase, but reappear after its end.

The second phase of the Real Plan is linked to the increasing need for financing the current account deficit and covers the end of 1997 until the end of 1998, a period characterized by crises in Southeast Asia and Russia. The policies implemented during this period showed the line of attack of increase interest rates to attract volatile capital, in order to support the exchange rate and maintain current levels of inflation. The result was extremely low growth rates in 1998 and expectations for 1999 of a slight decrease in the GDP, high interest rates and growth rates of inflation, derived from the devaluation promoted in early 1999.

The basic interest rate offered by the Brazilian Central Bank (Bacen) in January 1999 stood at a level of 27 % pa in March and reached almost 41 % pa. From April the Bacen adopted a policy with a downward bias for that rate, reaching 19 % pa in August. With the devaluation, a resumption of sustained economic growth was expected but which was quickly aborted in 2000 due to the crisis of energy supply in 2000 - 2001. At these interest rates the real estate market was paralyzed.

From 2000 to 2003 the Brazilian economy experienced growth rates above GDP at around 2 % pa, the best historical reference. It is accepted that this was related to the political transition of 2002, which originated intense deterioration of expectations regarding the evolution of the Brazilian economy under the aegis of the new government. In this period, we recorded the highest inflation rates since the beginning of the Real Plan, accompanied by a strong increase in interest rates in the economy.

From 2004 until early 2008, Brazil engaged in a relatively sustained expansion of economic activity, according to the state of main macroeconomic indicators, albeit with the highest interest rates of the emerging economies. The inflation level was high, but matched the targets set by the Bacen. Strong international reserves, increasingly surplus in the foreign accounts and balance of payments was realizeed, despite the effects of international crises that was already being experienced since the mid-2007 in major economies.

The year 2008 is marked on the Brazilian economy as the reversal of the more euphoric expectations found mainly in 2006 and 2007. It is in the last quarter of 2008 that investments pulled back abruptly and intensely, mainly in the residential real estate, with a fall in demand and the temporary restriction of credit.

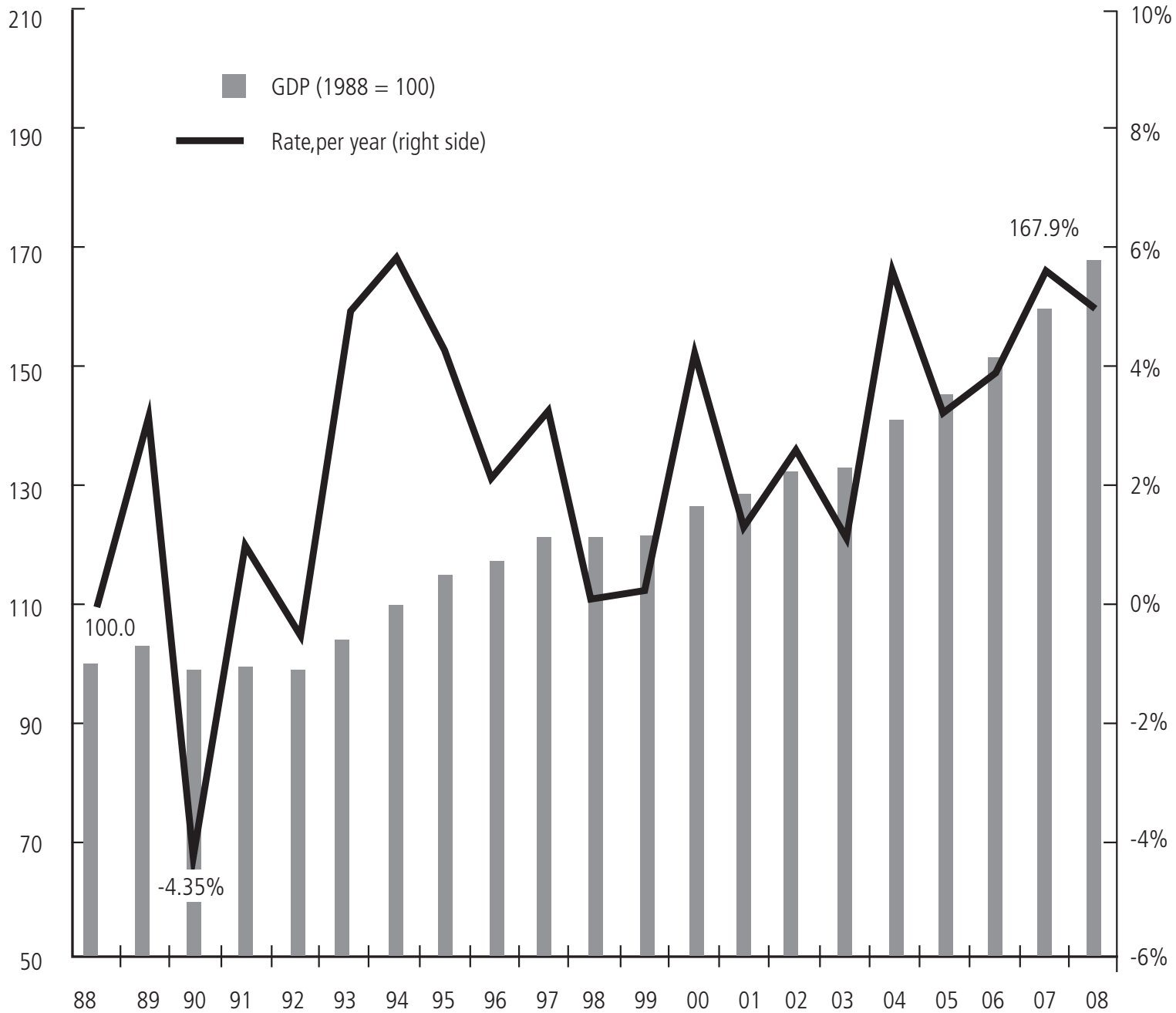
In addition, we saw the financial strangulation of several residential real estate companies that, in the phase of euphoria and availability of funding, immobilized abundant resources in the formation of land banks.

The fall in GDP, which occurred in the last quarter of 2008, though small, was repeated in the first quarter of 2009. The Federal Government, through the Brazilian Central Bank, in order to reverse the expectations of the market, promoted a series of reductions in the basic interest rate of the economy, currently 8.75 percent per year, and announced the plan to encourage production of housing for the low-income strata. In the second quarter of 2009, the mood among the majority of agents and analysts was that “the worst of the crisis has passed,” and that Brazil was one of the least affected.

In Figure 6, the value of GDP in 1988, expressed in the currency of 2008, is transformed into the index number 100; 20 years later, in 2008, the Brazilian GDP equals 167.9, resulting in an equivalent to annual growth rate of 2.62%, with the highest annual growth rate observed in the period of 5.85% and the least of - 4.35%.

Taking into consideration that the Brazilian system for housing finance is based on savings for raising money, just as important to recognize the pattern of evolution of the Brazilian GDP is to distinguish the historical behavior of GDP per capita over the same period. The higher the average income, greater tends to be the allocation of resources into long-term savings, thus nourishing the funding of SBPE. On the other hand, the higher the average income imply in higher access to real estate credit for a larger number of families.

FIGURE 6: **THE BRAZILLIAN GDP ALONG THE LAST YEARS**



Source: Brazilian Central Bank (Bacen)

As Figure 7 shows, in 20 years the per capita income in Brazil increased from BRL 12,309 (USD 6,838) to BRL 15,240 (USD 8,467) in 2008, meaning an annual effective growth rate equivalent of 1.07% in the period.

