BRAZIL Housing Sector Non-Lending Technical Assistance (*Minha Casa, Minha Vida* Guarantee Fund) and Housing DPL Implementation Completion and Results (ICR) Report

Aide Memoire
Mission, May 24-28, 2009

INTRODUCTION

1. A World Bank mission comprised of Sameh Wahba (Sr. Urban Specialist, LCSUW and Team Leader), Loic Chiquier (Manager, Non-bank financial institutions group, GCMNB), Roger Blood (mortgage insurance consultant) and Catherine Lynch (housing consultant, LCSUW) visited Brazil between May 24-28, 2009. The objectives of the mission were to: (a) discuss with the Ministries of Finance and Cities the scope of the requested technical assistance to the housing sector and the Minha Casa, Minha Vida (MCMV) stimulus program; (b) review existing information and undertake a preliminary assessment of the MCMV Guarantee Fund, including the guarantee and insurance components, in light of international experience and in view of its future development to ensure sustainability in the medium and long-term after the completion of the MCMV program; and (c) consider how the Guarantee Fund component of MCMV might be transitioned over time into a more sustainable mortgage credit enhancement framework. While in the field, the mission also discussed the draft Implementation Completion Report (ICR) of the US$500 million housing sector reform DPL, part of the sustainable growth and equity DPL series which closed in 2006.

2. The mission met with senior officials and representatives of: banks, trade groups and developers in Sao Paulo; government (Ministries of Finance and Cities), the Central Bank (BACEN) and Caixa Económica Federal (CAIXA)'s Financial Agent and FGTS operator arms in Brasilia; and insurance companies and trade groups in Rio de Janeiro. The mission would like to acknowledge Sra. Inês Magalhães, National Secretary of Housing, Ministry of Cities; Sr. Dyogo de Oliveira, Adjunct Secretary of Economic Policy, Ministry of Finance; Sr. Jayme Garfinkel, President, Brazilian Federation for General Insurance (FenSeg); Sr. Nylton Velloso, Vice President, Brazilian Association of Mortgage Lenders (ABECIP); Sr. Joaquim Lima, National Superintendent of FGTS, CAIXA; Sra. Bernadete Coury, National Superintendent of housing, CAIXA; and their respective teams. Annex I presents a detailed assessment of the Guarantee and Insurance Funds and preliminary recommendations, and Annex II presents the list of persons met.

MAIN FINDINGS AND RECOMMENDATIONS

3. <u>Preliminary assessment of the Guarantee Fund</u>: Some features of the Guarantee Fund are useful in advancing the MCMV goals, especially the payment protection insurance (PPI)'s likely effect on reducing low income groups' economic insecurity and thus increasing their propensity to take long-term mortgage loans, and the Government's upfront commitment of significant dedicated funding. There are, however, some key issues with the Guarantee Fund, especially in light of its future development to ensure sustainability in the medium and long-term after the completion of the MCMV program. These are:

- There is no requirement for independent credit risk management or independent program administration. CAIXA would simultaneously be a user and administrator of the Guarantee Fund, a situation which could lead to two potential risks. First, this would make CAIXA a competitor with other lenders that might consider using the Fund, which could deter them from participating especially if the regulations for processing claims with the Fund are unclear. Second, CAIXA would in theory have an ability to direct marginal credit risks to the Guarantee Fund, as this would allow it to accelerate lending while keeping a strong balance sheet. This could eventually produce adverse outcomes to the Government.

- The PPI terms, especially the 36 and 24 months, are too long and could potentially engender perverse borrower incentives regarding loan repayment, moral hazard and possibly fraud.

- Treating the Guarantee Fund advances as deferred borrower indebtedness, rather than as an outright benefit/indemnity (intended to address the moral hazard problem), will reduce low-income borrowers' ability to catch up and repay unpaid installments, in addition to potentially long periods of accrued interest. The Fund advances will thus translate into rising loan-to-value (LTV) ratios that may lead in some cases to negative equity and borrowers' unwillingness to repay. Loans falling more than six to twelve months behind could thus struggle to be brought current and could cause substantial uninsured losses for lenders in the case of foreclosure. Loss exposure will be especially an issue for the 6-10 minimum wage groups, as they lack the upfront subsidies that reduce initial LTVs. In addition, extending delinquent loans with original 20-25 year terms by 3-5 years would leave many lower income borrowers heavily indebted for long periods.

- Required repayment of Guarantee Fund advances could impose a significant added cost and an administrative burden on lenders' servicing platforms, as this would require servicing two separate repayment streams—one scheduled and one flexible—embedded in a single loan. This operational challenge could deter banks' willingness to participate.

- It appears that the Guarantee Fund would not be subject to any direct or quasi-insurance regulation, any rating agency review, or any formal periodic determination of actuarial soundness. This could also serve to discourage banks' participation.

- Administering claims to the Guarantee Fund from informal sector borrowers could be extremely complex due to the difficulty of reliably documenting income loss, in addition to posing risk management challenges and susceptibility to fraud.

- The Guarantee Fund's PPI program (borrower-benefit) lacks a link to mortgage default insurance (lender-benefit). These tend to be complementary coverage types as advances on behalf of temporarily stressed borrowers often benefit lenders by averting foreclosure, but ultimately it is mortgage insurance that provides protection to lenders against loss when the collateral property value is insufficient to make the lender whole. Longer-term PPI payments for the borrower, as provided by the Guarantee Fund, offers an uncertain value to the lender. Yet, shorter-term PPI terms linked to traditional mortgage insurance is a win-win, with temporary borrower relief and credit enhancement for the lender.

4. An initial review with CAIXA of the Guarantee Fund's current financial model suggests the following apparent concerns (subject to receipt and further detailed review of the model): (a) the lack of ongoing premium income, either direct or publicly subsidized, would likely affect the Fund's sustainability over the long-term; (b) the model's worst-case scenario assumes substantial eventual recovery of the amounts advanced by the Fund to lenders, which is overly optimistic; and (c) the model does not include real economic "stress testing," which links the drivers of the model with historical data of key regional/national economic indicators, notably unemployment.

5. Preliminary Guarantee Fund-related recommendations include:

- The maximum benefit periods provided to eligible borrowers experiencing loss of income should be reduced from the current 24-36 months to a limit of 6-12 months to align the program with positive borrower behavior and incentives and international "best practices", to reduce the likelihood of moral hazard, and improve the Fund's financial strength and claims-paying capacity during a period of economic stress.
- Eliminate the Guarantee Fund's policy of seeking full recovery of the delinquent loan advances and all related financial recovery projections because the effects of accumulating long-term debt and compound interest could serve to deepen the indebtedness of low-income borrowers.
- Apply an appropriate premium rate/charge to assure the Fund's sustainability, including under severe adverse circumstances, coupled with the implementation of a targeted premium subsidy to close the affordability gap where needed.
- Design and implement a modest bonus plan benefit for borrowers who pay the scheduled installments in a timely fashion for some sustained number of months.
- Ensure independent credit risk management and Fund administration. One approach is to install firewalls around the Guarantee Fund within CAIXA, which is the current plan. Another option, which better equipped to address the risks based on lessons learnt from international experience, is to identify/create an independent public or private entity (independent of CAIXA) to professionally manage the Fund according to established insurance principles.
- Give the Guarantee Fund a legal/regulatory framework that would enable it to continue and expand its housing finance/credit enhancement mission and which ensures appropriate regulatory oversight (e.g. by the insurance regulator, SUSEP).
- Expand the concept and scope of mortgage credit enhancement so as to attract over time private market participants, and explore in the medium term potential mortgage insurance including government-private partnerships to expand housing finance down market.

