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# **Housing Finance Market in Brazil and the Necessity of Reform**

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*To my wife Renata, my daughter Luiza  
and my sons Lucas and Pedro, who  
encouraged me and beared the weight  
of my absence with great love and patience*

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## Glossary

### *Brazil*

BNDES – National Economic and Social Development Bank

BNH - National Housing Bank

CEF - Caixa Econômica Federal (National savings & loans institution)

CIBRASEC - Brazilian Company of Securitization

CONFINS / CPMF - Social Contribution Tax

CRI - Certificates of Housing Receivables

FCVS - Income Variation Compensation Fund

FGTS - Guarantee Fund Proportional to the Time on Professional Duty

IGP-M - Market General Price Index

IPC-A - Consumer Price Index – Wholesale

OTN/BTN - Units Of Count Indexed

SFH - Housing Finance System

SFI – Real Estate System

TJLP - Long Term Interest Rate

TR - Referential Tax

UPC - Credit Unit Standard

### *United States*

FBH - Habitation Fomentation Bank

FHA - Federal Housing Administration

FHLB - Federal Home Loan Bank System

FmHA - Farmers Home Administration

FNMA - Federal National Mortgage Association– Fannie Mae

Freddie Mac - Federal Home Loan Mortgage Corporation

Ginnie Mae - The Government National Mortgage Association

MBS - Mortgage Banked Securities

S&L - Savings and Loans

VA - Veterans Administration

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## EXECUTIVE SUMMARY

Until the Habitation Financial System creation (SFH), in 1964, housing finance in Brazil was restricted to the loans from Caixa Econômica Federal and of the institutes of Social Service institutes of the time. It reached a very small share of the population and the involved subsidies were high. Inflation took care of eroding the real value of the debts.

The 60s experienced a significant institutional enhancement. The indexation was created, together with the BNH, the real estate credit societies and the savings and loans associations. Appropriate sources of funds were established for the system: the savings accounts and FGTS's deposits. FCVS's constitution (which warranted to the unitholders the quittance of their debt at the contract final term), in 1967, completed the system institutional framework that worked well during almost twenty years.

During the 80s, the macroeconomic conditions became especially adverse. Recession, foreign debt crisis and accelerated inflation. The difficulties faced by the system unitholders grew considerably.

Government's answers: partial indexation and expressive alteration of the calculation of the installments correction criteria. In spite of the implicit subsidy under the new rules, there was an increase in the unitholders insolvency. The “rules of the game” started to be quite unstable.

From the later 80s the financing system practically stop operating. The indifference by the private institutions in supplying new credits for the own house purchase wasn't followed by the liabilities drawback (obliged for lending). The rules started to change only after Collor Plan, at the beginning of the 90s. The financial applications blockade did vanish about 60% of the savings accounts balance. But the real state credits didn't disappear. The system stayed with excess of application, and this situation was being addressed step by step, with savings accounts having been improved.

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Besides the difficulties associated with expressive alteration of the economic environment, with the criteria changes associated and with the credit growth for system against the government, the financial institutions also faced difficulties running the warranties.

Additional problems have arisen after the Real Plan. Concerned about restricting the use of indexation, the government still keeps the savings accounts and the real estate credits indexed by TR. This is of a very bad index. TR didn't follow the price indexes, bringing serious consequences for the savings accounts and the real estate debts.

The prevalent uncertainties in Brazil brought difficulties to fixed rate long-term operations. The solution taken to decompose total (nominal) interest in real interest and indexation. Installment payments are calculated by Price Table based solely in the real interest rate, indexed (together with the balance debtor), monthly, through the application of the correction index (nowadays, for most contracts, this index is TR).

When the real estate loan is a bad business for the unitholder, it becomes a bad business also for the financial institutions. That is particularly true, when there are difficulties to accomplish the warranties.

Being a bad business, the financial institutions passed to be lose interested by the real state financing.

TR isn't a good index, for mostly being fastened arbitrarily by the government. It isn't possible to develop a mortgages secondary market if continuing financing being generated with correction by TR.

Brazil stayed three decades without introducing significant institutional, able changes of facilitate the financing to the habitation. The Law 9514, of September 97, is an important attempt in this direction. The new law has three important aspects: a) compared all of the backers of immobile to the financial system entities, for indexation collecting ends and of interests, and of fiduciary alienation utilization; b) creates securities firms, like

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SPE, authorized to emit receivable real states certificates (BELIEVED); and c) extends to the buildings the fiduciary alienation concept.

There are five the main obstacles to the development of a financing efficient system to the habitation, namely: a) in spite of the advances obtained with the Real Plan, the inflationary memory still remains; b) economies lack of long term; c) high propensity to disrespect contracts, by means of interference of the government, in prejudice of the credibility of indexation mechanisms; d) high interests, such in nominal terms as in real terms; e) in spite of recent advances in the legal framework, uncertainties regarding to the observance of judicial practices, specially concerning to the accomplishment warranties offered in the real state loans.

The multiplicity of necks and the complexity problem requires a huge reform of the system. Isolated measures will not have an expressive impact.

Securities firms could create at the same molds of the americans Fannie Mae and Freddie Mac. Probably, the Law 9514 would have to modify. These firms would be authorized to emit debt instruments in the internal and external markets.

The quality of credit from these new firms has to be unquestionable. They should be able to provide funding (with an inexpensive and minimal structure) to the financial institutions, such for primary generation of active, as for mortgages purchase. It is necessary governmental regulation. Securitization should be done with a clear quality of credit.

In a way to make capitation costs lower, these firms should be very solid, with possibility of foreign participation. The capital bases has to be significant, not just to demonstrate solidity, but also to facilitate the mortgages final purchase.



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The current financial institutions would dedicate to captivate resources from public (domestic market), international investors (including banks), securitization agencies and also BFH.

The right of choose the insurance company to do an insurance agreement with a specific purpose to quit the balance debt just in case of death and permanent disability, should be extended to all unitholders. Nowadays, the unitholders who use FGTS to quit part of building purchase value, are obligated to buy a collective insurance policy, which prize costs five times more than one purchased by insurance's companies.

The United States created agencies patronized by the government which have been playing an important role in the system development. The three main firms are well lucrative and their capital became from private sectors. Two of them have bonds which are sold at capital market.

The Federal Home Loan Bank System advances resources to the financial institutions, according with their needs. Fannie Mae and Freddie Mac operate in the secondary market and they are broadcastings of mortgage backed securities. All of them handspike itself in market, selling own emission bonds, and they have an excellent concept of credit. They are also important buyers of final mortgages.

In the North American market, the specialization level of these institutions are increasing. In fact, originating and financing are even more separated activities. Originators don't need to keep the active in their books until the respective emolument. Actually, they don't need to have available resources.

In the United States, securitization was born the mortgages market, at the end of 70s, when they faced serious problems with funding. The financial deregulation of the 80s brought a strong impulse to this process. The own house's unitholders began to have in the pension funds and in other professional managers of resources a new source of financing.

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The contracts standardization and the confidence in the investors' rights will be always observed. The observance of the law, constitute basic presuppose for good operations in the market. In U.S., the main reason of securitization is linked with the fact that this process reduced substantially transfers costs from investors ( capital market) to lenders of final loans.

Securitization is a process driven by the market. The investors are always seeking liquid and profitable bonds; the unitholders caring for reduce their financing costs; the financial institutions trying to fit itself in the new times; and the regulatories agencies able to give space to the criativity of private agencies.

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## Chapter I - Housing finance in Brazil

Before the Housing Finance System (SFH) was created, real estate financing was limited by the absence of mechanisms able to preserve the present value of the credits conceded. In the 1950s, loans for the acquisition of a family real estate were given by Caixa Economica Federal (CEF) and by some specific social security institutions, segmented by professional category. The corrosive effects of the increasing inflation during the late 1950s, over the installments and balances, came to the point of stopping any reapplication of resources in the sector.

Housing construction started to depend on the incorporation system, by means of which the “future owners” covered the building costs during the construction. What actually was that, due to the limited resources of those “future owners”, this system implied significant delays in the time to delivery, increasing even more the costs.

The monetary correction of the installments and the balances seemed to be a solution able to re-erect the mortgage market. During the President Goulart government, a popular housing plan was developed: all loans would have, as an accounting unit, the higher minimum-wage effective in the country. Nevertheless, this initiative didn't last long. With the President Castelo Branco, a frontal attack to the problem took place. The goal was the universalization of housing. The Law 4.380, dated August 21, 1964, created the National Housing Bank (BNH) and disciplined the concession of loans. Its main goals were:

- to avoid the amortization of the loans with the use of devalued instruments, which would give the borrowers several benefits due to negative real interest rates;
- to attract private savings for funding mortgage loans;
- to keep the sustainability of the system, by preserving the present value of the installments.