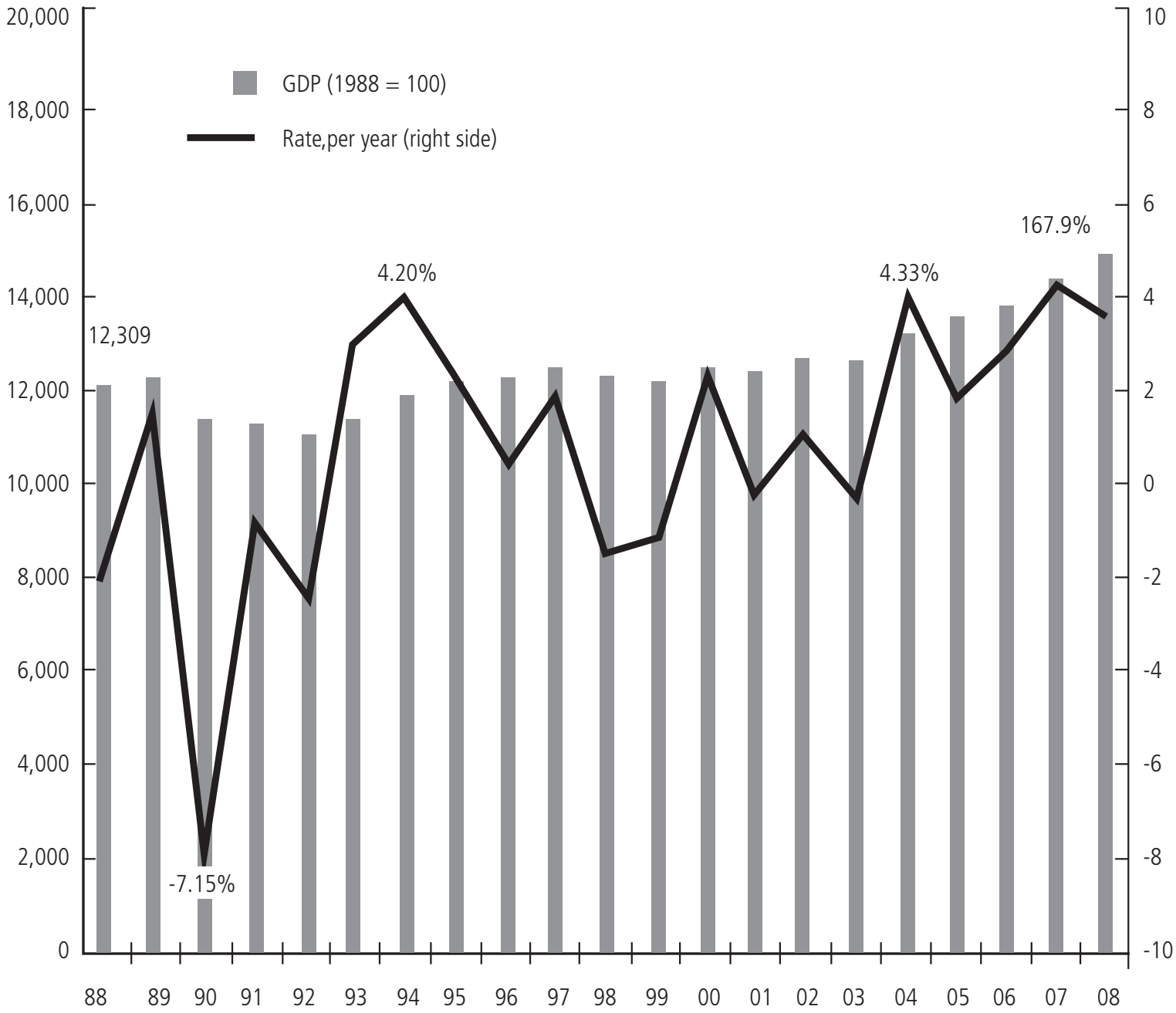
The years 1994, 2004 and 2007 show the highest rates of growth of GDP per capita in the period, reaching 4.20 percent, 4.33 percent and 4.50 percent, respectively.

Figure 8 shows the Brazilian GDP per capita in USD from 1988 to 2008. The annual growth rate, regardless of dollar inflation, is 6.90%, which was USD 2,186 in 1988 and reaching USD 8,298 in 2008.

Of course, the intense fluctuation of Brazilian GDP per capita in U.S. dollars over the period is due to the successive devaluations of the Brazilian Real. The value of per capita income fell sharply from one year to another, often from result of direct intervention of the Brazilian Central Bank, such as occurred in the max devaluation in 1999.

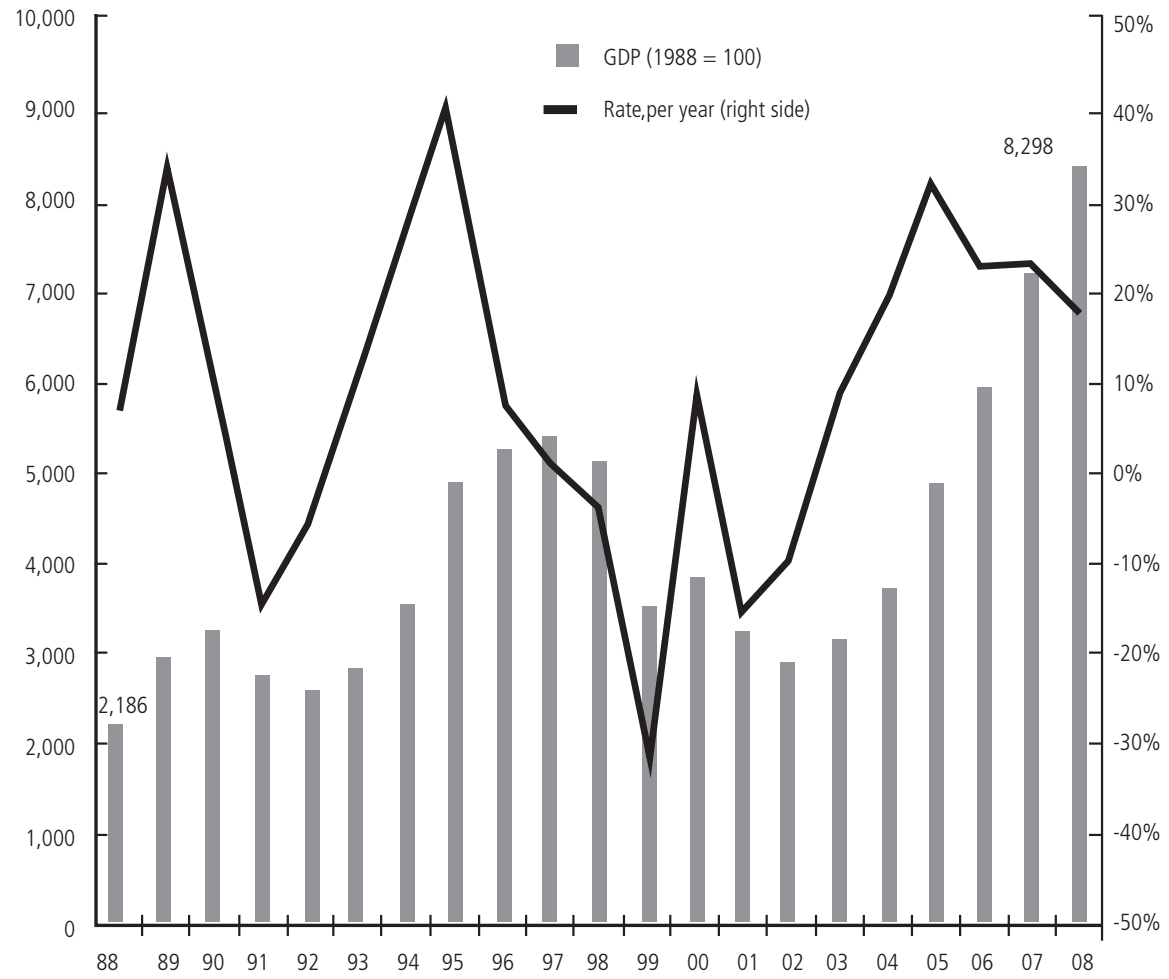
Its rapid growth, as observed from 2003 to 2008, was caused by monetary policies that favor the recovery of the Brazilian Real against the US Dollar. This cause, associated with the global trend of devaluation of U.S. currency, especially after the sub prime mortgage crisis, resulted in a sharp increase of Brazilian GDP per capita expressed in USD of approximately 2.18% annually, while the GDP increased during the same period the equivalent to 4.71% annually.