6. Preliminary assessment of the Insurance Fund: The premise of the proposed Insurance Fund, which provides life, disability and property insurance, is that low-income groups cannot afford prevailing market costs for privately-provided insurances that are required when buying a home with a mortgage loan and that only a direct public program could rapidly address the stimulus package's housing production target. This outcome, however, appears to create the undesirable result of a non-insurance insurance program, without regulation, skilled executive

management, or a sustainable business model. The main concerns related to the Insurance Fund are:

- The Fund does not appear to self-sustaining. Deeply discounted premium rates, not actuarially based and without ongoing subsidies, appear to fall far short of what would be needed to cover projected claims.
- The Fund will apparently not be subject to independent regulatory rules or supervision. As a banking entity, CAIXA may not have the expertise to operate an insurance entity (by contrast, such expertise is found in Caixa Seguros, Banco do Brasil Seguros and other private insurers in Brazil).
- The Fund combines life and nonlife (property) risks into a single reserve fund when, as insurance, they normally would be separated.
- Excluding established private insurers from this market segment prevents pooling life and property risks for the lower-income segment with comparable risks in the higher end of the market.

7. <u>Preliminary Insurance Fund-related recommendations</u> include:

- Determine actuarially sound premium rates for each risk and age group, and then allocate premium rate subsidies to address the affordability of target groups.
- Identify experienced private insurance provider(s) to contractually administer a program for providing the desired coverage, with premium rates subsidized to affordable levels.
- To make the required life insurance affordable for low-income borrowers, offer a more limited, lower-cost death benefit instead of a full loan payoff, possibly a PPI coverage (e.g. 2-3 years) to allow survivors of the covered party an extended adjustment period.
- Established insurers in Brazil, including Caixa Seguros, Banco do Brasil Seguros and other private insurers, already have the skills and experience to provide most of the products now to be offered by the Guarantee and Insurance Funds, including life, disability, property, and a PPI-type of consumer credit insurance for white goods. To the extent there are affordability issues with low income mortgage borrowers, exploration of alternative public-private partnerships could be preferable to a blanket replacement of private insurance with a government-run quasi-insurance scheme.

8. Finally, both the Guarantee and Insurance Funds appear to have an inherent time frame mismatch between the short three-year horizon to produce and allocate 600,000 new units and the far longer time frame of up to 30 years during which these Funds will be obliged to sustain (though not build) capital reserves to meet continuing obligations. Most abovementioned issues relate to the two Funds' lesser attention to insurance basics that would be expected for future sustainability (pricing, reserves, etc). Building upfront the capacity for both ongoing socially-oriented housing insurance and public-private partnerships could be a critical element of the MCMV program that is yet to be developed.

AGREEMENT AND NEXT STEPS

9. The agreements reached between the Government and the Bank and the next steps are the following:

- The Ministry of Finance submitted on July 14, 2009, an official request for technical assistance to the World Bank.
- Upon receiving a copy of the simulation model for the Guarantee Fund from CAIXA and the Ministry of Finance, the Bank team will prepare a concise, detailed technical note elaborating on key issues and recommendations based on further detailed review.
- The Ministry of Finance coordinated the provision of comments from the different concerned Government entities on the draft ICR for the housing sector DPL, prepared by the Bank. A meeting was held for this purpose on June 23, 2009. The final ICR report integrating the Government's comments was completed on June 30,.
- Further technical discussions will be held with the Ministry of Finance to finalize the issues of private lender participation and housing subsidy policy to be examined as part of the technical assistance, and with the Ministry of Cities on the Monitoring and Evaluation (M&E) system in light of completed and ongoing activities. The next mission is tentatively planned for August/September 2009.

Annex 1. Minha Casa, Minha Vida and housing-related credit insurance

Introduction

10. Minha Casa, Minha Vida (MCMV) is an economic stimulus package announced by the Federal government in March 2009 with the aim of promoting the production and sale of one million new homes over the next three years for low-income families with incomes from 0-10 minimum wages. MCMV builds upon several aspects of the National Housing Plan (PlanHab), which was completed in December 2008. MCMV includes a Government-funded guarantee fund (Fundo Garantidor da Habitação Popular, FGHab) with two components – a Guarantee Fund and an Insurance Fund.

11. With regard to mortgage credit-related insurance, the Guarantee Fund component of FGHab differs significantly in concept and detail from the type of guarantee fund set forth in PlanHab, although both schemes include guarantee fund advances to cover unpaid monthly mortgage obligations due to borrower loss of employment and/or temporary drop of income. MCMV adds a second type of housing credit-related insurance—not previously included in PlanHab—in the form of an insurance fund, which would serve as a low-cost, deeply subsidized government-sponsored alternative provider of mortgage redemption life insurance, mortgage disability insurance covering permanent borrower disability, and insurance against physical damage to the property. Whereas the Guarantee Fund would provide a form of mortgage credit insurance not presently available in Brazil, the Insurance Fund would provide a substitute set of housing related insurance coverages that currently are offered by private domestic insurance firms.

12. MCMV proposes to inject a combined total of R$2 billion into the FGHab, with an equal allocation of R$1 billion to the guarantee and insurance components.

13. Within the spectrum of households eligible to participate in MCMV, the FGHab's guarantee and insurance components would target households earning up to 10 minimum wages. Households earning up to 6 minimum wages are also eligible for substantial up-front cash subsidies (down payment assistance) for the purchase of a first home. As for households earning u3 minimum wages, MCMV optionally provides substantial direct subsidies for home purchase, but without any accompanying mortgage loan (households would contribute up to 10% of their monthly income, with a minimum of R$50, for a 10-year period). MCMV is entirely targeted toward owner-occupied housing; it does not include support for any rental housing.

The Guarantee Fund—Preliminary Assessment

14. The FGHab has been authorized by means of Medida Provisória (Executive Order) No. 459 issued on March 25, 2009. The Medida Provisória is currently under consideration by the Congress. The executive regulations organizing the FGHab were issued on April 14, 2009, by the Ministry of Finance.

15. The Guarantee Fund component will advance monthly installments, on behalf of a defaulting borrower:

- up to 36 months for those in the up to 5 minimum wage group;
- up to 24 months for those in the 5 -8 minimum wage group; and
- up to12 months for those in the 8- 10 minimum wage group.

16. These maximums refer to the cumulative months' benefit over the life of the loan, whether in one continuous period of non-payment or multiple shorter events at different times during the loan term. Six months of timely payments following the loan origination are required to establish initial borrower eligibility. This benefit is triggered in situations of unemployment as well as temporary disability and other reasons for loss of income, including for the self-

employed and those who earn their incomes in the informal sector. In case of a claim to the Guarantee Fund, the borrower is responsible for paying a minimum of 5 percent of each monthly installment for the duration of the coverage.[1] The Guarantee Fund's temporary coverage is treated as an advance that must be repaid by the borrower at a time that is suited to their circumstances, whether during the course of the loan upon restoring their income-earning ability or at the end through an extension of maturity.