BNH was an institution driven to disciplining, guiding and supervising the housing finance system, and to intermediating the flows, by transferring the resources to the several entities in the system, so that they conceded loans for the acquisition of houses and apartments.

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The BNH rules enforced the functioning of all “caixas economicas” (federal and state-ruled institutions), real estate credit societies, housing cooperatives, savings and loans institutions, and the social security institutions. All resources of the system should be driven specifically to financing new houses to unitholders that didn’t formerly own a house in the same city.

The Law 4.380 also created a financing instrument with which it intended to seize all the private savings needed for the system’s operation: the “Letra Imobiliaria”, based on the ORTN plus an interest of 8% a.a.. Together with the creation of this instrument, the BNH also started to receive compulsory resources resulting from payroll sheets of the companies and from compulsory subscription of the “letras imobiliarias”.

However, those resources were difficult to gather besides being of little value. The big push to BNH came with the creation of the FGTS (guarantee fund proportional to the time on professional duty), through the Law 5.107, from September 13, 1966. FGTS resources came from a contribution of 8% of the payroll sheets of the companies, and soon FGTS became the largest savings fund of the country. These resources were administered by the BNH.

Besides these compulsory savings (which paid interests lower than the market), the SFH managed to attract an enormous volume of personal savings, through an indexed instrument which were to become the most popular within the capital market: the “Caderneta de poupanca” (savings account). It had and still has a low captation cost comparing to other financial instruments, due to the exemption of income tax and the guarantee of deposits given by the government to this kind of deposit.

With these resources, the SFH financed more than six million mortgages since its foundation. From the mid-1970s to the early 1980s the system came to provide loans for up to 400 thousand houses and apartments a year.

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The agents who seize the resources have to use 60% of the savings deposits in real estate loans, with strong restrictions imposed by the government. Until recently, these restrictions included:

- the candidate to a loan shouldn't have any other house or loan under the system rules. This restriction excluded the real estate investments for rental or donation, and was revoked by the Resolution 2.519 , dated June 29, 1998;
- the candidate should also present an income statement and a maximum level of income compromising. Having in mind the dimension of the so-called informal sector of the economy, this procedure contributed to a significant reduction of people able to join the system. The Resolution 2.519 brought some simplifications to the former restrictions, stating that either the percentage of income compromise or the conditions required for its confirmation (in the operations where the monthly readjustment followed increases in the candidate income) would be agreed upon by both parties.

Besides those restrictions, there were another two inhibitors. *First*, it was very difficult for the lender to retake the real estate from the borrower, in case of default. The legal procedures used to take a long time before solution, what increased the loan risk. *Second*, the cost of insurance coverage for the death or permanent disability of the unitholder reached, until recently, up to 15% of the installment value. Of that amount, about 1% was destined to casualties coverage and 14% were used to fund the Income Variation Coverage Fund (FCVS). In other words, an elevated implicit tax was required for all real estate loans, disguised as an insurance premium.

Basically, the SFH has a complex actuarial problem. Due to the big variability of the inflation rate in Brazil, up to 1994, it was not possible to operate with prefixed nominal interest rates. The alternative of using contracts with floating rates was not even considered, and even if it existed, it would not be viable, for implying a higher installment value.

Thus, along the years, several indexes were used, and their function was to assure a positive interest rate, in real terms, for the lenders. The monetary correction did not precisely reflect

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the loss in the real value caused by inflation. However, the use of the TR (Referential Tax), which includes the expected inflation and some real interest, came to update the debt in levels much beyond the observed inflation.

### **The Instability of the System**

The rules of the game (and the credibility of the contracts) varied excessively, in these 35 years, according to the inflation behavior and to the recessive crises of the 80's.

Once conceded the first loans to the own house, in the terms of the Law 4.380, the unitholders' protests soon arose. The first kind of protest, a lot in vogue still in the late 60's, reflected the lack of understanding about the indexation: the unitholders complained that, the more installments paid, the more had arisen the current debtors balances. It should be reminded that the inflation rate, in this period, was decreasing and the problem, therefore, was temporary. With time, and especially from the mid-80's, this problem only worsened, contributing to destabilize the system.

The second protest was related to other inadequate mechanics of the system: the unitholders complained that the own house installments were corrected quarterly, while the salaries were readjusted only once a year. With the salary squeeze policy of the Castelo Branco government, the salaries were getting more and more outdated regarding to the inflation. To answer to this protest, BNH instituted the "Plano de Equivalência Salarial" (PES) – Wage Equivalence Plan. According to this plan, the balances debtors of the loans to the own home were still being readjusted quarterly by UPC (Credit Unit Standard), but the installments were readjusted just once a year, in the proportion of the increase of the larger minimum wage valid in the country.

With the divorce between the installments corrections and the balances debtors, the period of the loan amortization began to be variable. In any case, however, the Salary Variations Compensation Fund (FCVS), instituted in 1967 and managed by BNH, would quit the remaining debt of any PES's unitholder, after term 50% superior to the initially hired. Thus, anyone who had hired by PES a loan of 10 years could amortize it in a period larger or

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smaller, depending on the real minimum wage evolution. In any hypothesis, however, FCVS would warrant the debt quittance after 15 years. FCVS was financed by the application of a surcharge to the system unitholders installments, the Salary Equivalence Factor (FES), calculated in a way to keep the actuarial balance of the plan.

The PES made the SFH politically feasible. For the following 10 years, in an environment of decreasing inflation and accelerated economic growth, this set of measures resulted in a fast growth of the housing finance. But, from the late 70's and, more strongly from 1983 and on, SFH started to lose breath, affected by the increasing government interventions (and in one direction only) in the economy, becoming quite more vulnerable.

Until the late 70's, while inflation wouldn't get higher than 45% a year and the salaries were readjusted annually in the same proportion (see Illustrations 2 and 5 above), FCVS's health was kept unshaken. The problems started to arise at the end of 1979, when the Law 6.708, of October 30<sup>th</sup>, 1979, established biannual salaries correction and when inflation jumped to the level of 100% a year. At least as a partial compensation, it was time to shorten to six months the installments period of readjustment of the new PES's loans, since for the old loans the annual readjust had become a right for the unitholders. But the Figueiredo government didn't want to take this providence. The unbalance worsened with the inflation increase of more than 200% a year and with the real salaries compression in 1983. On the other hand, the Decree-law 2.065, of October 26<sup>th</sup>, 1983, that settled the salaries indexation for salary band, strongly compressed the real salaries of the middle income class, creating serious insolvency problems for SFH's unitholders.

Due to this problem, in 1984, it was created a subsidy to the unitholders of the system because of the FCVS. In 1985, already in Sarney government, the subsidy was renewed, but once again to FCVS's debit: the unitholder that for that moment on had accepted the biannual readjustment of the installments would stay subject to the readjustment relative to the previous year of just 112%, instead of 243%. This was a sufficiently attractive option so that nobody would have refused it. In none of the cases there was a provision of budgetary resources for FCVS, and there wasn't a way to try to rebalance it with FES, charged from

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the system new unitholders. Given that, it accumulated a rhombus of more than US\$ 30 billions in FCVS (growing to US\$ 70 billions). The savings gathered by SCI proceeded financing less and less new housing units construction and more and more FCVS's rhombus.

In 1988, BNH was extinguished by the Sarney government, having its functions been absorbed by the Caixa Econômica Federal (CEF), while SCI, for its turn was transformed in composite banks departments. However, the residential construction financing continued to be a problem needing solution.

From the macroeconomic point of view, one of the larger problems created by the frustrated attempts of desindexation of the Brazilian economy was the increasing distance between indexation series and the effective inflation series, due to the repeated use of mechanisms such as reducers, prefixing, *tablitas* and vectors. The mark of this process (in spite of not being the first attempt) was the Plano Cruzado, of March 1986. Between February 1986 and February 1991 (date of Plano Collor II), the multiplication factor of IGP-DI from Fundação Getúlio Vargas was 4.12 times larger than the multiplication factor of the units of count indexed in the period (OTN/BTN). For its turn, the FIPE's consumer price index multiplier was 3.62 times larger. That means that indexation preserved just something like 25% of the purchasing power initial values, in the five years of heterodox shocks.

In short, the indexation, that in the past used to be the anchor of the national economy, let of being reliable, after so many manipulations. It was another more dimension of risk-Brazil, that banished as much the backers as the financed.

In this picture, the substitution of indexes based on financial assets for a referential rate of resources collection was a pragmatic decision of the authors of “Medida Provisoria” (Temporary Measurement) 294, of January 31<sup>st</sup>, 1991 (Collor Plan II). In the terms of MP 294, TR could be understood not as an index anymore, but as a capitation nominal rate by the first-rate banks, a kind of Brazilian *libor*. In the regulation, however, the National



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Monetary Board preferred to interpret TR as the expected *rate of inflation built-in in nominal interest rates*. For that, it was determined that, of the net average rate paid by the sample banks, there should be discounted a reducer of 1% per month, in the quality of real interest rate. With this conception, TR ended up becoming itself a mix of reference rate and index, having the calculation procedures (essentially, the reducer definition) gone through several modifications in the last years.