FIGURE 7: **THE BRAZILIAN GDP PER CAPITA OVER THE LAST 20YEARS (BRL OF 2008)**



Source: Brazilian Central Bank (Bacen)

FIGURE 8: **THE BRAZILIAN GDP PER CAPITA OVER THE LAST 20 YEARS (IN USD)**



Source: Brazilian Central Bank (Bacen)

Another indicator that illustrates the efficiency of the SBPE into funding Brazilian housing is the ratio of housing credit volume in the market turnover with GDP. In Figure 9 one can visualize the behavior of this relationship over the past 20 years in Brazil. In the late 1980's the volume of granted credit for housing purchase reached a value equivalent to about 9 % of the monetary value of the Brazilian GDP on that date, which is BRL 161,123 thousand in 2008.

The whole 1990's decade is marked by a decrease in this parameter, since in 1990 the ratio of credit volume to GDP is 6.83 %, a figure that remains relatively stable until the middle of the decade, reaching, by the end of 1999, 5 %. This reduction in the ratio is due to the virtually stagnating credit while there has been a growth in GDP, albeit still small, equivalent to 1.65 percent annually during the decade.

After 2000, the significant reduction in the volume of real estate credit as a proportion of GDP average of 2 % is the result of two movements:

i. the intensified expansion of economic activity in Brazil, particularly from 2003, achieving equivalent annual growth rate of 4.71%;

ii. the reduction on the amount of credit allocated to the housing market, while during the 90s the average volume of credit, expressed in USD of 2008 was 116,456 thousands.

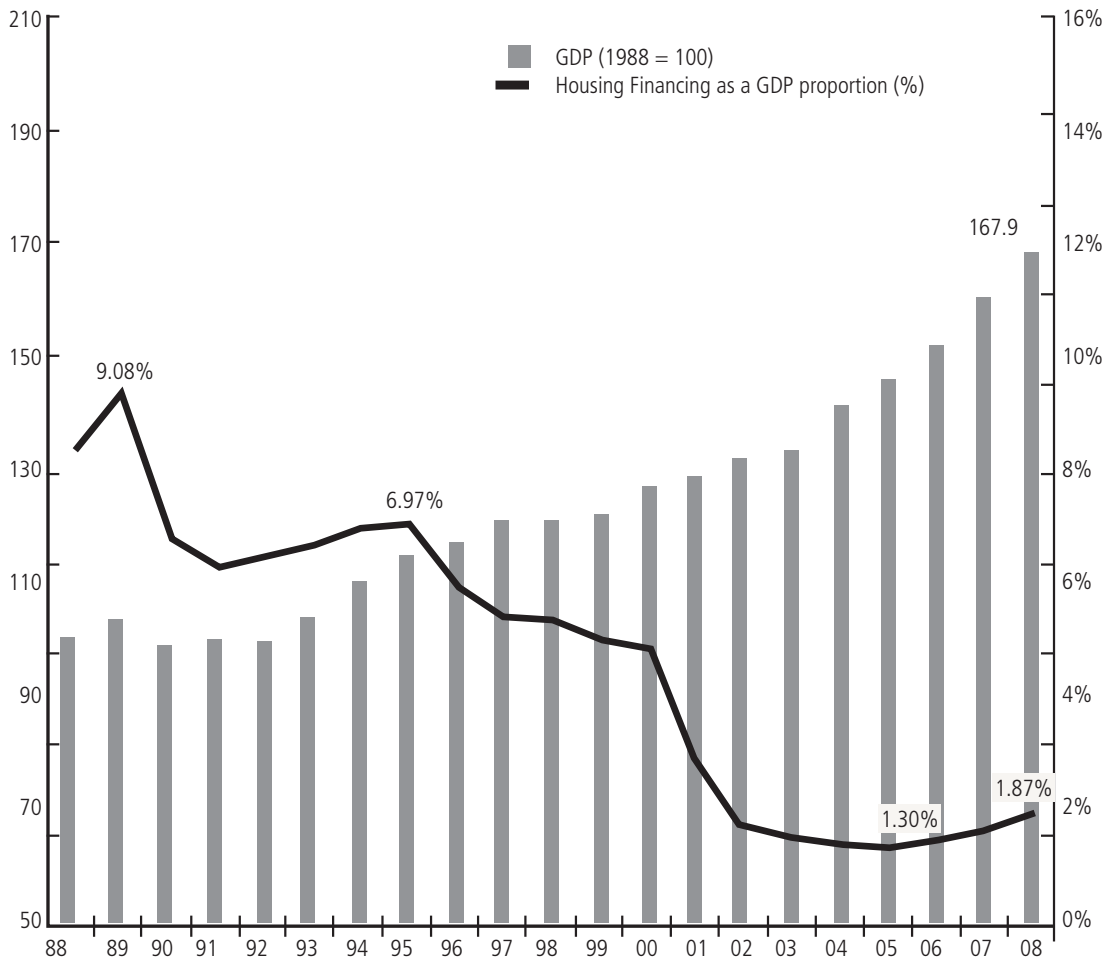
The allocation of credits for housing finance decreased since 1995 in a proportion of GDP which can be seen a as a paradox. However, while the due balance of FCVS in favor of the banks remained unsolved, the Government authorized that, exceptionally, the CP funds raised by the banks could be invested in public titles, although very secure and paying one of the highest rates in the world. Therefore, the banks made the Federal titles options for investing, instead use the CP funds to finance real estate. Since 2004, this particular situation is now replaced by the original obligation of finance (65% of the CP balance has to be used for real estate finance), but mitigated by the FCVS balance in favor of each bank, that can be used against the obligation in a decrease ratio of 5% per year.

In early years of the decade that followed, considering the interval from 2000 to 2008, the average was USD 48,437 thousands of 2008.

For illustration and comparison, the relation among housing credit and GDP indicators of selected countries (source – world bank 2005):

Holland	88.0%	**Germany**	51.0%	**Chile**	16.1%
UK	62.0%	**Malaysia**	21.0%	**Thailand**	16.0%
USA	53.0%	**France**	19.0%	**Mexico**	10.1%

FIGURE 9: **THE BRAZILIAN HOUSING FINANCING SYSTEM, AS A PROPORTION OF THE GDP**



Source: Brazilian Central Bank (Bacen)

In Figure 10, the evolution of the formation of households in Brazil from 1982 to 2007 with its annualized growth rates is presented.

In 1982, according to the IBGE, there were about 27,900 thousand households in the country.