17. Specific goals of the Guarantee Fund include: (1) to induce more lower-income households to seek mortgage financing to buy a home by means of reducing their sense of economic insecurity and vulnerability to foreclosure/loss of home in the event of loss of job or other loss of income; and (2) to attract more competing bank participation in the MCMV stimulus program and, in turn, more down-market lending, especially to those in the 6-10 minimum wage group.

18. The larger purpose of the Guarantee Fund, as an integral part of the larger MCMV package, is to help ease Brazil's current economic crisis and to help produce 600,000 of the total one million new low/mod income housing units.

19. Certain features of the Guarantee Fund may help to advance its stated goals and sound housing finance policies, including the following:

a. The payment protection insurance ("PPI") feature may reduce lower income households' economic insecurity, thereby increasing their propensity to make a large, long-term financial commitment for homeownership.
b. A government commitment of substantial, dedicated housing assistance funding – R$1 billion. The entire amount is being committed upfront and, therefore, will not be susceptible to risks of annual budgeting.

20. Conversely, certain features of the Guarantee Fund potentially will not serve to advance stated goals and sound housing finance policies, including the following:

a. There does not appear to be a requirement for independent credit risk management or independent program administration. CAIXA would be, simultaneously a lender-user and the Guarantee Fund administrator. As such, it would be a competitor with other lenders which might also consider using the Fund. This circumstance is likely to discourage banks from using the Guarantee Fund; furthermore, banks express concern about whether rules for documenting, perfecting claims (i.e., ability to access the Fund when needed) will be clear and predictable.
b. As both manager and beneficiary of the Guarantee Fund, CAIXA could potentially have an ongoing ability—in some circumstances perhaps even incentive—to direct marginal credit risks to the Fund, which could in the near term accelerate home sales and loan production while keeping CAIXA's own balance sheet relatively strong. These incongruent functions, if experience elsewhere is a guide, eventually could produce adverse outcomes: excessive costs to the government and reputational risk (already clouded by prior government guarantee fund efforts, notably FCVS) to the Guarantee Fund—most notably in the eyes of those lenders it seeks to attract.

[1] According to the Ministry of Finance, the Fund would advance 100% to the lender on behalf of the borrower. The 5% minimum borrower payment can be discounted from the debt if/when the borrower resumes payment including repayment of Fund advances, whereas they are treated as a penalty and forfeited in case of default and foreclosure. This measure is viewed as an incentive to resume repayment. However, it is unclear whether the same logic applies to borrowers experiencing a drop in income but who pay more than 5% of the monthly installment (e.g. 50%). The idea in this case would be that the Fund would advance the shortfall/difference rather than the full installment.

c. Administration and control by a social-purpose lender such as CAIXA (which is tasked with implementing the Government's housing policy) could plausibly cause essential risk management discipline and long-term perspective to be subordinated to more immediate social and political priorities.
d. The PPI terms – especially the 24-36 months' maximum period of Fund advances – are too long and could thus potentially engender perverse borrower incentives regarding loan repayment and moral hazard, and could possibly lead to fraud. A likely result would be to undermine the Fund's financial strength and durability and to waste scarce resources. Such long cumulative advancing periods, furthermore, is inconsistent with PPI "best practices" internationally, where total advances allowed normally would not exceed six to twelve months.
    - Successful public and private PPI programs typically limit advances to six monthly installments. These programs are normally linked with a traditional lender-beneficiary mortgage insurance component to cover losses where the PPI benefit does not succeed in curing the borrower's default.
    - In the U.K., where over a dozen private insurers (e.g., Norwich Union, UKI/RBS Insurance, Lloyds, St. Andrews/HBOS, Barclays, Hamilton Insurance/HSBC) offer a freestanding mortgage PPI product, the typical contract benefit is limited to twelve monthly advances.
    - In Mexico, the banks offer their home mortgage borrowers PPI coverage with covered advances typically limited to six to twelve months. By contrast, the Sofoles—specialized non-bank housing lenders—offer PPI protection with covered advances typically limited to three to six months.
e. Treating the Guarantee Fund advances as deferred borrower indebtedness, rather than as an outright benefit/indemnity (intended to address the moral hazard problem), could reduce the low-income borrowers' ability to catch up and repay so many months of prior unpaid installments, in addition to potentially long periods of accrued interest. Furthermore, the Guarantee Fund advances that eventually must be repaid translate directly into rising loan-to-value (LTV) ratios, especially during periods of economic stress. This is equivalent to "negative amortization" which in some circumstances (high LTV, declining house prices, etc) leads to "negative equity", may lead to borrowers' *unwillingness* to repay, even if they are able to do so. Many such loans will fail to ever be brought current, especially those that fall more than six to twelve months behind, and will result in substantial uninsured losses for lenders. These risks can be further aggravated by the fact that extending the terms of delinquent loans having original 20-25 year terms by an additional 3-5 years can leave many low-income borrowers heavily indebted in their retirement years. The concept of postponing current repayment difficulties to some distant future date is reminiscent of the costly historical failure of the FCVS government guarantee program—costs that endure to this day.
f. Loss exposure for those in the 4-6 minimum wage group will be reduced by substantial upfront public subsidies that reduce initial LTV ratios. However, those in the 6-10 minimum wage group will have higher starting LTVs; if the Guarantee Fund advances are made on their behalf, susceptibility to heavy losses (both frequency and severity) will be much greater. Opportunities for such loans to cure through resale and loan payoff will be much fewer in the 6-10 minimum wage versus the 4-6 minimum wage groups. (See below for several possible mitigating loan modification options.)