It isn't surprising that, after the system had financed on average 400 thousand units per year in the 70's and 80's, in more recent years, with the inflation rate falling drastically since 1994, this average came to be about 55 thousand units.

The deterioration of the SFH occurred gradually, side by side with the inflation increase and consequent currency devaluation. Experience shows that it is not possible to have a long-term loan market that is not based over a stable currency. The savings and loans crisis in the USA, in the mid-1980's brings an important evidence of this.

In Brazil, the creation of an index (initially ORTN) was conceived like an instrument to fight inflation. Through contract indexation, the idea was to create a capital market in the country. From the government standpoint, it would allow the issuance of long-term securities and would help to avoid debt financing through expansion of the monetary basis. Indeed, between 1964 and 1966, the public debt had been reduced from 4% to 1% of the GDP, then coming to be integrally financed by the placement of securities in the market.

The Law 4.357, dated July 17, 1964, created the ORTN, which later became an indexed accounting unit, contrary to its initial purposes. Basically, the multiplication of cases of monetary indexation, foreseen in the law, gave it this role. The first attachment of readjusts to ORTN happened with the Law 4.380/64, that created the BNH and the SFH. This law stated that the real estate loans due balances should be corrected in every first day of each quarter, according to the variation of ORTN. Thus, the quarterly ORTN (known as UPC – Standard Unit of Capital) became the accounting unit for the system.

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The problem with inflationary regimes is that the more the economy gets used to the inflation the bigger becomes the tolerance to it, and the bigger the probability to start an explosive process. Said in another way, there is no stable inflationary regime. This notion is important because it contests the idea that a strong currency can derive from a certain indexer, whatever it is.

This argument is supported by the Brazilian experience with the indexers of housing contracts' indexes. The TR, for instance, which was taken as an index for several years, overcame the inflation rates, regardless of the considered index, as such as the IGP-DI and the IPC-FIPE. Figure 1 shows that, during the low inflation period subsequent to the “Plano Real” (*real plan*), the TR overestimated the inflation rates, due to incorporating an interest rate that penalized the borrower.

Monetary stability, and the subsequent reduction of the nominal interest rate, is a crucial element for the consolidation of a long-term mortgage market, where all the operations could be pactuated in local currency, under nominal prefixed or floating rates.

### **The present indexation**

The most important issue concerns how to bring incentives to the savings process and to the concession of loans destined to the acquisition of a real estate, in conditions that don't cause “divorce” among assets and liabilities in the real estate portfolios.

At the same time, the loan conditions should have credibility and attractiveness enough to allow for the development of additional funding sources. It also means the possibility to attract domestic and foreign resources to the sector, coming from institutional investors, through securitization of loans made by financial institutions.

Along the 1990s, the TR (Referential Tax) lost credibility as an indexer, mainly for being an arbitrary index, causing all kind of distortions in the system and the flee of borrowers.

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Several simulations have been conducted with different indexes, obeying to the following criteria:

- it shouldn't cause distortions (“divorce”) among assets and liabilities in the credit portfolios;
- it shouldn't be interpreted as a short-term index for the savings accounts;
- it should have credibility to allow for the development of financing alternatives.

When people hear about indexation, they have in mind a price index that will have the function of assuring the real profitability of the saver/investor, and at the same time, that does not arbitrarily affect the ability of the borrower to fulfil its obligations. In that sense, the IPC-A (Consumer Price Index – Wholesale) could be such an index, because it has a very broad range, in the country's perspective and also in a different income classes perspective.

Nevertheless, when credibility becomes essential, the IGP (General Price Index) or the IGP-M (Market General Price Index) has incontestable advantages. However, they don't fulfil the other two requirements, specially in what concerns their adherence to the borrower's capacity of payment, because they have a big volatility related to exchange rate fluctuations and supply shocks.

### **The high cost of insurance**

All loans within SFH are guaranteed by a death or disability insurance of the borrower. In case one of these happens, the insurance covers for the remaining balance pay off for the unitholder, in case of disability, or for his/her heirs, in case of death.

In the 1980s, insurance came to represent up to 30% of the installment value. This absurd situation occurred because the insurance was collective for all the system and part of the borrowers paid very low installments, in terms of the remaining value of the loan. This was due to the fact that the installments were corrected by indexes significantly inferior to those applied over the remaining value. Given that the borrowers with more recent contracts paid

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more realistic installments, they ended up being severely penalized in this perverse system of crossed subsidies.

As the percentage of old contracts with ridiculous installments diminished, the collective insurance of SFH came to have its cost significantly reduced. However, it still represents about 15% of the installment value.

Nowadays, only those borrowers using the FGTS to pay off for part of the mortgage are obliged to take part in the collective insurance policy. This is possible only for those buyers who do not own another real estate and only have one loan within the SFH system. All the rest may freely choose the insurance company, what reduces the insurance cost to something about 3% of the installment value.

This differentiated treatment between borrowers implies, admittedly, in a big injustice. The present unitholders – those who have a lower income – pay a very high insurance premium to cover a rhombus whose origin is not due to them but to benefits granted in the past to former unitholders. The truth is that, nowadays, the collective insurance system of SFH has a positive balance (the premia exceed the compensations for sinisters), and thus it is used for reducing part of the FCVS (Compensation Fund for Salary Variations) rhombus.

The proposal that emanates from the above mentioned considerations is obvious: to extend to all borrowers the free right of choice in terms of insurance company, whether they want or not to withdraw their FGTS when buying their house. It doesn't make sense to burden the new buyers for distortions generated in the system more than two decades ago. Unfortunately, there is no other solution to cover the FCVS rhombus than its socialization through using resources from the tax collection.

### **The Real Estate Finance System (SFI)**

Up to here, the analysis showed the weaknesses of the housing credit in Brazil. The activity of gathering savings resources aimed to provide loans to housing became a very bad

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business. For that, the financial institutions only seek to obey the legal requirements, sometimes using subterfuges. Some initiatives have been arising, driven to correcting the imperfections of the system. It must be noticed that Brazil remained for more than thirty years without introducing significant changes in its procedures related to house financing. Up to the promulgation of the Law 9.514, on November 20, 1997, the structure in force was the one created in 1964. In a certain way, the slowness of the institutional improvement shows the low priority given by the public authorities to the housing system, in a deep contrast with what usually takes place in other countries.

The Law 9.514, which created the Housing Finance System, represented an expressive advance into several directions. *First*, it extended to the real estates the concept of fiduciary alienation. In this sense, there seems to be a consensus that, in terms of the formalization of the juridical concept, there is nothing left to do. Now, the issue has a practical approach. From now and on, how are the courts going to interpret eventual disputes about retaking the real estates from those insolvent borrowers? *Second*, the law equated all housing finance institutions to the remaining institutions within the financial system, for monetary correction and interests, and the utilization of fiduciary alienation purposes. *Third*, it created the securitization companies, as specific purpose societies, which were authorized to issue certificates of housing receivables (CRI).

Based on that law, CIBRASEC was created, and it has been working basically as an instrument for the adaptation of the financial institutions to the legal requirements related to housing loans. It must be noticed that those institutions are authorized to buy CRIs up to the 10% limit of their savings deposits. Given that in the market there are those who show an excess of applications in housing credits and those who are in a deficit position, there is space for negotiations. In general, the problems with application are related not only with the already mentioned low availability of that kind of credit but also with the fact that many financial institutions bought banks (in the period subsequent to the *Real Plan*) with significant savings deposits, although the assets were not considered in those acquisitions. The situations of application over the legal limit, for its turn, are concentrated in the official credit institutions, which continued to give financial loans throughout the 1990s.

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It is important to point out that the negotiations among financial institutions in opposed situations in terms of fulfillment of the requirements may happen independently from CIBRASEC. Banks with an excess of applications sell assets directly to those who need to expand the volume of housing credit. If the direct transactions are viable – actually they are cheaper, due to the lower tax burden – why then use the CIBRASEC? The only reason seems to be the participants will to keep the gears lubricated, hoping that CIBRASEC does take off. Above all, it is the price to pay for a certain bet.