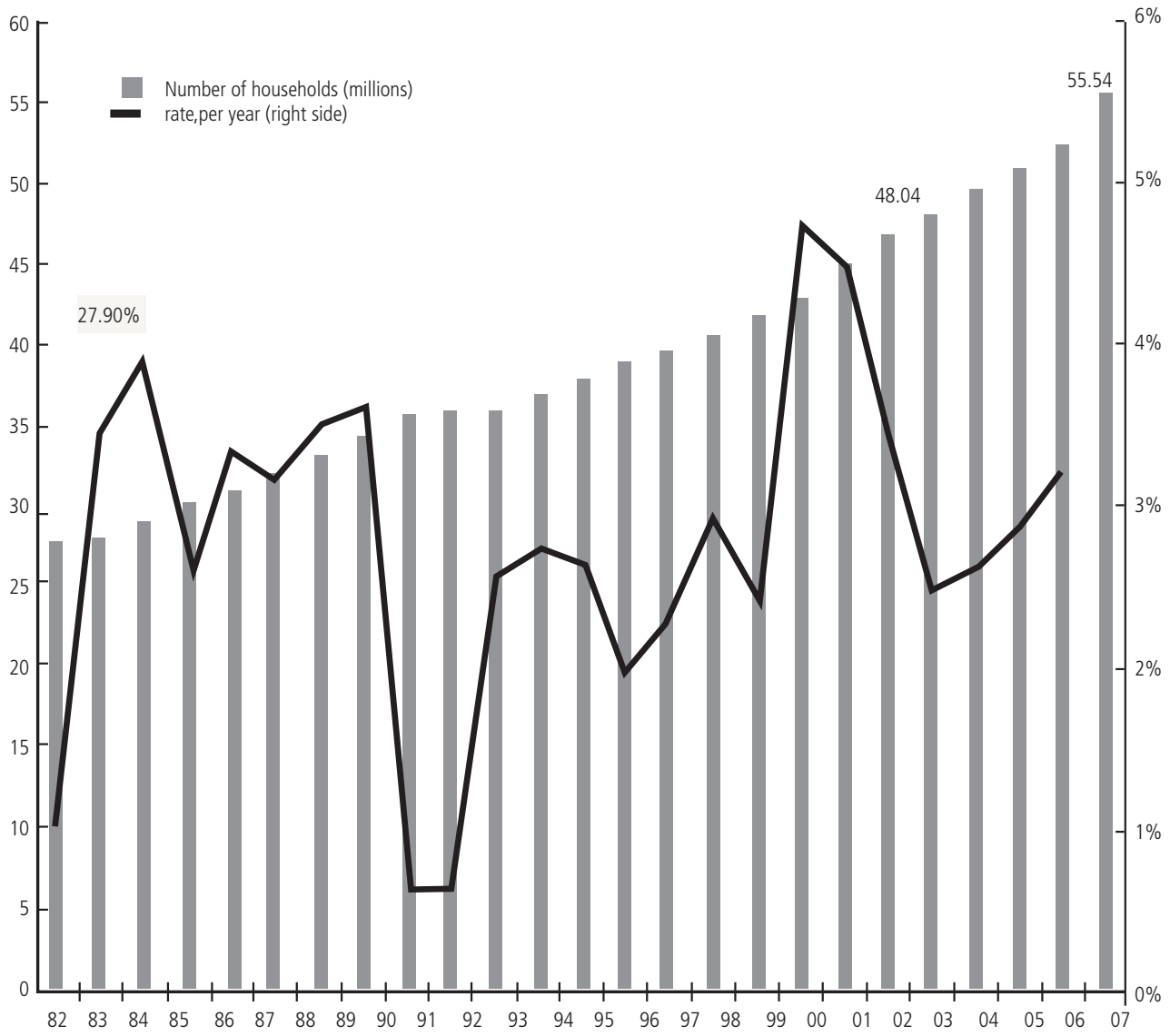
In 2007, the number of households in Brazil reached 55,544 thousands. Thus, the average number of households formed each year in Brazil, within the period under review was approximately 1,135 thousand, which means an expansion rate of 2.8 percent annually.

Considering only the SBPE and funds generated under the FGTS as a source of funds for the acquisition of residences by the Brazilian population, one can have a measure of the ability of the formal system to meet one of the components that characterize the demand for production housing and therefore the financing for the acquisition.

Roughly speaking, the historical data compiled here show that the system was able to fulfill the order of 53% of the needs of demand, when considering the best performance years (600 thousand residential units financed against a demand of 1,135 thousand).

Table5 shows the data displayed in Figure 10.

FIGURE 10: **HOUSEHOLDS IN BRAZIL TOTAL AND INCREASE RATE**



Source: Brazilian Institute of Geography and Statistics (IBGE)

TABLE 5: **NUMBER OF HOUSEHOLDS IN BRAZIL AND THE ANNUAL INCREASE RATE**

Year	Number of Households	Increase rate
	Million	per year
82	27.90	7.2%
83	28.19	1.0%
84	29.16	3.5%
85	30.30	3.9%
86	31.10	2.6%
87	32.14	3.3%
88	33.17	3.2%
89	34.34	3.5%
90	35.58	3.6%
91	35.81	0.6%
92	36.04	0.6%
93	36.96	2.6%
94	37.96	2.7%
95	38.97	2.6%
96	39.75	2.0%
97	40.64	2.3%
98	41.84	2.9%
99	42.85	2.4%
00	44.88	4.7%
01	46.90	4.5%
02	48.04	2.4%
03	49.71	3.5%
04	50.96	2.5%
05	52.30	2.6%
06	53.81	2.9%
07	55.54	3.2%

MAIN SISTEMA BRASILEIRO DE POUPANÇA E EMPRÉSTIMO-SBPE PLAYERS

The funding providers, public and private savings, linked to SBPE currently operating in Brazil totals 17 institutions, arranged in descending sequence according to the balance of savings deposits.

1. Caixa Econômica Federal (Public – Federal)
2. Banco Bradesco S.A. (Private)
3. Banco Itaú S.A. (Private)
4. Banco Santander SA. (Private)
5. Banco Nossa Caixa S.A. (Public)
6. Banco do Estado do Rio Grande do Sul S.A. (Public)
7. HSBC Bank Brasil S.A. (Private)
8. POUPEX (Private)
9. Banco do Estado do Espírito Santo S.A. (Public)
10. Banco Real S.A. (Private)
11. Banco Safra S.A. (Private)
12. Banco do Estado do Sergipe S.A. (Public)
13. Banco Citibank S.A. (Private)
14. Banco do Estado do Pará S.A. (Public)
15. Banco Mercantil do Brasil S.A. (Private)
16. BicBanco (Private)
17. Lemon Bank (Private)

In this list, there are 11 private and 6 public institutions, one of them being the biggest savings bank, the Caixa Economica Federal (CEF). Since 2002 there is a strong concentration in the sector, involving both public institutions and private banks as seen in the data presented below:

- In 2002 the SBPE was composed of 38 institutions, 25 private and 13 public;
- In 2003 there were in SBPE 36 players, 24 private and 12 public;
- In 2004 the system had 35 institutions, of which 23 were private and 12 public entities;
- In 2005, there was a reduction of 3 in total number of agents operating the system in the previous year, totaling 32, with 20 private and 12 public;
- The number of players and type of control does not change in 2006, is the same proportion and total from year 2005;
- In 2007 there was a strong reduction in the total number of participants in the system, being the total equivalent to 24, with 16 private banks and 8 public banks;
- In 2008, the number of institutions in SBPE drops to 22. This year, the system has 14 private and 8 public.

In Table 5 we see the participation of each type of institution, according to the nature of the controlling shareholders, on the total lending in the housing SBPE. The distribution between public and private lenders is not balanced due to the aggressive action of CEF (major public) in providing funds for housing.

TABLE 6: **HOUSING FINANCING LEVEL ACCORDING TO THE FUNDS PROVIDER SOURCE**

Year	Public, mainly CEF		Private all other banks	
	BRL million	(%) of total	BRL million	(%) of total
1988		68.4%		31.6%
1989		70.3%		29.7%
1990		67.2%		32.8%
1991		67.7%		32.3%
1992		71.4%		28.6%
1993		75.0%		25.0%
1994		74.9%		25.1%
1995	407,689	76.1%	127,840	23.9%
1996	450,083	78.1%	126,136	21.9%
1997	479,078	81.2%	110,547	18.8%
1998	514,908	82.6%	108,252	17.4%
1999	540,222	83.2%	108,714	16.8%
2000	576,493	83.6%	112,564	16.4%
2001	316,427	68.8%	114,764	31.2%
2002	181,505	62.8%	107,290	37.2%
2003	195,752	66.2%	100,014	33.8%
2004	206,028	67.9%	97,253	32.1%
2005	226,749	69.5%	99,543	30.5%
2006	286,401	72.8%	106,411	27.2%
2007	355,432	72.6%	134,434	27.4%
2008	461,716	71.2%	186,918	28.8%

Source: Brazilian Central Bank (Bacen)

FINANCING SYSTEMS IN NUMBERS

Residential Units Financed

In Figure 11 there are the number of units whose acquisition was financed through the SBPE system and using the FGTS funds. As shown in Figure 11, the SFH peaked in 1980, when it surpassed 600 thousand units financed.

