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Analysis: Down Marketing Housing Finance Through Community Based Financial Systems

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NHB RESOURCE MOBILISATION
AND
THE DEMAND FOR REFINANCE

Prepared for:

The National Housing Bank, New Delhi

and

USAID/India

by

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Measures and Equivalents

Rs 1 lakh = Rs 100,000

Rs 1 crore = Rs 10,000,000

Abbreviations and Acronyms

CFHL	CanFin Homes Limited
DHFL	Dewan Housing Finance Limited
EWS	Economically Weaker Section
GOI	Government of India
HDFC	Housing Development Finance Corporation
HFC	Housing Finance Company
HG	Housing Guarantee Program (USAID)
HFI	Housing Finance Institution
HLA	Home Loan Account
HUDCO	Housing and Urban Development Corporation
IDBI	Industrial Development Bank of India
LDSP	Land Development and Shelter Projects
LIC	Life Insurance Corporation of India
LICHFL	LIC Housing Finance Limited
LTO	Long-Term Operations lending by RBI
NHB	National Housing Bank
RBI	Reserve Bank of India
SLR	Statutory Liquidity Ratio
USAID	U.S. Agency for International Development
UTI	Unit Trust of India

NHB'S REFINANCE PROGRAMS IN A DEREGULATING FINANCIAL SECTOR

This report is intended to assist the managements of the National Housing Bank (NHB) and USAID/India in formulating a strategy for the refinance programs of NHB, given the growing gap between the demand for refinance and the supply of directed credit accessible by NHB. It is a product of USAID-funded technical assistance under the "Indian Housing Finance Expansion Program."

The specialized housing finance industry in India has been rapidly growing and evolving for the last fifteen years. Change has been so rapid that within any five year period, the industry has completely reshaped itself. Thus, it is not surprising that the forces of change are at work again, forcing a re-examination of the goals and methods of all of the participants.

This time around, however, the entire financial sector in India is changing. In fact, the housing finance system is just now feeling the full effects of changes underway in the rest of the financial sector since 1988. Gradually, interest rates of all kinds are being allowed to be freely set and more and more borrowers are having to compete in the financial marketplace for funding, rather than in the political marketplace of directed credit.

This slow but radical evolution of the financial sector comes just as housing finance institutions had adjusted to the previous situation. Housing lending had grown steadily as new institutions built upon the success of HDFC in mobilizing funds and maintaining good recoveries and as NHB channeled directed credit at below-market rates to thousands of mortgage borrowers. The industry survived a jump in lending rates in 1991 and the stock market scandal of 1992, as well as a rapid expansion in networks of competing branches.

The latest challenge to the sector derives partly from its own success. The underlying demand for NHB refinance is now running at over Rs. 600 crores per year, reflecting the efforts of HFCs to expand their branch networks and to cater to those households and housing units eligible for refinance. At the same time, the funding base of NHB from sources of directed credit has started to decline from its level in 1991-92. Moreover, the general thrust of GOI policy is to further reduce the amount of directed credit, suggesting that pleas for fiscal or other advantages to raise funds for NHB, or for housing in general, will not be responded to favourably. A growing gap between the supply of below-market funds for refinance and the demand for refinance appears to be inevitable.

NHB has a variety of options with respect to closing this gap. It can increase its efforts to capture below-market funding; it can close portions of the refinance window; or, it can seek market-rate funding and modify the refinance activities to support such fund-raising.

(Or, of course, it can pursue all three strategies to some degree). This report attempts to quantify NHB's situation in this regard and to evaluate the advantages and disadvantages to each of the available strategies.

The report consists of three parts. The first part reviews the recent history of housing finance in India and the development and present role of NHB's refinance activities. The second part develops projections of the demand for refinance under the current parameters of the programs and compares them with the projected supplies of funding from current sources. The projections are formulated alternatively under best case, worst case, and most likely assumptions.