In that sense, tributes as such as COFINS and CPMF are serious obstacles to the development of a secondary market for mortgages. On October 1999, the Brazilian Central Bank released its studies on the costs of financial mediation in Brazil, especially in what concerns the fiscal burden and to the effects of the requirements related to the compulsory collection. The monetary authorities also announced some measures (as such as the reduction in the IOF on bank credit and the elimination of compulsory on term deposits) and presented several additional proposals, aimed at the improvement of the financial system. The important to be highlighted is that the Central Bank referred to what would be a constitutional amendment, destined to reduce the cost of financial mediation. In that document, it reads:

*“One of the most serious problems of our tributary structure refers to the indirect taxes which assume the form of a cascade over the different phases of the production process, jeopardizing the efficiency of the economic system. In the case of the financial system, which mediates a basic material – the capital - used by all firms in the country, this indirect taxation is particularly harmful”.*

Having said that, one may state that the government is conscious of the relevance of the subject. The concrete fact is that the final buyers of CRIs (others than the financial institutions) practically do not exist yet. The imperfection of the TR as an index, the contracts standardization difficulties and the issue of credit enhancement are still pending subjects, waiting for adequate solutions, able to allowing the enlargement of the market.

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## CHAPTER II - REFORM PROPOSAL

### Towards a new Housing Model

Brazilian economy displays characteristics hardly compatible with the development of an efficient habitation financing system. We may briefly say that, in our opinion, there are five great obstacles for the development of such a system.

First, in spite of the significant improvements obtained with the Real Plan, the memory of inflation dies hard. Second, Brazil clearly is still a country which lacks long term savings. Third, our history reveals a strong propensity to disrespect contracts, through interference of the Authorities themselves, thus endangering credibility in the indexation mechanisms. Undoubtedly, this is one of the reasons why such mechanisms may not be considered perfect substitutes for effective price stability. Fourth, the high and volatile interest rates, both in nominal as well as real terms, greatly increase the risk of long term financing. Fifth, in spite of the real progress achieved in the legal area, there still remain doubts as to the practical observance of the new juridical framework, especially as concerns fulfillment of real estate guarantees. As is of public knowledge, tradition demonstrates that it never is easy to retake real estate from default payers.

In view of the above, it seems clear that there are many bottlenecks in the habitation financing system, and it would be wishful thinking to believe that it is possible to solve the fundamental questions by the adoption of topical measures, incapable of eliminating the basic obstacles.

Just to illustrate, we would like to pinpoint some specific issues. The first one refers to inflation and the mechanisms to deal with it. As already said, indexation does not substitute price stability. For the economic agents, however, inflation is just a data with which we have to live with. In spite of the great advancement represented by the Real Plan, inflation is far from having been eradicated. Consequently the long-term contracts continue to

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require explicit indexation clauses, but because of the numerous changes in the inflation calculation, a discredit has impaired the system.

To the discredit thus generated, there is now an added element, in that the legislator has not specifically authorized application of the indexation to the long-term contracts. Law No. 9514, approved three years after the Real Plan implantation, avoided the expression, preferring the word "readjustment". However, for the mechanism to generate credibility, it is necessary that, from North to South, the legal representatives feel absolutely sure that the Law permits indexation. It is to be noted that the Real Plan itself permits application of this instrument for contracts superior to one year. This may lead to conclude that the question of the applicable index should not be considered merely from the prism of the more adequate price index.

Another important illustration of this argument concerns the tax aspects. In various countries, there exists a stimulus for acquisition of own dwelling, by means of tax favors, basically deduction of interest expenses. However, here too one should not admit illusions. There is a *sine qua non* condition for the income tax legislation to be effectively stimulating: the supplier of funds for habitation financing should be willing to supply the funds. And this, as already said, involves the elimination of a large number of stumbling blocks.

### **Government Role and Creation of New Institutions**

The social character of habitation financing justifies the presence of the State in this sector. This discussion, however, has to be adequately inserted within the current reality of the Brazilian economy. From the historical point of view, nationalization certainly represents one of the most serious ills of our society. Nevertheless, lately (in the 90 decade in particular) a large program of nationalization has been undertaken, and the citizens have generally become more aware of the necessity of the so-called State reforms. Consequently, the moment is inadequate to speak of State intervention, specially when one recalls the public deficit level (almost 10% of the Gross Domestic Product in 1999).



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However, this does not mean that it has to be disregarded. What appears to be fundamental is to avoid the Government direct participation in this sector. This will contribute, within other things, to stimulate the demand for public employment, but will also imply the risk of resources allocation being oriented by political decisions.

In our opinion, it is sensible to propose adaptation in Brazil of the " model" defined by the three "Government" agencies existing in the U.S.A.: FHLB, Fannie Mae and Freddie Mac. The first would be a kind of Habitation Fomentation Bank. (FBH), directed towards supplying long term funds to financial institutions dedicated to real estate financing. Such agency would be supervised by Government and authorized to make debts in and out of the country. As regards the agencies corresponding to Fannie Mae and Freddie Mac, they may be created on basis of the same law as CIBRASEC.

The basic point here is the assets structure of the companies mentioned. The credit quality of these Companies has to be absolutely above board. Should they develop, they will be great supplier of funds to the financial institutions, either by lending resources for primary generation of mortgages, or for acquisition of mortgages in the secondary market. As regards the costs of financial funding, it is obviously desirable that they remain as lowest as possible.

In order to reach this objective, it may be necessary to have a foreign participation in the Company's assets. It is to be noted that in the United States, the unquestionable credit quality of the government sponsored agencies is one of the reasons of their success.

Furthermore, it is important that these Companies have a strong assets basis, not only to show solidity (and have low financial funding costs) but also to become (like their American counterparts) final mortgage buyers, carrying these in their books. This argument certainly strengthens the idea of share participation of foreign leading groups of unquestionable quality.

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## **Long Term Target**

Adoption of the model proposed herein will permit reaching, in the course of time, a significant degree of system specialization, as happens now in the States where the functions of origin and financing are distinctly separate. In this case, the current financial institutions would specialize in capturing financial funds from the public, the securitizing Agencies, and the BFH, concentrating on operation generation of the primary market. The new agencies would already begin with specific specializations.

This specialization may be considered advantageous also in another aspect. Although this activity is not prohibited to financial institutions authorized to operate in exchange, the new Companies (BFH and the securitizing agencies) would concentrate on obtaining longer-term loans abroad. On the domestic market, as is known, the supply of long term funds is scarce, restricted to a relatively low number of institutional investors (pension funds basically). These Companies would do the hedging as per legislation norms.

## **The indexation**

TR should be substituted by a new index, preferably based on a price index. During the last years, TR lost credibility as an index, principally for being an arbitrary index causing all kinds of distortion in the system and the flight of borrowers. It would be difficult to attract investors' interests in long term papers indexed to TR, and therefore the formation of an ample mortgage secondary market would not be viable. Our suggestion is that the real estate financing contracts be indexed to a consumer price index at national level, the IPCA being the best candidate. The general index prices calculated by the Getulio Vargas Foundation (IGP-DI or IGP-M) have the superior advantage of high credibility, facilitating the attraction of investors for the development of a mortgage secondary market. However, for being more sensitive to exchange devaluation or supply shocks, they may register significant variation of the index normally used for salary readjustment. Section 2.6 deals with this matter in more detail.

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## **The Insurance Cost**

The right to choose the Insurance Company should be extended to all borrowers, independently of whether they withdraw the FGTS (Government Severance Indemnity Fund for Employees) or not, when they buy the real estate. As is common knowledge, the borrower who acquires real estate using FGTS resources is obliged to effect insurance (acquittal of balance due in case of death or permanent invalidity) through the collective SFH (National Housing System) policy, where premium value is five times superior to value collected by the insurance company, reaching 15% of installment value. The difference (positive at present) between the premium collected and the indemnity for casualties paid, serves to help in the reduction of the FCVS. (Salary Variation Compensation Fund) gap. There is no sense in charging the new dwelling purchasers with distortions generated by the system almost two decades ago, but unfortunately there is no other solution to cover the FCVS gap, except its socialization by means of tax resources.

## **Tax Handling**

In the United States, the interests on habitation loans are deductible from the Federal Income Tax. This reduces substantially the effective cost of interest on mortgages. Nevertheless, in Canada, which has a tax structure similar to the U.S.A., interests are not deductible, which reveals a lack of consensus on the matter.

We believe, however, that in Brazil, deduction of interests on real estate loans is appropriate, since the high financing cost is one of the great impeding factors. As long as the real interest rate remains superior to the economy growth rate, we believe that the Government should not collect this tax, benefiting financial development in a great social segment.

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## Hedging

As regards financial funding abroad, it is convenient to prohibit foreign currency financing for the final borrower. In Brazil, the dollar has never been a largely used index. Breaking off this tradition now would create a problem. Argentina's example gives support to the procedure suggested herein.

The exchange regime in Brazil is different from that of Argentina, but we already know what happens when individual debtors in dollars appeal to the Government, in response to an expressive foreign exchange devaluation. At the beginning of 1999, the leasing contracts in dollar for imported property (cars, basically) were altered by Government interference, immediately after the rate had passed from R\$ 1.20 to more than R\$ 2.00 per dollar. It was not a positive experience, (except by the lessons resulting thereof) specially in a period where the ideal (from the financing generation viewpoint) is contract credibility.