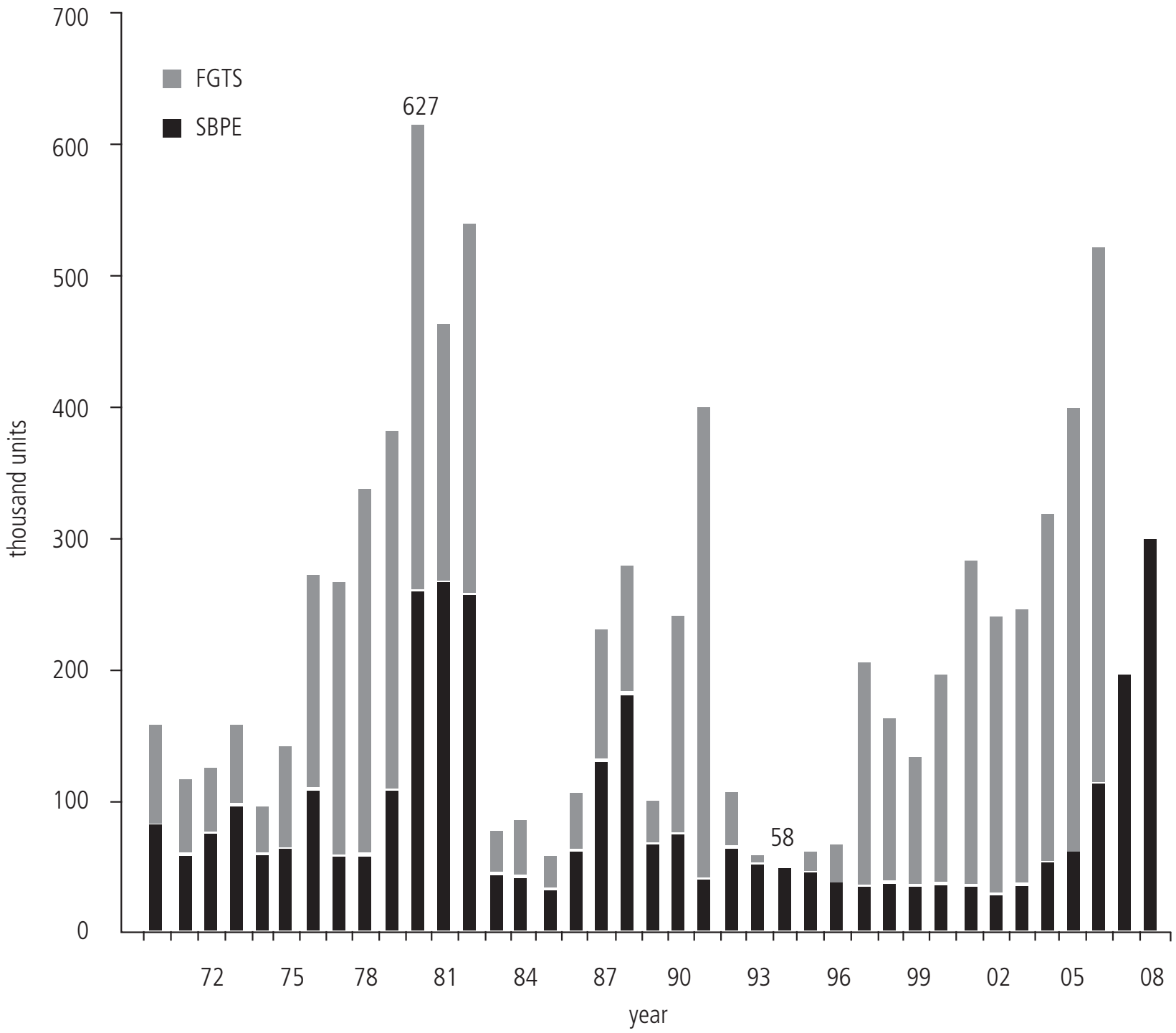
Different factors contributed to the change in volume of loans granted since the time limit on the use of FGTS for amortization of mortgages (from 1983) to disagreements arising from inflationary pressure that brought the system to collapse, registering in 1993 the worst point, only with 58 thousand units financed.

From the total funds allocated to housing by SFH through SBPE, part has been used first to produce new units, following the acquisition. Part of the funds are used under the direct purpose of buying a home by the end purchasers.

The partition of resources to meet first the production and directed straight to marketing of units has been fair in recent years, as shown in Figure 12.

Table 7 details the values in Figure 11 and Table 8 the values of Figure 12.

FIGURE 11: **NUMBER OF UNITS FINANCED BY SFH (SBPE+FGTS)**



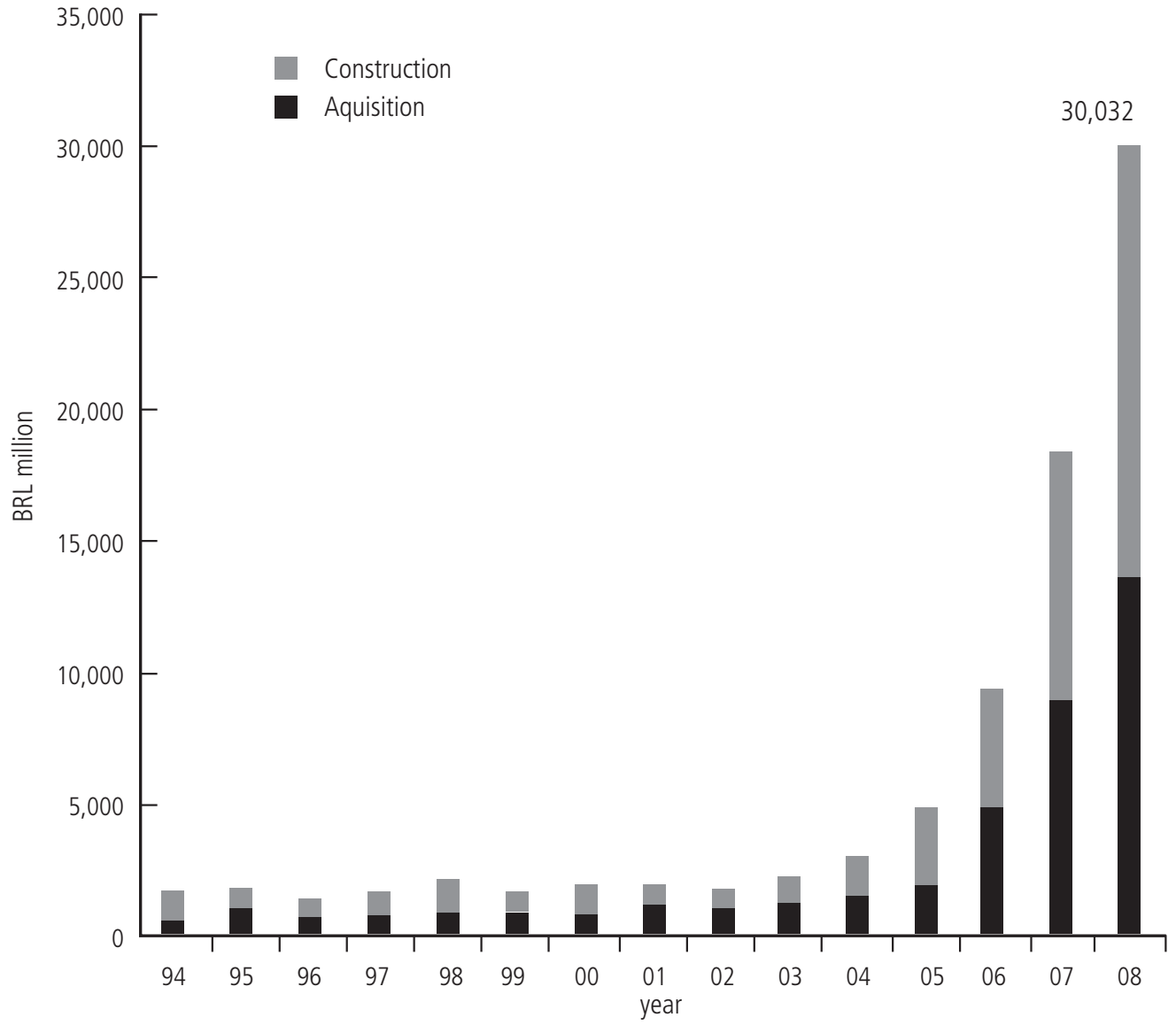
** FGTS information non available*
Sources: Bacen, Brazilian Association of Entities of Real Estate Finance and Savings (ABECIP), Caixa Econômica Federal (CEF), Brazilian Committee of the Construction Industry (CBIC)