g. Required repayment of Guarantee Fund advances would impose a significant added cost and administrative burden on lenders' loan servicing platforms. Guarantee Fund advances and required eventual repayments resemble an irregular, long term second lien. This burdensome feature was incorporated apparently without much consultation with banks, other than CAIXA. Delinquent loan advances by the Guarantee Fund and accrued interest thereon would require mortgage transactional and accounting system capabilities that most banks in Brazil do not currently appear to possess. The loan servicing requirement inherent in this required-borrower-payback provision is akin to requiring two separate loan repayment streams—one scheduled and one flexible—embedded in a single mortgage loan. This operational challenge would appear to add another deterrent to banks' willingness to participate.
h. It appears that the Guarantee Fund would not be subject to any kind of direct or quasi-insurance regulation, any investment rating agency review for rating purposes, or any formal periodic determination of the Fund's actuarial soundness. This, too, could discourage bank participation, as the lack of any such regulation will not only leave uncertain the Fund's reliability and sustainability, it could also preclude the banking regulator from granting lenders any relief with respect either to Risk-Based Capital under Basel II or special provisioning relief.
i. In addition to formal sector salaried households, those from the informal sector will also be eligible for Guarantee Fund benefits should they suffer a loss of income and inability to make their scheduled mortgage payments. The addition of informal sector borrowers as entitled beneficiaries of the Guarantee Fund has the potential for being extremely administratively difficult. Undocumented, uncertain and irregular incomes present the greatest degree of economic insecurity—therefore arguably the most need for outside assistance in meeting regular mortgage payment obligations—but how reliably can a borrower and/or lender document loss of income so as to perfect a claim upon the Guarantee Fund? Furthermore, this element of the program probably is the most susceptible to fraud and abuse, resulting in both excessive claims and lower chances of eventual recovery. An optimal administrative setup for PPI (e.g. Massachusetts State's program) would entail an automated electronic linkup with a government-run unemployment insurance program. A baseline program requirement should be a clear and reliable means of documenting covered loss of income. For example, the self-employed person's benefit should be conditional upon a documented failure/shutdown of the income-producing enterprise, and not just a reduction in business activity or other adverse condition impacting earnings. Though economic insecurity is endemic to the informal sector, the PPI product seems inherently ill-equipped to deal with this type of economic risk.
j. Unlike the PPI programs that are successfully written in the U.S. by both government and private insurance providers, the Guarantee Fund has no link-up to an underlying traditional mortgage default insurance (MI) program. Under the linked program approach, the borrower who encounters loss of employment income can receive the benefit of monthly (non-repayable) advances for a limited period – typically about six months – while seeking to secure re-employment. Failing that, however, before the loan becomes more hopelessly in arrears, the insured lender would begin legal proceedings or otherwise negotiate to recover the property securing the loan. The lender's MI coverage at that second stage of default provides backup protection against loss in the event that the value of the collateral property is insufficient to make the lender whole. The two types of coverage complement one another because the monthly advances on behalf of

the temporarily stressed borrower often will also benefit the lender by enabling a foreclosure to be averted.

k. The attraction of longer-term PPI payments for the borrower, as provided by the Guarantee Fund, offers an uncertain value to the lender. By contrast, shorter-term PPI terms linked to traditional MI is a "win-win", with temporary borrower relief and a clearly-defined credit enhancement tool for the lender. Traditional MI, can – as with the Fondo Mi Vivienda in Peru – help attract lenders to move towards the lower income market. PPI alone, as proposed under MCMV, is highly unlikely to draw private banks into the MCMV program. In fact, the form contemplated by the Guarantee Fund – whereby the monthly payment "benefit" is defined by debt deferral with full interest accrual, rather than payments by a third party guarantor with no expectation of later recovery – may well act as a deterrent to bank participation.
l. To be most effective and control risk, the unemployment coverage component of a credit guarantee program should be able to establish and maintain an operational and IT link to a country's underlying insurance system which, in turn should possess robust and accessible participant and claim databases.
m. In addition to coverage for temporary and longer term unemployment, the Guarantee Fund also extends coverage to other unspecified causes of income loss, including temporary physical disability. These measures are understood to be targeted at self-employed and informal sector workers who could face a decrease of income due to various reasons. Short term (i.e., not permanent) disability insurance and coverage against decrease of income presents significant administrative and risk management challenges and is highly susceptible to fraudulent claims.
n. Continued owner-occupancy of mortgaged properties covered under the Guarantee Fund could be an important risk factor. The program and its participating lenders should be able to demonstrate an ability to establish and monitor the ongoing owner-occupancy of covered properties. At present, there seems to be little evidence of lender monitoring or enforcement of owner-occupancy conditions.

21. An initial discussion with CAIXA to review the Guarantee Fund's current financial model suggests the following apparent concerns (subject to receipt and further detailed review of the model itself, at which stage a technical note will be prepared):

a. It appears that there is no ongoing premium income, either direct or publicly subsidized; therefore the Fund appears to be not sustainable. It is important to note that sustainability is not a stated goal of the MCMV program, including the Guarantee Fund component, but is an objective of the Ministry of Finance for post-2012.)
b. The "Worst Case" scenario projected using the model appears to assume substantial (2/3) eventual recovery from defaulting borrowers of the amounts advanced by the Fund to lenders on the borrowers' behalf. This would seem to be exceedingly optimistic – and the more so to the extent that accrued interest in arrears is also expected to be recovered.
c. It appears that the model does not contain an economic "stress test" component, e.g., there is no built-in linkage between the drivers of the model output and any historical experience/database of key regional or national economic indicators – most notably unemployment.

Guarantee Fund-related Recommendations

22. The following recommendations identify possible ways for the Guarantee Fund to better meet its stated goals and/or to mitigate adverse effects of operating the program as presently structured.

23. <u>The maximum benefit periods provided to borrowers experiencing a documented loss of income could be reduced from the currently proposed 24 to 36 months to a limit of six to twelve months</u>.

a. Such a change could serve to align the program with, positive borrower behavior and incentives and international "best practices". Unless there is evidence that the targeted lower-income segment of the Brazilian housing market behaves substantially different that most mortgage borrowers in developed markets, once a borrower becomes more than one year behind in making scheduled mortgage payments, the likelihood of reinstating such deeply defaulted loans becomes rather remote.
b. Shortening the maximum benefit period should reduce "moral hazard", i.e., the tendency for covered borrowers to act in a manner – because of the presence of credit protection – that increases Fund claims incidence and loss severity.
c. Allowing borrowers to be covered for such long periods could also serve as a disincentive for *lenders* to engage in pro-active collections. Early lender intervention/borrower contact is particularly important for lower-income borrowers who are also typically first-time homeowners.
d. Shortening the maximum benefit period could greatly improve the Fund's financial strength and claims-paying capacity during a period of economic stress.

24. <u>Eliminate the Guarantee Fund's policy of seeking full recovery of the delinquent loan advances and all related financial recovery projections</u>.

a. It could be unrealistic to rely upon such recoveries – often long after the actual defaults have occurred – as an underpinning of the Fund's viability.
b. Although assumed to do so, it is doubtful that this feature will serve to significantly reduce borrower fraud.
c. The effects of accumulating long-term compound interest at the mortgage contract rate could serve to deepen indebtedness for defaulted borrowers whose incomes and livelihoods are, by definition, among the most vulnerable of the overall population.
d. The mandated recovery feature causes rising loan-to-value ratios during the period of borrower default (typically during the earlier years of the loan when the LTV ratio is at its highest even when the loan is current). This adverse risk effect could be most notable for the unsubsidized borrower segment, i.e., those whose incomes fall in the 6-10 minimum wage group. Such rising loan balances outstanding are much akin to "negative amortization", a proven high risk situation whereby eroding borrower equity tends to result in borrower unwillingness to repay even when they may have the ability to do so. The end result of negative amortization tends to be both higher loss incidence and greater loss severity.
e. The adverse effect of treating covered advances as a deferred, interest-accruing borrower obligation, rather than as an outright indemnity, is illustrated in Exhibits 1 and 2. Total debt owed rises above the original loan amount, remaining at elevated levels for many years. Likewise, the LTV ratio increases substantially, even exceeding original property value for a significant period of years. The borrower's monthly installment amount would have to be increased substantially following the period of advances in order to reduce appreciably the elevated LTV and the additional accrued debt level. To enable repayment of the new outstanding debt over the remaining loan term or if the term is extended by the same number of advances received, such monthly repayment increases would lead to significant increase in the Payment-To-Income-Ratio (PTIR), which would constitute a major burden to low-income groups' affordability (See Tables 1-2).

f. Such a program modification could also eliminate operational and cost issues relating to the need for special loan servicing/administration platform enhancements.