The matter acquires a different connotation when the foreign currency debtors are financial institutions, supervised by Central Bank, and whose day-to-day business comprises price risks. Perhaps for this reason, it would be advisable to maintain the possibility of dollar debts open only to these institutions and to the "new Companies" previously referred to.

As regards the role of Government as hedge supplier to the private system, the theme is rather complex. As is of general knowledge, in spite of alteration of the exchange regime, the public sector continues to supply the system with Government bonds indexed to the North-American currency. In the Agreement in force with the International Monetary Fund, the Brazilian Government undertook not to use subterfuges, turning absolutely transparent any and all commitment undertaken in foreign currency. The result is that the Government dollar debt (Treasury and Central Bank) with domestic creditors, is all of it expressed in exchange papers.

The debate around this theme is, in thesis, that under a regime of flexible exchange, it is better to do without the hedging mechanisms offered by the public sector. After all, under

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this regime, the exchange rate may either rise or fall, and for this reason the degree of foreign indebtedness may be inferior to the one observed under a rigid exchange control regime.

The reality is, however, that both the Treasury as well as the Central Bank continue to offer securities adjusted by the dollar variation, and this type of indebtedness represents currently around 27% of the stock of public papers in the market. Consequently, the volume of Government "dollar" papers is far from being small. However, for many people, the hedging modality has a serious inconvenience : it requires the use of cash. As is of public knowledge, the modalities which do not have this disadvantage, offered by the market itself (derivatives) are represented by assets of poor liquidity, except for relatively short term contracts (two or three months).

The foregoing situation leads us to inquire whether there is something more that the Government could do, in order to provide exchange protection for the economic agents who look abroad for long term resources necessary for their activities.

Certainly, the real estate financial members may allege that the business participants of other sectors already have access to the resources supplied by the Economic and Social Development National Bank (BNDES), without regard to the exchange issue. In fact, when receiving (long term) funds from abroad, and transforming them in national currency, on the basis of Long Term Interest Rate (TJLP) BNDES is taking on itself the exchange risk. Why not extend this possibility to the habitation sector, not included in that Bank's range?

In our opinion, it is convenient to examine carefully the alternative mechanisms, able to produce similar effects. In this respect, we have in mind the "exchange compensation fund", to be created in the government sphere, which does not involve cash movement, except as regards risk premiums and payment of casualties. In accordance with this mechanism, the public sector would allow the private agents to effect hedging of their debts in dollar, at competitive prices. Since this will not involve expressive cash movements, it would not jeopardize the monetary policy, contrary to what happened at the time of Central

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Bank's Resolution 432. Furthermore, this mechanism would be valid only to protect long term operations (let us say above five years).

Experience demonstrates that, when involving a sufficiently long period, a debt in dollar is not a bad business. Obviously, it would be up to the private sector to make or not to make the hedge, i.e. the mechanism would be absolutely elective. It is possible to imagine that, should the mechanism be approved, the private sector would have limited possibilities to "unblock" the existing hedge (a detailed analysis of this issue would penetrate too much into the operational aspects of the system). Undoubtedly this idea has two inconveniences a) its heterodoxy in the measure in which the "good" debt is the chattel one, b) tendency to increase the Government debt. However, there is no reason to presume that the social costs of this mechanism are superior to its benefits.

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## Chapter III - Secondary Mortgage Market

### Overview

Tapping long term funds in the capital markets in order to foster creation and expansion of secondary mortgage markets is perhaps the hottest topic in housing finance today. Mortgage-backed securities (MBS) have been issued in at least sixteen countries. Another twenty or more are discussing or contemplating the creation of a secondary market.

Why is secondary mortgage market development such a hot topic ? There are a number of reasons. Secondary market development holds the promise of :

- Expand the flow of funds to housing and improve risk management for lenders (particularly depositories);
- Creating a flow of high quality fixed income securities to meet the demands of emerging pension and insurance investors (particularly in countries undergoing pension reform);
- Expanding competition in a market long dominated by specialized circuits and institutions. Issuance of asset-backed securities can be done by thinly capitalized originators because the loans do not remain on balance sheet;
- Financing housing loans off-balance sheet( existing lender facing capital constraints) either as capital or crisis management tool.

Secondary market development is not a new topic. Mortgage securitization has its origins in European mortgage banking going back to late 1700s. The issuance of securities backed by pools of mortgages and the reputation and capital of a mortgage bank has been a staple of mortgage finance in Scandinavia , Germany , France and Spain .

A variant of the mortgage bank model that has enjoyed considerable success in the U.S. in the liquidity facility with institutions acting as collateralized lenders and centralized bond issuers. However, these models address only one element of true secondary market

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development: funding. The origination, servicing and credit enhancement aspects of mortgage lending remain bundled in the originating institution.

The modern secondary market emerged in the U.S. in the 1970s. This model is different from continental European mortgage banking in a couple of respects :

Functional separation. The modern SMM involves a unbundling of the functions of loan origination , servicing , credit enhancement and funding.

Issuance of asset-backed rather than institution-backed securities . Investors must depend on the pool of loans and external credit enhancement and not the assets on capital of the originator or servicer .

Unbundling is simply a convenient way to describe a system in which a number on functions and activities associated with originating, servicing, brokering and investing in mortgages are accomplished by two or more specialists , as compared to a bundled system in which virtually all the functions reside in a single mortgage intermediary.

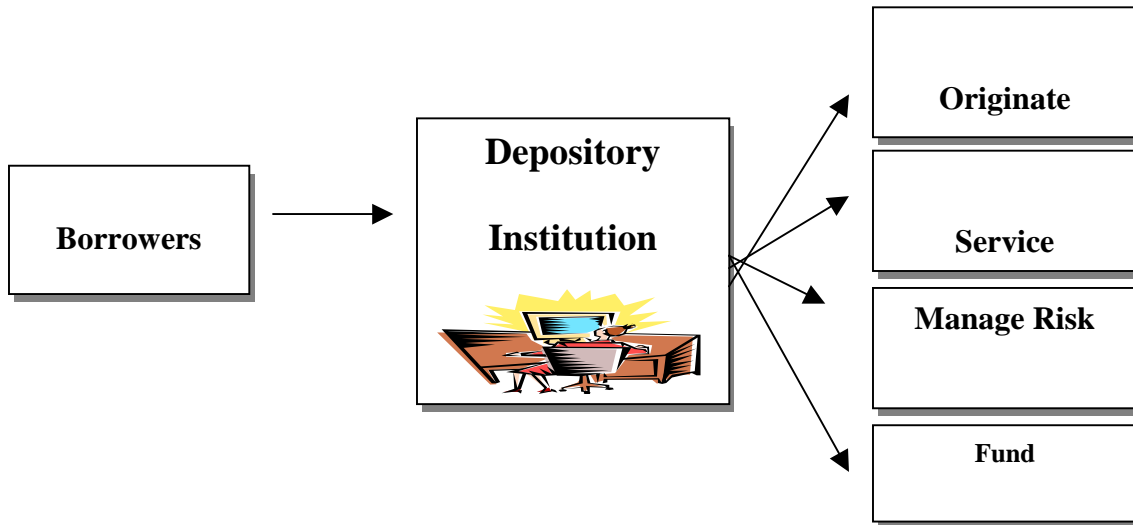
The unbundled systems typically use mortgage securities as the financing vehicle as compared to the bundled intermediary system which relies on deposits and or some on balance sheet institutional financing source. The United States currently utilizes both systems , although the unbundled system is now the dominant.

**Figure 1** provides a simple visualization of a bundled financial system. In this system characterized by that portion of the U.S. mortgage delivery system dominated by saving and loans and commercial banks the depositories assume all the major functions of origination , servicing and portfolio risk management. These intermediaries still purchase a few services from third-party vendors, however , the primary functions are accomplished by a single firm. The depository originates a mortgage to a homebuyer services and performs all the pipeline risk management functions , including funding.