TABLE 7: **NUMBER OF UNITS FINANCED BY SFH (SBPE+FGTS**

Year	Number of units financed		
	FGTS	SBPE	Total
1970	84,086	73,144	157,230
1971	58,531	59,059	117,590
1972	76,685	47,804	124,489
1973	96,623	61,178	157,801
1974	60,268	35,937	96,205
1975	64,512	77,417	141,929
1976	109,410	164,353	273,763
1977	58,004	209,709	267,713
1978	58,133	279,516	337,649
1979	108,985	274,238	383,223
1980	260,534	366,808	627,342
1981	266,884	198,514	465,398
1982	258,745	282,384	541,129
1983	44,562	32,685	77,247
1984	42,807	43,551	86,358
1985	34,652	25,005	59,657
1986	62,312	44,350	106,662
1987	132,005	99,227	231,232
1988	181,834	98,249	280,083
1989	68,089	31,617	99,706

Year	Number of units financed		
	FGTS	SBPE	Total
	units		
1990	74,993	165,617	240,610
1991	41,050	359,719	400,769
1992	64,869	43,801	108,670
1993	53,708	42,56	57,964
1994	61,384	NA	
1995	46,594	16,550	63,144
1996	38,286	29,900	68,186
1997	35,487	170,729	206,216
1998	39,368	124,055	163,423
1999	35,131	99,875	135,006
200	36,465	160,821	197,286
2001	35,795	247,990	283,785
2002	28,905	212,144	241,049
2003	36,480	211,204	247,684
2004	53,827	266,424	320,251
2005	61,223	337,448	398,671
2006	113,873	408,428	522,301
2007	196,133	NA	
2008	299,685	NA	

Figure 12: **AMOUNT FINANCE FROM SBPE FOR CONSTRUCTIOAND ACQUISITION OF RESIDENCES**



Sources: CEF, Bacen, CBIC

TABLE 8: **AMOUNT FINANCED FROM SBPE FOR CONSTRUCTION AND ACQUISITION OF RESIDENCES**

Year	Amount financed (SBPF)		
	Construction	Aquisition	Total
	BRL Million	BRL Million	BRL Million
1994	1,124	611	1,735
1995	826	1,051	1,876
1996	699	764	1,463
1997	857	868	1,725
1998	1,161	984	2,146
1999	758	916	1,673
2000	1,048	888	1,935
2001	666	1,216	1,882
2002	595	1,175	1,769
2003	965	1,252	2,218
2004	1,394	1,608	3,002
2005	2,855	1,997	4,852
2006	4,484	4,857	9,340
2007	9,401	9,009	18,410
2008	16,221	13,811	30,032

Financing Volumes

The SFH achieved in historical values, the mark of BRL 75 billion in funding the residential construction and acquisition only through funds raised by SBPE.

In the last 10 years, the funds raised in the environment of the SFI were able to accrue just over 7% of this amount, being in its most part resources for the production or acquisition of non-residential units.

In the SFI system, which fund raising system is not based on savings, but in placement of securities (the CRIs), overall there were 273 new offerings, including the raising of BRL 5,523 million. Since its inception, the SFI has not been able to finance expressive volumes.

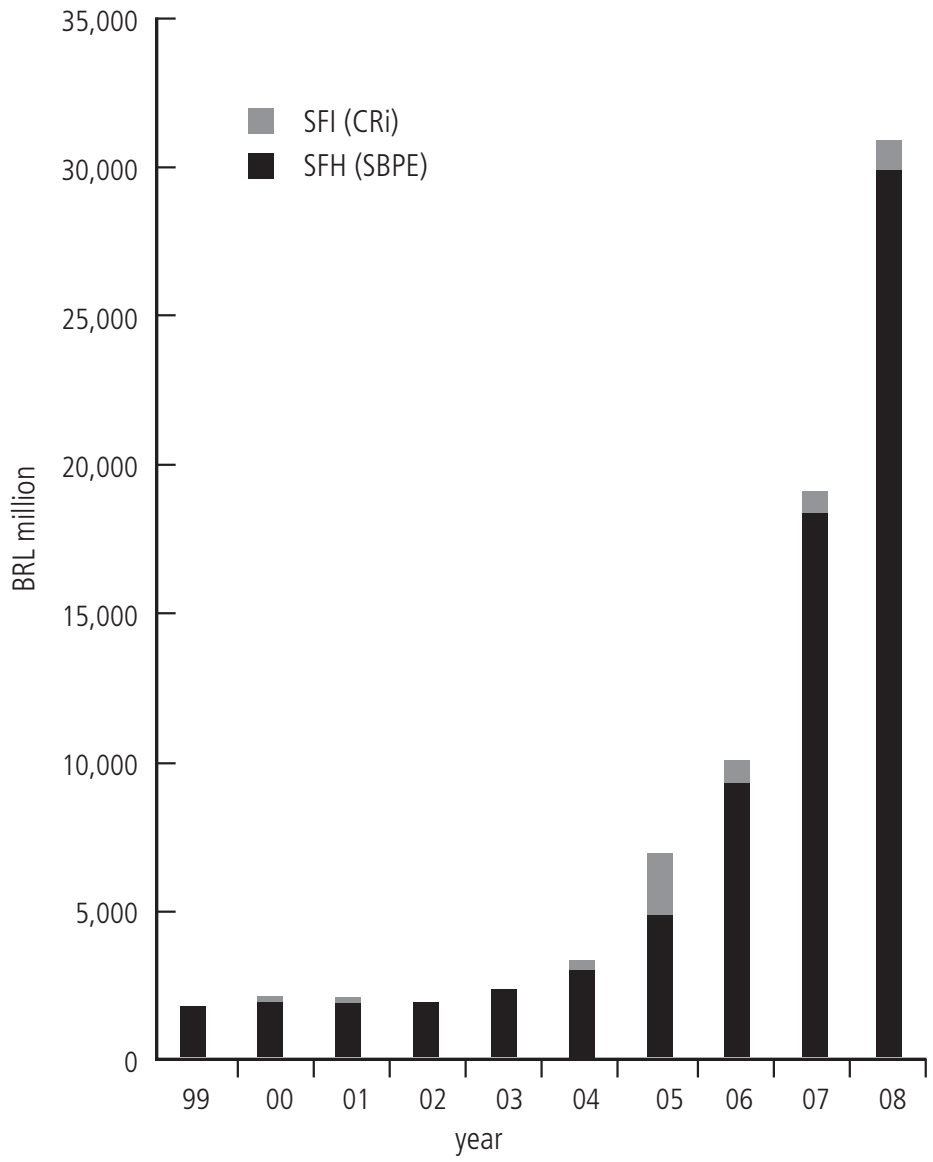
Figure 13 illustrates the behavior of the two systems in finance volumes, within the last 10 years (1999-2008).

The image shows that the Brazilian housing finance privileged mechanism is the SFH, running with the CP (savings accounts) funds and the FGTS (compulsory savings accounts), as it was designed in 1964.

The SFI, with its fundamentals in capital market fund raising, is still an appendix of the Brazilian global system and tends to persist in that situation.

Table 9 details Figure 13.