25. Consistent with good insurance principles and practices, apply an appropriate premium rate/charge that will assure the Guarantee Fund's sustainability, including under severe adverse circumstances. Then, to deal with the resulting borrower affordability issue, design and allocate a targeted premium subsidy (possibly up to 100 percent) to close the gap between what is affordable for each targeted low-income group and what is necessary to sustain the Fund's claims-paying capacity.

26. Design and implement a modest "bonus plan" benefit for borrowers who are able and willing to pay their schedule installments in a timely fashion for some sustained number of months. For example, have the program grant to such well-performing borrowers one "free" installment following each series of twelve successive timely installment payments. To limit the total cost of such a bonus feature, this benefit might be limited to, say, the first five years of the loan (after which time, good payment habits, as well as risk-reducing equity buildup, have been established).

27. Ensure independent credit risk management and Fund administration. One approach is to install firewalls around the Guarantee Fund within CAIXA, which is the current plan. Another option, which is better equipped to address potential risks based on lessons from international experience, is to identify and/or create an independent entity (independent of Caixa) that would be capable of professionally managing the Guarantee Fund according to established insurance principles and practices. Such an independent entity could be either a newly formed government-owned corporation or, if applicable skill sets are found to be available in Brazil, the Guarantee Fund might be managed by an existing institution – which might or might not be an insurance company. For reasons set forth earlier, the most essential element is underwriting and risk management independence from the Fund's major user-beneficiaries, including CAIXA.

28. Give the Guarantee Fund a legal/regulatory framework that would enable it to continue and expand its housing finance/credit enhancement mission, and which ensures appropriate regulatory oversight (e.g. by the insurance regulator, SUSEP). The objective is to not fragment Brazil's large-country advantage in being able to manage and disperse via insurance a significant risk exposure, including concentrations by region, market segment and lender base – which risks will eventually encounter severe cyclical swings; and which will enable the free-standing PPI (monthly payment advance) feature to be offered – if not now, then eventually – in combination with a traditional mortgage insurance credit enhancement.

29. Expand the concept and scope of mortgage credit enhancement so as to attract, over time, private market participants, whether domestic or international, including direct underwriting, reinsurance, and government-private partnerships that link direct underwriting and reinsurance.

a. Begin to develop a sound insurance regulatory structure to authorize both public and privately sponsored mortgage credit insurance programs. Key features of such a regulatory framework would include:
   - Substantial capital reserve requirements with a minimum ratio of required reserves to aggregate risk exposure appropriate to the type of cyclical (catastrophic) economic risk that is inherent to this type of credit risk insurance;
   - Segregation of mortgage credit insurance capital reserves from all other non-credit/casualty insurance lines;
   - Conflict-of-interest provisions that will assure underwriting/credit risk management independence from lenders, both private and public; and

- Independent actuarial review to assure adequate, but not excessive premium rates and sustainable, adequate capital reserves.

b. In advance of establishing a formal MI regulation, explore with private non-life insurance carriers and the Insurance Regulator the prospect of establishing a pilot MI program within Brazil's existing credit insurance regulatory authority. Such a pilot program would entail regulator supervision and oversight pursuant to an approved Financial and Operating Plan submitted by one or more existing non-life insurers, with such a Plan containing required standards and procedures suited to the unusual long term, cyclical and economic risks being assumed (including provisions noted in subsection (a) above). Such a pilot program, at the outset, could entail either a lender-benefit feature (traditional MI), a borrower-benefit feature (payment protection PPI), or a combination of these two complimentary types of mortgage credit insurance.

30. <u>In the intermediate term, explore potential MI schemes whereby government and private providers may partner to expand down market access to affordable housing finance</u>, including:

a. Private insurer (domestic or international) providing direct underwriting/risk assumption, with government reinsuring excess/catastrophic risks.

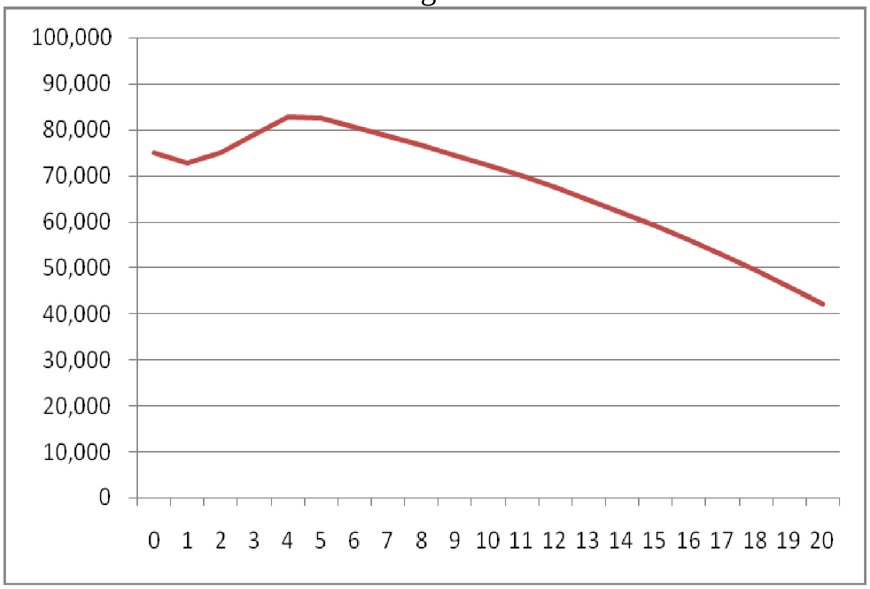
b. Private insurer providing direct underwriting with actuarially sound (regulated) insurance premium rates, with government subsidizing such premium rates for creditworthy borrowers earning 4-10 minimum wages.

Exhibit 1. Effect upon Total Outstanding Indebtedness when Guarantee Fund Advances and Accrued Interest Are Added to the Borrower's Total Outstanding Debt: Borrowers with Monthly Incomes of 3-5 minimum wages

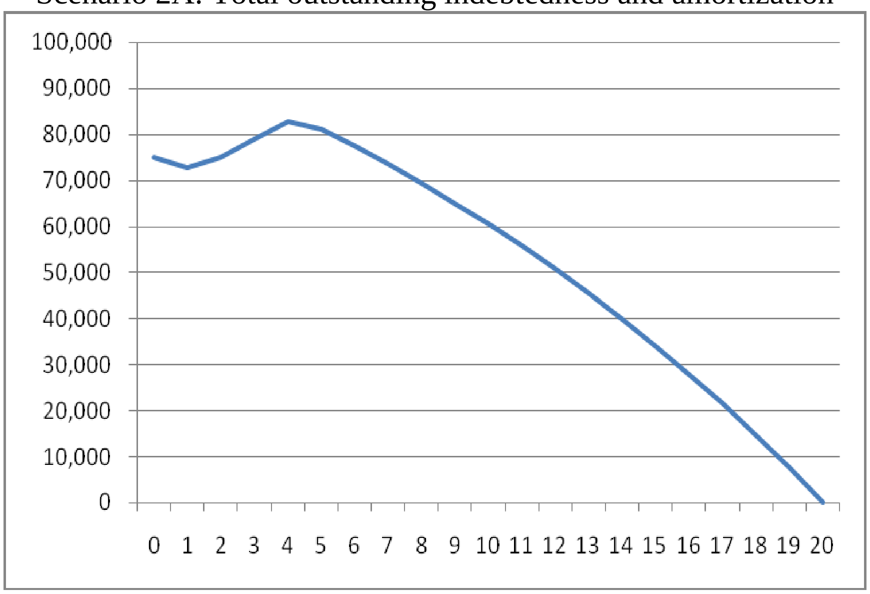
Assumptions: Property value = R$100,000; Original LTV=75%; Interest rate = 5.0%; Original loan term = 20 years; Number of borrower installments paid before default = 15; Number of covered advances following default = 36