Finally, the report reviews and evaluates NHB's options for responding to the projected difficulties in funding its refinance programs. The recommendation is made that NHB adopt a three-stage program to respond to the changing financial environment. First, since it will take some time for NHB to raise long-term funds from the market, it may be necessary to truncate some portions of the overall program in order to bridge the 1992-93 gap. Second, NHB should reorient the refinance window towards purposes other than conveying subsidies to lower-income households, funding it from the market-rate sources that are most easy to access. Third, NHB should review its options, with the assistance of USAID and Abt, for facilitating the market-rate funding of the entire housing finance sector.

Part 1: Housing Finance, HFCs and the NHB

Background

Even before there were any specialized retail housing finance institutions (HFIs) in India, there were significant amounts of formal sector housing finance going on. The major lenders were the LIC, the banks, and HUDCO. Both LIC and the banks had their own resources, while HUDCO benefitted from funds channelled to it from those entities and other institutions. None of these lenders experienced free competition on either side of their market, i.e., raising funds or making loans.

HDFC was set up in 1977 as a specialized private sector retail lender (but with GOI sponsorship) to marshall additional funds for the sector and to operate in a more market-oriented fashion. Over the next ten years, HDFC grew to be the largest single direct lender for housing. In the process, it aggressively developed a wide variety of funding sources, ranging from pools of directed credit available from LIC, banks, and other institutions, to corporate and household deposits; bonds marketed to trusts; World Bank and other foreign-sponsored borrowing; and even a contract-savings plan, as well as major equity infusions. The mix of resources changed with changing opportunities, but as of March 1989, over half of the outstanding funding was from non-directed, market-rate sources.

In principle, HDFC could have blended all of these funds together and offered mortgage funds at some mark-up over its average cost of funds. However, the practice in the government-directed part of the financial sector was to offer smaller borrowers, presumably with less income and wealth, a substantially lower rate than for large loans. HDFC adopted such an approach, presumably to ensure continuing access to non-market sources of funds and to build political support for its activities. The practice could be viewed as either simply channeling the subsidies implicit in below-market funding on to targeted beneficiaries or as cross-subsidizing lower-income borrowers at the expense of higher-income borrowers. An examination of the evidence from HDFC's cost of funds and its lending rates in 1989 suggests that it was pursuing a conscious policy of cross-subsidization, e.g., they were charging more for larger loans than the rate required to cover the cost of market-rate fund raising. [1]

By the mid-1980s, there were at least three forces towards the establishment of additional housing finance companies (HFCs). (The term HFC is used for HFIs which are market-oriented.) First and foremost, HDFC had shown that the business could be very

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[1] See Diamond (1990), "Expanding Market-Oriented Housing Finance in India," USAID, New Delhi. In 1989, most of HDFC's funds cost about 12 to 12.5 percent, and additional funds probably could have been raised at 12.5 percent. This suggests that the rates of 14.5 to 16 percent charged for loans over Rs. 1 lakh were intended to provide some excess return to permit rates of only 12.5 to 13.5 percent on loans less than Rs. 50,000.

profitable. Secondly, the middle-class market for housing and housing finance were growing rapidly. Third, government policy was beginning to lean towards the expansion of credit for housing.

Thus, eight of the seventeen HFCs recognized by NHB today were started between 1984 and 1988, when NHB was set up. Many other HFCs opened their doors, some of them affiliated with real estate development companies. The situation called for some greater degree of regulation and orderly development of what can be a very risky or even fraudulent business. In addition, GOI and USAID policy favored systematic promotion and support for specialized, market-oriented housing finance institutions. NHB was started in July 1988 to perform these and other functions.

The National Housing Bank Act speaks of NHB as the "principal agency to promote housing finance institutions...and to provide financial and other support of such institutions." The Act specifies a variety of acceptable activities for NHB and gives NHB the authority to seek information from and otherwise regulate the activities of those HFIs which receive funding from it.