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## Traditional Mortgage Model



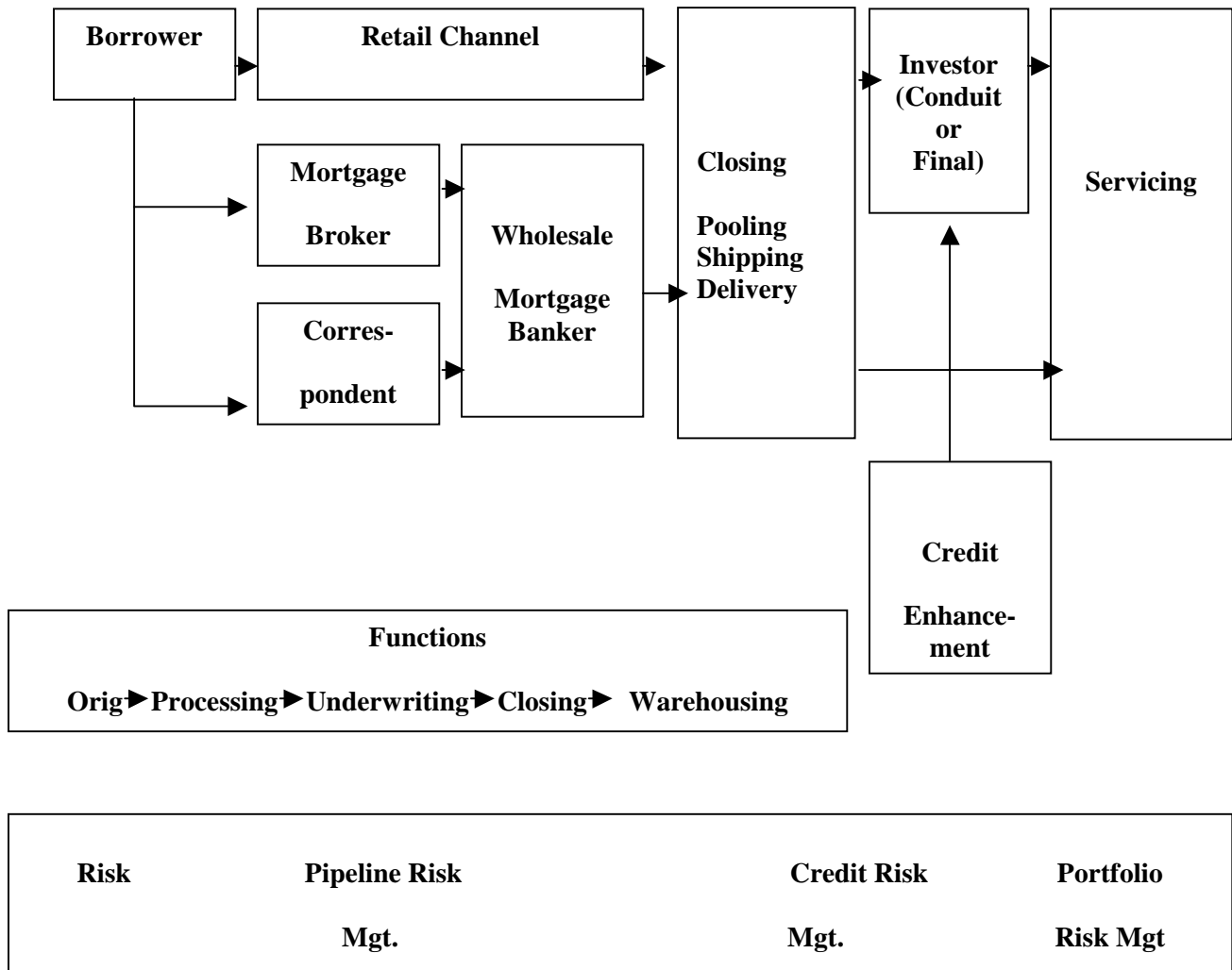
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**Figure 1: The Bundled Home Mortgage Delivery System**

**Figure 2** provides a visualization of unbundled mortgage finance system dominated by security issuing firms. This system unbundled the mortgage delivery system functions that are performed by large number of specialized organizations which include:

- Loan broker who close loans on be wholesale mortgage banking firms.
- Loan correspondents who originate loans and sell them to wholesale mortgage bankers.
- Full service retail mortgage bankers who originate mortgage, assume pipeline risk and deliver them to investor(conduits) such as Fannie Mae and Freddie Mac trust ( in the case of private-issue and backed securities (ABS).
- Organizations, Usually Mortgage Banks Who Service Mortgages.
- Security issuance firms that perform certain portfolio management activities, issue securities and perform sub-servicing to investors.
- Investors who perform a variety of risk portfolio management activities.
- Mortgage and mortgage security credit risk guarantors and insurers , who may be either public or private.

## Unbundled Mortgage System



**Figure 2: The Unbundled Mortgage System**

Despite the interest expressed by investment bankers, analysts and others, secondary markets and securitization have been slow to take off outside of the U.S.. Until recently development was mainly confined to English speaking, commonwealth countries (UK , Canada, Australia). Attempts to introduce securitization in continental Europe have been slow reflecting difficulties in developing the proper legal framework (in civil law environment) and the lack and need on the part of entrenched portfolio lenders to sell assets.

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This change is reflected in the volume of MBS issuance in Europe. MBS have been issued in 9 countries and non-UK issues are becoming a major factor. Perhaps more importantly, secondary markets have been created in a number of developing countries including Argentina, Columbia, Hong Kong, Trinidad and Tobago and Ghana. Why has this change come about? Through a combination of hard work to create the legal and regulatory framework as well as a growing interest in and need of domestic lenders to finance off-balance sheet.

Securitization may be a necessary first step towards secondary market development. The separation of the funding from the origination and servicing of mortgages is the first form of functional separation. The ability of mortgage banking institutions to fund off-balance sheet facilitates increased competition with retail funded depository institutions. As a more competitive market develops, there will be increased pressure for specialization in the origination function (moving from origination through branches with significant cost overhead to use of brokers and intermediaries who only get compensated for successfully closed loans) and servicing which through the application of technology is beginning to demonstrate the potential for significant economies of scale.

The mortgage market is a collection of markets that includes a primary mortgage market, or origination market, and a secondary market in which mortgages trade. These two markets were essential for the development of the robust primary market in the U.S.. Similarly, the secondary market is dependent on a consistent and healthy primary market for its product or raw material.

While we provide here a thumbnail sketch of the early mortgage market – to give reader an appreciation of the need for a secondary mortgage market – the focus of this chapter is on the secondary mortgage market. That market includes the market for whole loans and the market for mortgage-backed securities. Our primary focus is on products backed by single-family mortgage loans. The secondary markets for mortgages backed by multifamily houses and commercial property.

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## Government Intervention in the Housing Finance Market

A major goal of U.S. public policy is to provide adequate and affordable housing for U.S. citizens. Historically, the private sector has not been able to accomplish this goal without the intervention of the federal government. To understand the ways in which the government can intervene in the housing market, it is necessary to recognize the three groups participating in the housing market:

- 1- those who demand funds with which to purchase a home (borrowers);
- 2- those who supply funds by investing in mortgage loans or mortgage-related products (Investors), and
- 3- those who supply housing (builders). The amount of housing construction and the amount of funds demanded for the purchase of homes are determined by the combined actions of these three groups.

The U.S. government has influenced the behavior of all three groups by creating government agencies or government-sponsored entities that have one or more of the following:

- Insured or guaranteed mortgage loans against default, thus making mortgage funds available to certain segments of the population who would not otherwise have been able to acquire a home; moreover, government guarantees made such mortgage loans attractive to investors;
- Introduced or promoted various types of mortgage designs that are more attractive to borrowers and investors;
- Developed various mortgage-backed securities products such as passthroughs and collateralized obligations, and guaranteed those products against default risk so that a wider range of institutional investors would supply funds to the mortgage market;
- Standardized mortgage loan terms and documentation as a result of the process of insuring/guaranteeing mortgage loans and securitizing them;
- Provided liquidity to the mortgage market by buying mortgage loans;
- Provided credit facilities to certain lenders in the mortgage market;

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- Granted loans at an interest rate below the prevailing market rate to encourage the construction of low-income housing.

### **Limitations of the Early Mortgage Market**

In the first decades of the post-World War II period, the bulk of mortgage loans was originated and kept in the portfolios of depository institutions (and a lesser extent, insurance companies). By 1950, depository institutions held nearly 50% of these loans, of which S&L held 20%; by the mid-1970s, the share of depository institutions had grown to 64%, of which S&L held 37%.

Thus, the supply of funds to the mortgage market was dependent on the ability of depository institutions, particularly S&L, to raise funds. Depository institutions, however, were encouraged by legislation and regulation to confine their deposit seeking and lending activities to their local market. Since they were constrained to obtain their funds from local citizens, a poor allocation of mortgage capital resources resulted, as some regions had an excess supply of funds and low rates and others experienced shortages and high rates.

Enter a new participant—the mortgage banker or, more accurately, the mortgage bankers broker. Unlike thrift and commercial bankers, mortgage bankers did not provide funds from deposit taking. Instead, they originated mortgage and sold them, not only to life insurance companies, but also to thrift in other parts of the country looking for mortgage investments. They provided a brokerage function, laying the foundation for a national market. Although the mortgage market operated this way through the late 1960s, it had a major flaw – it remained dependent on the availability of funds from thrifts and banks, either local or national.