Scenarios: (1A) Borrower monthly payment fixed at R$ 495 leading to partial amortization over remaining term; (2A) Borrower monthly payment increased to R$642 to fully repay loan balance over remaining 189-month term; (3A) Borrower monthly payment increased to R$575 to fully amortize loan balance over a term extended by 36 months (225 months).

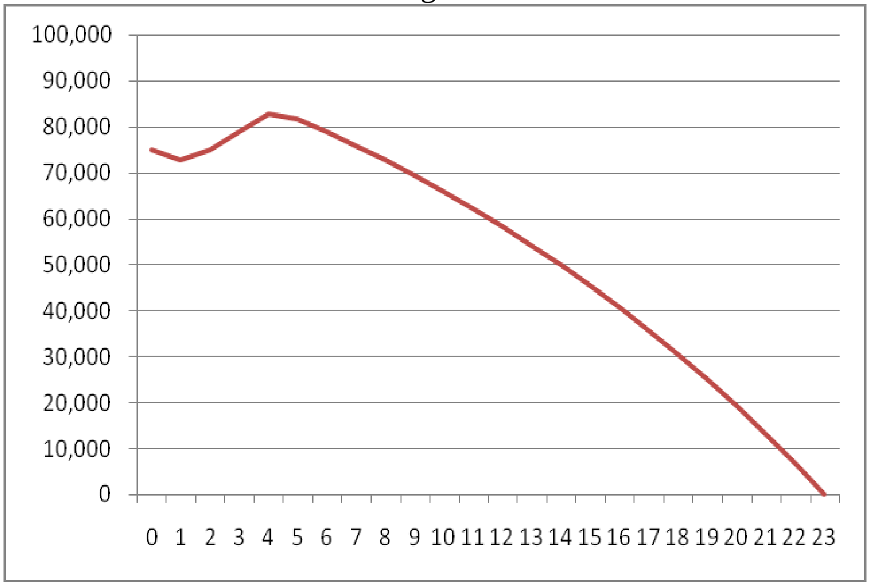
Scenario 1A: Total outstanding indebtedness and amortization



Scenario 2A: Total outstanding indebtedness and amortization



Scenario 3A: Total outstanding indebtedness and amortization



Note: Maximum loan balance reaches R$83,848 at the end of the 36-month period of Guarantee Fund advances, thus increasing LTV from the initial 75% to 83.8%.

Table 1: Monthly Loan Repayment (R$) and Payment-To-Income-Ratio (PTIR) by Household Income Level

Monthly Household Income (multiple of minimum wages)	Scenario 1		Scenario 2		Scenario 3	
	Monthly payment (R$)	PTIR	Monthly payment (R$)	PTIR	Monthly payment (R$)	PTIR
3	495	35%	642	46%	575	41%
4	495	27%	642	35%	575	31%
5	495	21%	642	28%	575	25%
6	495	18%	642	23%	575	21%

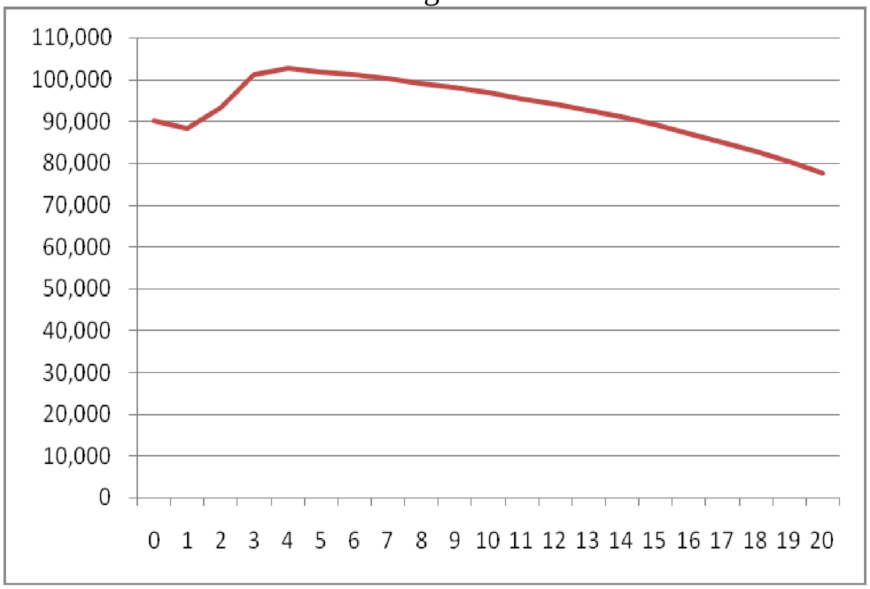
Note: Monthly loan repayment would increase by 29.7% to be able to repay the outstanding debt over the remaining term (Scenario 2), while it would increase by 16.2% to be able to repay the outstanding debt over the remainder of term, extended by the same duration as the advances received (Scenario 3).

Exhibit 2. Effect upon Total Outstanding Indebtedness when Guarantee Fund Advances and Accrued Interest Are Added to the Borrower's Total Outstanding Debt: Borrowers with Monthly Incomes of 6-8 minimum wages

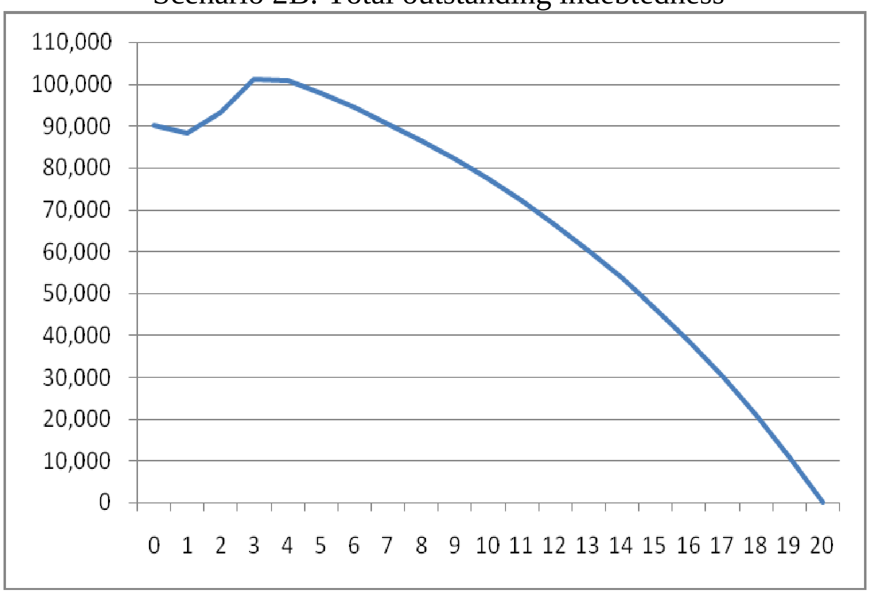
Assumptions: Property value = R$100,000; Original LTV=90%; Interest rate = 8.16%; Original loan term = 20 years; Number of borrower installments paid before default = 15; Number of covered advances following default = 24