Despite its wide-ranging mandate, NHB has not exercised oversight with respect to all of the housing finance industry. Much housing finance is still originated through HUDCO or the many state or local housing boards, as well as through the scheduled banks and the LIC. However, NHB does oversee, regulate, and promote the largest group of specialized housing lenders, the HFCs recognized by NHB.[2] Total lending for housing by these NHB-recognized HFCs has grown dramatically since 1988. For the HFC fiscal year ended March 1989, only Rs. 276 crores in loans were originated by this group. (Only ten were in full operation at the time, and HDFC originated over 90 percent of the total.) By the end of the next year, the volume of loans originated had nearly doubled to Rs. 598 crores, mostly due to growth in the same companies. Growth continued through March 1992, with now all seventeen institutions originating Rs. 1198 crores, double again the origination of 1989-90 and with HDFC handling only about half. These recognized HFCs clearly form the largest single sub-sector of the formal housing finance sector, especially since LIC has shifted most of its home lending activities to the LICHFL after 1989.

The Role of NHB Refinance

In theory, NHB could have emphasized its role as regulator of the HFC industry. In addition to defining and monitoring fiscal soundness, this function includes activity as a lender-of-last-resort, providing short-term liquidity to even out supply and demand of funds for individual HFCs, especially in case of deposit withdrawals. NHB could have also

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[2] Some categorization of housing finance institutions include HUDCO as an HFC. However, in this report, HUDCO is treated as an entity whose primary focus is not housing finance to individual households and thus not covered by the term "housing finance company" (HFC).

developed a role as promoter of the system by making available long-term market-rate funding to smaller HFCs which could not otherwise tap the market on favorable terms. However, the modern Indian financial system has a tradition of creating refinance facilities with access to below-market funds to channel to favored sectors. So, below-market refinance was the approach adopted by NHB in 1989, to both promote housing as well as housing finance.

NHB had several reasons to take this approach in addition to the force of tradition. As noted above, the interest rate structure adopted by HDFC up to that time featured a significant gradation of rate according to loan size. In keeping with the Indian practice of regulating interest rates, NHB wanted to adopt a sliding-scale rate structure for the HFC industry as well. However, most of the new HFCs were going to be dependent on market-rate funding and would also be seeking to become profitable and to gain market share by offering the lowest rates possible to the largest borrowers. Thus, they would tend to adopt a uniform rate based on the average cost of funds plus a mark-up, and some would possibly try to avoid originating smaller loans entirely.

Another important consideration was that NHB's general regulatory enforcement powers were relatively weak, except in the case of HFIs which accepted financial support. Only a valuable incentive such as access to refinance funds on attractive terms might persuade HFCs to seek recognition by NHB and to accept unpopular regulatory actions in the future.

For all these reasons, NHB sought to provide a refinance program to those HFCs which would submit to its regulatory dictates a program that would be profitable to the HFCs and encourage lending to lower-income households at below-market rates. To do so, NHB needed two things: 1) sources of below-market credit, and 2) eligibility guidelines for refinance that attracted participation but balanced demand against the limited supplies of below-market funds.

The author has no information about what considerations determined NHB's overall access to directed credit. The key component of it was a commitment of up to 5 percent of incremental accretions of LIC, but this component did not become available until 1990. Initially, the majority of the funding was drawn from annual capital contributions of Rs. 50 crores from RBI (on top of an initial Rs. 100 crores), issuances of tax-advantaged bonds (80 crores per year), borrowings from the RBI, and funding by foreign loans guaranteed by USAID.

In total, this initial funding came to less than Rs. 200 crores per year, as against total lending by recognized HFCs of almost Rs. 600 crores in 1989-90. This may have suggested that demand would exceed supply if the terms of the refinance program were very liberal. For this or for other reasons, the original terms of all of the refinance programs were quite conservative. For example, the initial terms for refinance of direct housing loans, applicable to loans sanctioned after January 1, 1989, provided one hundred percent refinance for only the smallest loans and with a spread greater than 1.0 percent only for the very smallest loans. In addition, in urban areas an area-wise restriction was imposed (the house had to be smaller than 40 square meters), in order to prevent higher-income households from accessing the refinance through taking a small loan.