Figure13: **FINANCED VOLUME SFH (SBPE) AND SFI (CRI)**



Source: Bacen, CBIC, Brazilian Securities Issuing and Exchange Commission (CVM)

TABLE 9: **FINANCED VOLUME SFH (SBPE) AND SFI (CRI)**

Year	Financed Volume	
	SFH (SBPE)	SFI (CRI)
	BRL Million	BRL Million
1999	1,673	13
2000	1,935	172
2001	1,882	223
2002	1,769	44
2003	2,218	148
2004	3,002	309
2005	4,852	2,102
2006	9,340	815
2007	18,410	868
2008	30,032	829
2009	5,872	638

Source: Bacen, CBIC, CVM

The Caderneta de Poupança-CP (savings accounts) Balances

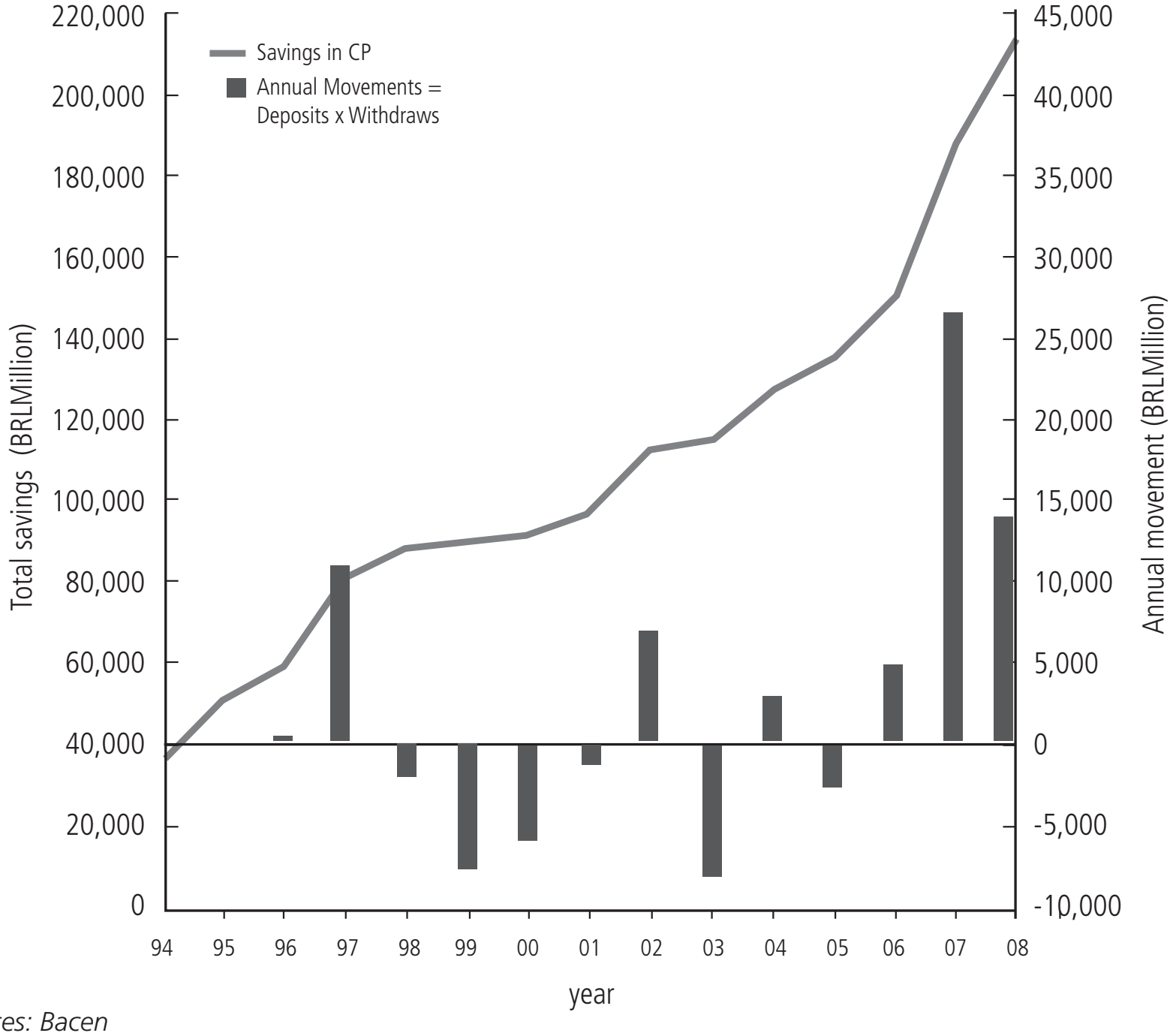
Overcoming the turmoil that took place in prior periods in Brazil, derived from attempts at economic plans that sought to contain the inflationary spiral at the expense, among others, of changes in rules for remuneration of the CP savings accounts, since the Real Plan, the amount of funds invested in conservative savings has been growing vigorously.

Despite the net inflows that vary in the period, the volume of global resources are significant in amounts, in respect to which agents in applications related to housing finance has been propelling the growth of credit.

The evolution of CP balance and net fund raising and withdraw balances is illustrated in Figure 14.

The CP balance shows stability in these years (since Real beginning) which gives to the system the necessary confidence to keep financing for 20/30 years against a month of compulsory retaining of the deposits. The asymmetry already described in Figures 1 and 2, although representing a liability of the system is being surpassed for the long funds retaining cycles experimented in those 35 years of SFH.

FIGURE14: **SAVINGS (CP) VOLUME AND ANNUAL NET BALANCE OF DEPOSITS AND WITHDRAWS**



Sources: Bacen

Residential Loans and Use of the Caderneta de Poupança-CP Funds

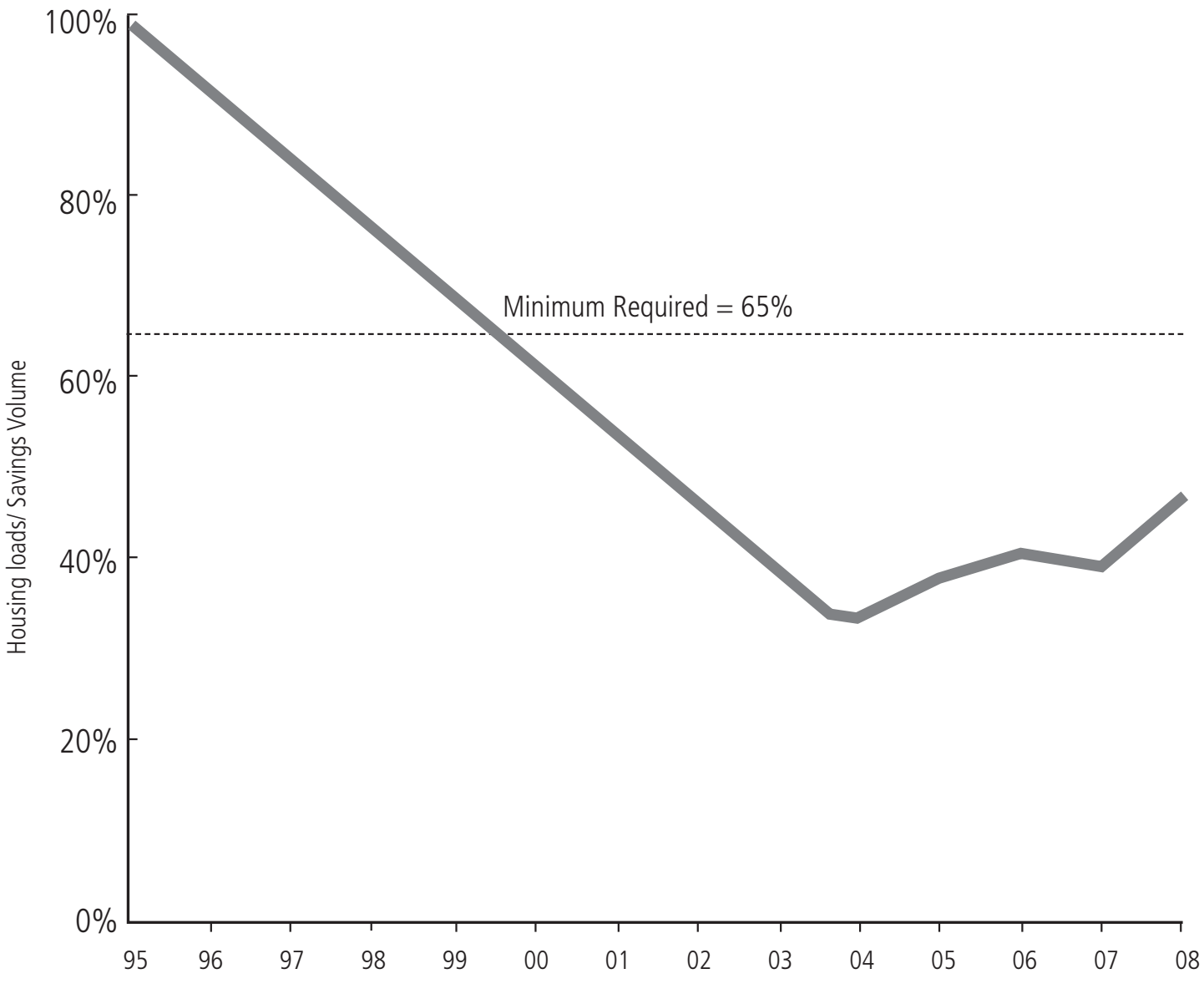
housing credit has grown permanently since 1994, real estate lenders were allowed to compute receivables against FCVS (insurance fund for compensation of installments adjustments against debt loan balance adjustments) to reach the chargeability of 65% required for the allocation of resources raised through the savings accounts (CP). In current values, the use of such claims peaked in 2004, decreasing since then, what triggered the allocation of funds to residential construction and acquisition.