The late 1960s was a period of high and fluctuating inflation and interest rates; disintermediation, induced by government-imposed interest rate ceilings on deposits, led to a reduction in the funds available to all depository institutions for investment in the mortgage market. Even if funds were available, the traditional fixed-rate mortgage loan in

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such an economic environment was an unattractive investment, particularly to depository institutions that were borrowing short term. To counter , or at least mitigate, this problem, a mortgage market that was not dependent on deposit-taking institutions was needed. This could be accomplished by developing a strong secondary mortgage market in which financial institutions, in addition to deposit-taking institutions and life insurance companies, would find it attractive to make investments that in turn provide funds to housing. To make mortgage loans more palatable to other financial institutions, new mortgage designs and security structures collateralized by mortgage loans had to be developed.

### **Foundations For The Development Of The Secondary Market**

The foundations for the secondary mortgage market can be traced back to the Great Depression and resulting congressional legislation. Congress's response to the depression's adverse effects on financial markets was to establish several public-purpose agencies. The two entities that were established to provide credit facilities for depository institutions were the Federal Reserve for commercial banks and the Federal Home Loan Banks (FHLB) for Thrifts.

Congress founded the Federal Housing Administration (FHA) through the National Housing Act of 1934. The FHA was authorized to provide programs to assist in constructing, acquiring , and /or rehabilitating single-family and multifamily properties. Following World War II , its role expanded to programs for urban renewal projects, hospital, and nursing homes. To meet its policy objectives , the FHA did two things. First , it reduced credit risk for investors by offering insurance against mortgage defaults. Not all mortgages could be insured, however. To be insured, the mortgage applicant had to satisfy the underwriting standards established by FHA . The FHA was thus the first agency to standardize the mortgage design it insured. While this standardization may be taken for granted today, it was essential for the development of a secondary mortgage market.

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Second, in the process of insuring mortgages, the FHA developed and promoted a mortgage design that would be more palatable to borrowers. Prior to the founding of the FHA, only balloon mortgages were available. In a balloon mortgage, the homeowner made only interest payments over the term of the mortgage; that is, no periodic payments were made to reduce the original loan balance. At the maturity date of the mortgage, usually between 5 and 10 years after the loan was obtained, the original loan balance had to be repaid, with the proceeds for repayment typically coming from yet another mortgage loan. This mortgage design increased the probability of default, since a homeowner, for a variety of reasons, might not have found a funding source to pay off the balloon payment due.

Who was going to invest in these mortgages? Thrifts could, and they had, at that time, tax incentives to do so. But these investments would be illiquid in the absence of a market in which they could be traded. Congress thought of that, too. It created a government-sponsored agency, the Federal National Mortgage Association (FNMA) to provide liquidity. This agency, popularly known as “FANNIE MAE”, was charged with the responsibility for creating a liquid secondary market for mortgages by primarily buying FHA mortgages. Unlike mortgage bankers, Fannie Mae was an investor in mortgages.

Despite the presence of Fannie Mae, the secondary mortgage market did not develop to any significant extent. During periods of tight money, Fannie Mae could do little to mitigate the problem because of the continued reliance on depository institutions to originate mortgage loans. In response to this problem, Congress divided Fannie Mae into two organizations in 1968: 1- The current Fannie Mae and; 2- The Government National Mortgage Association (GINNIE MAE). Ginnie Mae’s function was to use the “full faith and credit of the U.S. government” to support the FHA mortgage market, as well as the market for mortgage loans insured by two other government agencies, the Veterans Administration (VA) and the Farmers Home Administration (FmHA)

Two years later in 1970, Congress authorized Fannie Mae to purchase conventional mortgage loans and created the Federal Home Loan Mortgage Corporation (FREDDIE MAC) to provide support for conventional and FHA/VA/FmHA mortgage loans. While

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Fannie Mae and Freddie Mac are commonly referred to as “agencies” of the U.S. government, both are corporate instrumentalities of the U.S. government. The stock of these two entities trades on the New York Stock Exchange; therefore they are effectively quasi-private corporations. They do not receive a government subsidy or appropriation, and are taxed like any other corporation. Fannie Mae and Freddie Mac are more appropriately referred to as government-sponsored entities. The guarantee of a government-sponsored entity does not carry the full faith and credit of the U.S. government. In contrast, Ginnie Mae is a government-related agency because it is part of the Department of Housing and Urban Development. As such, its guarantee carries the full faith and credit of the U.S. government.

Ginnie Mae accomplished its objective by guaranteeing securities issues by private entities that pooled FHA, VA and FmHA mortgages together, using the mortgages as collateral for the security sold. Freddie Mac and Fannie Mae purchased and pooled primarily conventional mortgages and then issues securities using the pool of mortgages as collateral. This process of converting individual mortgages into securities collateralized by mortgage pools is called securitization, and the securities thus created are known as PASSTHROUGHS. These passthroughs were then purchased by many types of investors who had previously shunned individual mortgages.

### **Market Making**

Trading in the secondary market has been fostered by several factors. First, investment banking firms and commercial banks have committed capital to make markets in passthroughs and CMOs. Second, because of the improved liquidity of the market, institutional investors have been more willing to trade mortgage-backed securities actively. Such trading has allowed them either to capitalize on expectations about yield spread changes between these securities and other sectors of the bond market or to rebalance a portfolio based on the changing characteristics of their liabilities.



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The second half of the 1980s saw a sharp decline in bid-ask spreads for several reasons. First was the increased competition among U.S. investment banking firms, money center banks, and, more recently, foreign securities firms. Initially, dealer firms competed by offering a variety of services to clients in exchange for transactions. Examples of such services included the valuation of mortgage-backed securities, asset/liability analysis for commercial banks and thrifts, and research information. Today, the passthrough market is more of a commodity business.

Second, the development of a myriad of interest rate risk-control tools allowed dealer firms to reduce their capital risk effectively and inexpensively. This is not to say that there was not an extensive learning process involved with hedging positions – in early 1986 several dealer firms realized substantial losses both on their long pass through position and on a short position in Treasury futures that they had tried to use to hedge their long position.

Standardized agreements to accommodate the nuances of the mortgage-backed securities market were developed to permit dealer firms to improve their market-making capabilities. More specifically, the repurchase agreement limited the flexibility of dealers in covering a short position so as to avoid the expensive cost of a fail or to postpone delivery of a security to a future date. If the dealer uses a repurchase agreement in such cases, the dealer firm is obligated to return the identical security. The dollar roll agreement (or simply, dollar roll) is a form of collateralized borrowing developed for the passthrough market. A dollar roll permits dealer firms greater flexibility in covering a short position by allowing a dealer firm to return substantially identical securities.

### **The private mortgage-backed securities market**

The mortgages that the agencies may purchase or guarantee in securitized form are restricted to those that meet their underwriting standards, which set limits such as the maximum size of the loan and the maximum ratio of the amount of the loan to amount of the market value of the mortgaged property. Such mortgages are called conforming mortgages. Similarly, a mortgage that fails to satisfy the underwriting standard is called a

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nonconforming mortgage. Mortgage loans that are greater than the maximum permissible loan size are referred to as jumbo loans. Congress has periodically increased the maximum amount of the loan that may be included in passthroughs guaranteed by the three agencies, but it is still often below the typical average cost of a home in certain geographical areas.

The agencies did not do anything for the liquidity of nonconforming mortgages such as jumbo mortgages. The importance of the nonconforming mortgage market can be seen by the size of the jumbo loan market, estimated at \$500 billion. In 1998, jumbos constituted about 25% (or \$91 billion) of newly originated mortgages. This segment of the mortgage market had to be securitized by the private sector, with any such securities carrying no explicit or implicit U.S. government guarantee.

Privately issued – i.e., conventional or private label – passthroughs were first issued in 1977 by the Bank of America, but met with many impediments to widespread acceptance by investors. The government wanted to see the private sector market develop, not only to improve its liquidity, but because of concern with the huge potential liability of the U.S. government should the agencies have to make good on their guarantee in the event of massive homeowner defaults. One of the objectives of the Presidential Commission of Housing established in mid-1981 was to recommend a number of private sector alternatives.

The commission's report in April 1982 recommended the privatization of Fannie Mae and Freddie Mac and the development of private sector alternatives to the two government-sponsored entities. The commission pointed out three major problems to be solved before an efficient private sector market could be developed. First, private passthroughs were being crowded out by agency issues. Second, private issuers faced federal and state laws or regulations that either limited the demand for private label products, or resulted in security structures that were not cost-efficient for issuers. Moreover, these restrictions had no economy justification. For example, federal or state regulators would not permit such securities to be treated as qualified investments for the institutions they regulated. Tax rules regarding how a transaction must be structured in order to qualify as a nontaxable conduit

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resulted in needlessly expensive security structures. Finally, private issues lacked standardization, thereby limiting liquidity.