Scenarios: (1B) Borrower monthly payment fixed at R$ 762 leading to partial amortization over remaining term; (2B) Borrower monthly payment increased to R$943 to fully repay loan balance over remaining 201-month term; (3B) Borrower monthly payment increased to R$897 to fully amortize loan balance over a term extended by 24 months (225 months).

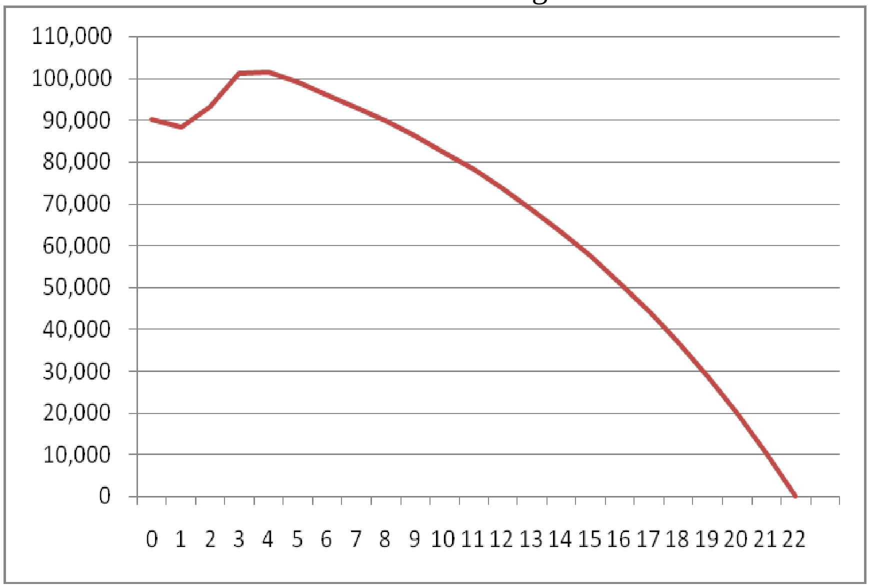
Scenario 1B: Total outstanding indebtedness and amortization



Scenario 2B: Total outstanding indebtedness



Scenario 3B: Total outstanding indebtedness



Note: Maximum loan balance reaches R$103,173 at the end of the 24-month period of Guarantee Fund advances, thus increasing LTV from the initial 90% to 103.2%.

Table 2: Monthly Loan Repayment (R$) and Payment-To-Income-Ratio (PTIR) by Household Income Level

Monthly Household Income (multiple of minimum wages)	Scenario 1		Scenario 2		Scenario 3	
	Monthly payment (R$)	PTIR	Monthly payment (R$)	PTIR	Monthly payment (R$)	PTIR
7	762	23%	943	29%	897	28%
8	762	20%	943	25%	897	24%

Note: Monthly loan repayment would increase by 23.8% to be able to repay the outstanding debt over the remaining term (Scenario 2), while it would increase by 17.8% to be able to repay the outstanding debt over the remainder of term, extended by the same duration as the advances received (Scenario 3).

The Insurance Fund—Preliminary Assessment

31. In addition to the R$1 billion Guarantee Fund covering borrower loss of income, MCMV also envisions a R$1 billion Insurance Fund covering borrower death, permanent disability and property damage – all of which are products traditionally covered in Brazil by private insurance carriers. Unlike the Guarantee Fund, which would create a new form of credit protection for Brazil, the Insurance Fund would provide low-income borrowers with access to some standard credit-related insurance at a cost substantially below prevailing private market premium rates or—it appears—rates that would be required to pass any tests of actuarial soundness. For those whose incomes are under 5 minimum wages, the cost of this combined life, disability and property insurance would be zero. The deepest subsidies would go to borrowers over 50 years of age.

32. The premise of the proposed Insurance Fund is that lower-income aspiring homeowners cannot afford the prevailing market costs for insurances that one would normally have to carry when buying a home with a mortgage loan. Unlike the credit guarantee component of FGHab, the insurance component does not appear to have gone through several stages of development over a period of time, and appears thus to have taken both insurance providers and bankers somewhat by surprise. The stated rationale for creating the Insurance Fund to provide life, disability and property insurance products was:

- These three forms of private insurance are too costly for lower-income homebuyers and, therefore, a substantial deterrent to their potential for becoming homeowners in larger numbers;
- The high price of private coverage was not justified by its underlying costs, but rather arose from the lack of competition in an essentially captive market;
- A recent regulation requiring that mortgage lenders provide their borrower-applicants a choice of insurance providers beyond just the lender's affiliated insurance carrier would not suffice in bringing premium costs down;
- Government-imposed insurance price controls for the lower-income market segment was not a realistic option; and
- Only a direct government program could work quickly enough to fulfill the perceived needs of the larger stimulus package in meeting the 600,000 unit production goal.

33. This outcome, however, appears to create the undesirable result of a non-insurance insurance program, without regulation, skilled executive management, or a sustainable business model.

34. Mortgage-related life and property damage insurance are both formal requirements in Brazil. Whereas property insurance is required in nearly all countries for homes financed with a mortgage loan, mortgage-related life insurance is often a formal requirement for borrowers in less-developed markets. As countries' housing markets develop, however, a statutory mandate for this type of life insurance may be terminated, thereby allowing mortgage borrowers a free choice whether or not to purchase it. (If deregulated, however, international experience also shows that mortgage life insurance requires strict borrower/consumer protections.)

35. The broad goals of the Insurance Fund resemble those of the Guarantee Fund, and include: (1) to make housing and homeownership more affordable for Brazilian households in the 3-10 minimum wage group; and (2) to reduce the feeling of economic insecurity of household in these lower income ranges so that they will be less reluctant to assume a large, long term debt burden, thereby expanding effective housing demand in support of the substantial increases in new low-income housing production projected by MCMV.