On the other hand, the granting of housing loans have been growing significantly in recent years caused by, either the fall in interest rates or expanding the time for payment.

In the period represented in Figure 15, the granting of credits also used the sources from LI and CI, and some transfers from funds and social programs.

Counting the three different sources of funds, (CP, LI+CH, social programs), in the last 10 years, in average, LI and CH together, considering the net amount (corresponding to the total issued, less the total paid), accounted for 6.6% of the amount financed, while social programs for 6.2%.

FIGURE 15: **HOUSING LOANS X SAVINGS VOLUME IN CP**



Source: SBPE-SFH, Bacen, CBIC

Residential Loans Allocation Within the Country

Considering the vast territory of Brazil and disparities between regions, whether in terms of population distribution and stage of socio-economic development of families, the distribution of housing loans is disbursed.

Using the identification of macro-regions, characterized by a set of states / territories, as indicated in Figure 16, we have:

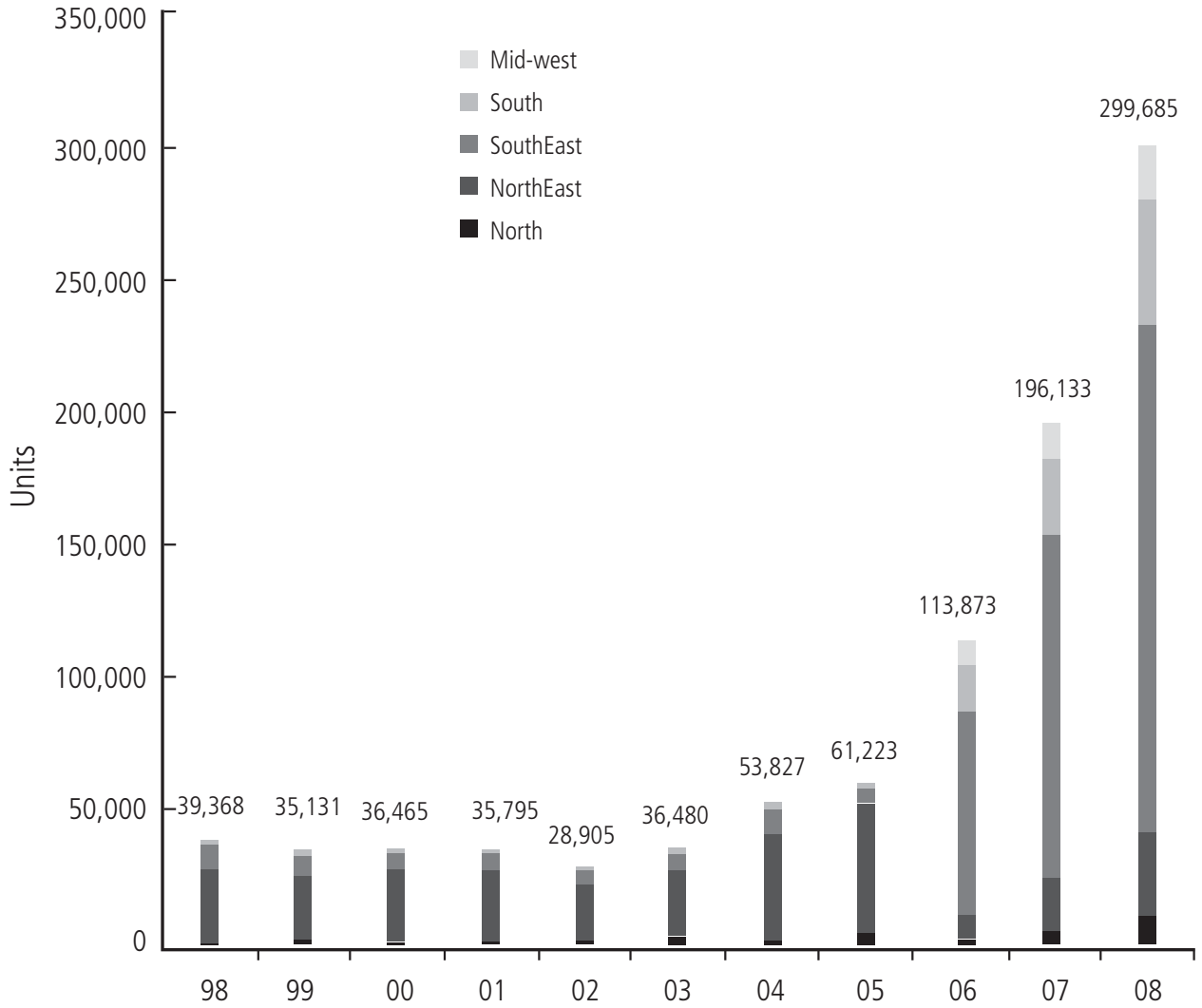
- North (N): Acre (AC), Amapá (AP), Amazonas (AM), Pará (PA), Rondônia (RO), Roraima (RR) e Tocantins (TO);

- Northeast (NE): Alagoas (AL), Bahia (BA), Ceará (CE), Maranhão (MA), Paraíba (PB), Pernambuco (PE), Piauí (PI), Rio Grande do Norte (RN), Sergipe (SE);
- South-East (SE): Espírito Santo (ES), Minas Gerais (G), Rio de Janeiro (RJ) e São Paulo (SP);
- South (S): Paraná (PR), Santa Catarina (SC), Rio Grande do Sul (RS) and
- Mid-West (MW): Distrito Federal (DF), Goiás (GO), Mato Grosso (MT), Mato Grosso do Sul (MS).

Figure 7 presents the distribution of loans all over the country.

Figure 16: **BRAZILIAN REGIONS**

FIGURE 17: **NUMBER OF RESIDENTIAL UNITS FINANCED (SBPE) ACCORDING TO REGIONS**



Sources: CEF, Bacen, CBIC

The Human Settlements Finance Systems Series

Housing finance mechanisms in Brazil have a very particular structure, when compared with the existing system allover the world. The Federal Government, aiming to solve different situations at the same time, created the Brazilian system in 1964. Labor problems caused by stability, the intensive creation of unqualified jobs in civil construction and the institutionalization of a housing finance mechanism, for construction and acquisition.

The whole conception of the Brazilian system is based on these two sources of funds: Fundo de garantia por tempo de serviço-FGTS - a retirement fund and Caderneta de Poupança –Savings Account (CP). The mortgages remain as anchors of the savings (mandatory in FGTS and voluntary in CP). As the mortgages are not object of securitization, the system operate at a very low level of leverage, and its growth is based on the capacity of the economy to create jobs and pay salaries adjusted higher than the accrued inflation rates. In 2008, construction finance accounted for 9 USD billions; acquisition finance 7.7 USD billions, 299,685 residential units were financed from the housing finance system in Brazil.

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