The development of the private passthrough market has been the result of government intervention to foster the growth of this sector, as well as initiatives undertaken by the private sector to structure passthroughs in a way that would enhance their credit quality.

### **Government Intervention**

Several legislative acts and regulatory changes helped foster the development of the private mortgage-backed securities market. The Secondary Mortgage Market Enhancement Act of 1984 (SMMEA) included provisions to improve the marketability of mortgage-related securities earning a double-A quality rating or better from one the nationally recognized commercial rating companies. SMMEA declared such securities (which are referred to as SMMEA-qualified securities) to be legal investments for federally chartered banks and thrifts. It also made SMMEA-qualified securities permissible investments for state regulated financial institutions (depository Institutions and insurance companies) that are permitted to invest in Treasury securities or federal agency securities. The SMMEA granted individual states the right override this particular provision of the act by October 1991, however 21 states have exercised their prerogative and overridden the portion of the act that applies to state regulated financial institutions, thereby reducing the funds that could be invested in the private sector market. The Department of Labor, which has the responsibility of regulating pension funds, had made private passthroughs acceptable plan assets.

The peculiarities of the packaging of passthroughs made it difficult for issuers to comply with SEC registration regulations. The SEC requires that the prospectus contain pertinent information about the underlying pool of mortgages. However, in the creation of mortgage-backed securities, issuers sell the securities while they are assembling the underlying pool of mortgage loans. Thus, the final pool is unknown at the time of registration and cannot be indicated in the prospectus. SEC regulations prevented the registration of these blind pools

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and refused to allow such underwriting on a shelf-registration basis. In addition to the registration requirements, issuers had to contend with the requirements for periodic reporting after the MBS was issued. None of these rules applied to agency MBSs, since such securities are exempt from SEC registration. The increased cost associated with the inability to time issuances via the self-registration mechanism, the lost flexibility to assemble pools prior to the offering, and the ongoing reporting requirements all made private issuance unattractive and impeded the development of the private label passthrough market.

Recognizing this, the SEC significantly modified the requirements for private passthroughs issuers in 1983 by permitting the registration of securities backed by blind pools, as long as the issuer commits to obtain a specified quality rating and provides sufficient information about the potential pool in the prospectus. When the final pool is assembled, that information must be sent to investors. Private mortgage-backed security issuers can now also qualify for shelf registration, and the periodic reporting requirements are less stringent than for corporate issuers. The SMMEA exempted qualified SMMEA securities from state blue-sky laws unless overridden by state statutes. By October 1991, eight states overrode this provision.

The Tax Reform Act of 1986 made the structuring of private mortgage-related securities less costly from a tax perspective. An entity that issues a mortgage-backed security is simply acting as a conduit in passing interest payments received from homeowners through to the security holders, and thus it wants to make sure that any legal structure created to distribute those payments is not taxed. Under the tax law, the issuer is not treated as a taxable entity if the passthrough is issued through a legal structure known as a grantor trust. Therefore, the grantor trust arrangement is used by issuers of passthroughs. However, there is a major disadvantage to the grantor trust arrangement: if there is more than one class of bonds, then the trust does not qualify as a nontaxable entity.

While structures could be designed to avoid adverse tax treatment, such structures were inefficient, considering that in the absence of tax rule restricting multiple classes of bonds,

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the same collateral could be used to create securities with a higher price. Private issuers needed a new type of trust device so that mortgage-backed security structures with more than one class of bonds could be issued more efficiently.

The 1986 act expanded the types of structures that could be issued (if certain conditions were satisfied), without incurring a separate tax on the legal entity that distributes the cash flow. More specifically, the act introduced a new type of trust device called the real estate Investment Conduit (REMIC), so that mortgage-backed securities with multiple bondholder classes could be issued without any adverse tax consequences.

Finally, brokers and dealers could use agency passthroughs as collateral for margin transactions. Prior to 1983, private passthroughs were not marginable. In January 1983, the Federal Reserve Board rectified that situation by amending Regulation T to allow the same margin requirements as for over-the-counter nonconvertible bonds.

### **The whole loan secondary market**

The securitization of mortgages played the critical role in improving liquidity in the mortgage market, as originators sold mortgage loans (called whole loans) to the conduits or created their own securities with newly originated mortgages. However, there was still a need for a secondary market for trading whole loans among investors. This market could serve several functions.

First, even mortgage originators that had products qualified for sale to the conduits could sell them in the whole loan market. By packaging both conforming and nonconforming products for sale in the whole loan market, mortgage originators would receive a better price than by splitting up the two and selling them in their respective markets. Because they are less liquid, the yield of whole loans is typically 50 to 100 basis points higher than that of comparable coupon passthroughs.

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Second, mortgage originators would also use this market to purchase whole loans to satisfy mandatory commitments. Third, institutions that sought to rebalance their investment portfolio needed a market to do so. Depository institutions that sought adjustable-rate mortgages which they could not originate themselves would use this market.

### **Secondary Market Trading Services**

While the whole loan secondary market continues to be a highly illiquid and fragmented market, the market has been improved by the participation of entities that provide various secondary market trading services.

Whole loan brokers provide a wide range of services, including the screening of potential counter-parties to a transaction in terms of their financial capabilities and integrity. Other brokers work closely with their customers in negotiating the terms of bulk sales. For example, if a life insurance company wants to sell residential mortgages with a mortgage balance of \$ 20 million, varying coupons and remaining lives, the price must be negotiated. This requires an in-depth analysis of the mortgage portfolio. The terms must be negotiated as well. For example, mortgages require servicing (collecting payments and so forth); the mortgages can be sold with the servicing released or retained. Brokers also provide various types of analysis such as optimal delivery analysis or pricing of servicing.

In the 1980s, private mortgage insurance companies expanded their traditional function to include various forms of services to secondary market participants. At one time, private mortgage insurers introduced buyers and sellers without direct compensation. Their compensation was indirect through the insuring of the mortgages. They now receive direct compensation for this services and others services. Examples include: (1) evaluating for credit quality of mortgage loans to ensure compliance with the buyer's underwriting standards, and (2) acting as a master servicer to the numerous entities that may be servicing the mortgage loans in a portfolio. The increased role of private mortgage insurance companies in secondary mortgage services has come at time when the need for private

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mortgage insurance has declined. Newly devised credit enhancement structures have diminished the need for such insurance.

## **Dealers**

Dealers in a market provide liquidity by buying for and selling from their own inventory. Private entities are active as dealers in the whole loan market. The major dealers buy individual whole loans or bulk loans but usually do not sell individual whole loans to investors. Instead, they accumulate whole loan positions with the intent of doing one of two things with the inventory: (1) creating a capital market instrument (passthrough or CMO), or (2) in the case of private conduits, selling a package of whole loans to an institutional investor.

Typically, a dealer does not know how it will ultimately use the whole loans accumulated. Instead, the best use will depend on market conditions. The prices that dealers bid on whole loans are a worst-case scenario bid. By this we mean that the dealer determines the alternative for its accumulated position that will offer the lowest proceeds.

Dealers compete among themselves for whole loans, as well as with Fannie Mae, Freddie Mac, and institutional investors that wish to buy whole loans for their investment portfolio. Dealers are less aggressive in bidding on whole loans to their clients. In addition, unlike institutional investors that bid on whole loans and hold them in their portfolio, a dealer must hedge the price risk of the whole loan position. Bidding will reflect the cost of hedging.

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## Conclusion

As a result of government intervention, the liquidity of all sectors of the secondary mortgage market – agency MBSs, private label MBSs, and whole loans – has increased. The market for agency passthrough securities is now the second most liquid, long-term fixed-income market in the United States, the first being the U.S. Treasury securities market. Thus, the government has accomplished one for its goal. However, the dominance of agency securities has crowded out the private sector, whose growth the government seeks to encourage in order to reduce potential liabilities resulting from its implicit or explicit guarantees.

The greater liquidity, coupled with new mortgage designs and security structures, has resulted in increased participation by a greater number of non-depository financial institutions. This, in turn, has assured a supply of funds to the mortgage market sufficient to keep mortgage rates in line with rates in others sectors of the long- term debt market. As such, rates in the mortgage market have reflected supply and demand in the capital markets rather than the fortunes or misfortunes of thrifts.

In a way to have a good performance of a real estate financial system, it is required:

- an adequate supply of long-term resources for the lending institutions,
- an active secondary market, able to guarantee a continuous flow of funds for the sector, under competitive conditions,
- a stable institutional environment that assures the contracts providing a favorable macroeconomic conditions,

The social importance of the housing sector justifies governmental intervention . Even in the country that constitutes the most significant free initiative regime, in practical terms, this sector is one of the “elected” for the state action.



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