36. The main concerns related to the Insurance Fund include the following:

a. It appears that the Fund is not self-sustaining. Deeply discounted premium rates, not actuarially based and without ongoing subsidies, appear to fall far short of what would be needed to cover projected claims. The Fund itself, however, may be sufficient to cover claims losses for the discrete number of mortgage loans projected to be covered.
b. The Fund will apparently not be subject to any independent regulatory rules or supervision. As a banking-oriented entity, CAIXA may not have the expertise to operate what is to be an insurance entity (by contrast, such expertise is found in Caixa Seguros, Banco do Brasil Seguros and other private insurers in Brazil).
c. The Insurance Fund combines life and nonlife (property) risks into a single reserve fund when, as insurance, they normally would be separated.
d. By excluding established private insurance providers from this entire market segment, property and life risks for the lower-income market segment will not be pooled with comparable risks in the higher end of the market.
e. Though the Insurance and Guarantee Funds involve separate reserve accounts, the proposed regulation is not clear that, in the event one or the other Fund were to be depleted, it could then call upon the remaining reserves in the other account. There should be an absolute, permanent separation between the two Funds and the respective categories of risks that they can be called upon to cover.

Insurance Fund-related Recommendations

37. The following recommendations identify possible ways for the Insurance Fund to better meet its stated goals and/or to mitigate adverse effects of operating the program as presently structured.

a. In regard to premiums, a more sustainable approach might be to determine what premium rates for each risk and age group are actuarially sound; then, to the extent a determination is made that necessary rate levels are unaffordable for a particular income group, transparent premium rate subsidies could be allocated without compromising the continuing viability of the program.
b. An alternative to operating the Insurance Fund is to seek out one or more experienced, established insurance providers from the private sector or through a public-private-partnership to administer by negotiated contract a program for providing the desired coverages, with premium rates subsidized to affordable levels.
c. In order to make the required life insurance component affordable for lower-income borrowers, an alternative to simply repealing the current legal mandate to buy such coverage might be to offer a more limited, lower-cost death benefit, i.e., to provide a survivors' benefit in the form of an extended PPI-type coverage, rather than a full, unconditional loan payoff. This more affordable approach would make, say, 2-3 years of monthly mortgage installments, thereby providing an extended transition/adjustment period following the death of the covered party.
d. Established insurance companies in Brazil, including Caixa Seguros, Banco do Brasil Seguros and other private insurers, already have the skills and experience in providing most of the insurance lines now to be taken over by the Guarantee and Insurance Funds operated by Caixa. This includes, directly, the traditional life, disability and property, and casualty lines. Less directly, and to a more limited degree, the existing insurance industry writes a PPI-type of consumer credit insurance, e.g., for consumer durable "white" goods purchases which is comparable, if not identical to the proposed PPI for home mortgages albeit for a much shorter coverage period. To the extent there are insurance affordability issues with lower income mortgage borrowers, further exploration

of alternative public-private partnering approaches ought to be preferable to a blanket replacement of private insurance with a government-run quasi-insurance scheme.

Concluding Observations

38. Groups and individuals interviewed by the mission team including banks and insurers expressed some concern about various aspects of the recently-announced version of the MCMV Guarantee and Insurance Funds and remarked that their current understanding is sketchy, and that full details have not yet been forthcoming.

a. A universally-expressed concern of banks and insurance companies, and their respective trade organizations, was the lack of advance outreach or consultation with them by the designers of the Guarantee and Insurance Funds prior to their announcement. This lack of engagement appeared to reinforce the aversion toward direct involvement or reliance upon these Funds.

b. The main specific concerns expressed by the banks included: (1) anticipated problems with having CAIXA as the Funds' manager, including perceived conflict of interest, competitive disadvantage; (2) the payback vs. indemnity feature, including expected operational issues; (3) the absence of any lender-benefit feature in the Guarantee Fund (currently a borrower-benefit); (4) questions as to the long-term reliability of the Funds and claims-paying entities.

c. Insurance companies' specific concerns included: (1) prospects for a non-insuring entity to operate a sustainable insuring entity; (2) no underlying actuarial method--irrational pricing of the life, disability and property insurance package component; (3) unwise to extend already-long maturities for repayment of earlier defaults; (4) apparent usurpation of a significant segment of the overall market for several traditional lines of insurance.

d. Other concerns expressed included: (1) no clear legal/institutional framework for the Guarantee Fund; (2) likely impediments to expanding the Funds' reach beyond CAIXA to competing banks; (3) proposed multi-year benefit periods seem too long.

30. Regarding both the Guarantee and Insurance Funds, there appears to be an inherent time frame mismatch between: (a) the short three-year horizon to create, sell and occupy 600,000 new low-income dwelling units; and (b) the far longer time frame—up to 30 years—during which these two Funds will be obliged to sustain (though not build) capital reserves to meet continuing claims obligations. The proposed Funds are highly oriented to the three-year stimulus goal, whereas many of the issues identified herein relate to their lesser attention to insurance basics one would expect to find for sustainability over the ensuing decades – pricing, reserving, etc. A built-in capability at the start – both for ongoing socially-oriented housing insurance and for public-private partnering along the way—appears to be a potentially attractive, but (at least as of yet) missing element to this major piece of the overall MCMV plan.

Annex 2. List of Meetings, May 24-28

Name	**Title and Affiliation**
Sao Paulo	
Fernando Baumeier	Grupo Sandander Brasil
Fernando C. Brasileiro	Director, Cibrasec (ABECIP)
Hus Morgan Daroque	Housing Finance Dept, Banco Itau/BBA
Natalino Gazonato	ABECIP
José Pereira Gonçalves	Superintendent, ABECIP
Fabio Leme	Housing Finance Dept, Unibanco/Banco Itau
Adriana Henry Meirelles	Odebrecht/Bairro Novo Developers
Osmar Roncolato Pinho	Director, Banco Bradesco, S.A. (ABECIP)
Eduardo Rottman	Contacto Consultants
Nylton Velloso	Vice-President, ABECIP, President, Economisa (ABECIP)
Rio de Janeiro	
Jayme Garfinkel	President, National Federation for General Insurance (FenSeg), President, Porto Seguro
Maria Elena Bidino	Director, Institutions and Reinsurance, National Confederation for Insurance Companies (CNSeg)
Neival Rogriques Freitas	Director, FenSeg
Armando Petrillo Grasso	Superintendent of Production, Bradesco Insurance
Antonio Carlos Gonçalves Silva	Director, Delphos Insurance Consultancy
Roundtable discussion	FenSeg, CNSeg
Brasilia	
Inês Magalhães	Secretary, National Housing Secretariat (SNH), Ministry of Cities
Dyogo Henrique de Oliveira	Adjunct Secretary, Secretariat of Economic Policy (SPE), Ministry of Finance
Júnia Santa-Rosa	Director, Institutional Development and Technical Cooperation Dept, SNH, Ministry of Cities
Esteves Pedro Colnago, Jr.	SPE, Ministry of Finance
Bernadete Maria Pinheiro Coury	National Superintendent, Housing,CAIXA
Teotonio Costa Rezende	Technical Consultant, VIGOV, CAIXA
Jefferson Luís Coutinho	Planning Manager, VIGOV, CAIXA
Joaquim Lima de Oliveira	National Superintendent, FGTS, CAIXA
Vera Vianna	Consultant, Ministry of Cities
Anaclaudia Rossbach	Consultant, Ministry of Cities
Silvia Marques de Brito e Silva	Banco Central (BACEN)
Julio Carneiro	Banco Central (BACEN)
Felipe Pinheiro	Banco Central (BACEN)
Rodrigo Pereira Porto	Banco Central (BACEN)
Romulo de Magalhães	Banco Central (BACEN)