The initial designs of the refinance program proved to be too restrictive. Demand was less than the supply of funds, both because of the size constraint on the unit, and because of the limitation of the amount refinanced to only Rs. 50,000. Moreover, a potentially major user of the refinance, the banking sector, did not take much interest in the refinance activity of NHB.

Not only was the demand for refinance low, but the interest rate structure being enforced by NHB was unprofitable to the newer HFCs for many smaller loans not eligible for refinance. Given the cost to HFCs of raising market rate funds, they could not afford to make smaller loans unless refinanced by NHB.

As a result of these considerations, NHB substantially liberalized the direct refinance program in March 1990, retroactive to January 1, 1990. It expanded the loan amount to be refinanced on a small (i.e., less than 40 square meters) urban unit to Rs. 200,000 and permitted refinance on up to Rs. 100,000 for larger units located anywhere and costing less than Rs. 150,000. As of January 1, 1992, the price limit had been raised to Rs. 200,000 and the refinance rate set at 100 percent. In addition, the spread to the HFCs was expanded to 2.0 percent for loans up to Rs. 50,000 and 1.5 percent for larger loans.

These modifications had a dramatic effect on the level of NHB refinance activity and on the HFC industry. Demand expanded rapidly in 1990-91 and 1991-92. This expansion reflected the greater share of HFC lending eligible for refinance, the general growth in housing lending, and the substitution of lending by LICHFL for lending previously done by LIC directly and thus not subject to refinance. It also reflected the fact that under the more liberal terms, an HFC could profitably cater to those portions of the market subject to refinance and not have to raise funds in the market. This permitted rapid expansion in lending by two or three HFCs.

The pace of growth in overall HFC lending and in the demand for direct refinance by NHB has slowed in the 1992-93 year, along with the growth in the Indian economy. However, as discussed below, it appears that the demand for refinance will overshoot the supply. This imbalance reflects not only the success of the refinance of housing loans, but also the pace of lending under two other types of programs, for land development and for bulk refinance of HUDCO lending to EWS households.

The Land Development and Shelter Projects (LDSP) portion of NHB's refinance dates from the very start of NHB. Despite NHB's roots in the RBI and the financial sector in general, its ultimate goal is to facilitate the provision of housing in India. This encompasses not only access to mortgage credit by the consumer, but also access to construction credit by the developer. In fact, the argument can be made that expansion of consumer demand for housing without expansion in the supply will lead primarily to price increases, not more and better housing. Thus, NHB saw a responsibility to provide finance to public, cooperative, and private agencies for land development and house construction. NHB specified a refinance program for such activities at the same time as it set up the program for refinancing consumer mortgages, accompanied by similar targeting restrictions.

The LDSP program was slow to develop into a major demand on NHB resources, both because of tight initial restrictions and because of the long lead-time in land development in India. However, the passage of time and the relaxation of the restrictions has seen the rate of LDSP disbursements grow to Rs. 56 crores in 1991-92 and a projected amount of Rs. 132 in 1992-93. Approvals for future funding were approaching Rs. 400 crores by June 1992. While these amounts are considerable, they are expected to be outstanding for only the period of land development and construction, generally less than four years.

At the time of its inception, NHB's broad mandate to facilitate the provision of housing finance arguably included assisting another major public-sector bulk lender to housing, HUDCO. On the other hand, HUDCO traditionally had extensive access itself to directed credit sources and thus drawing upon NHB's limited resources could have been considered inappropriate. As it happened in 1989-90, though, HUDCO had a need for additional funds and NHB had an excess of funds due to the modest demands for refinance by HFCs. Moreover, NHB had a statutory interest in funding schemes for the economically weaker sections (EWS), and had a desire to avoid creating a while new lending mechanism to meet this responsibility. Thus, HUDCO and NHB agreed that HUDCO would have a line of credit at a concessionary rate for refinancing up to half of HUDCO's expenditures on EWS housing. In 1989-90, this came to Rs. 50 crores, followed by Rs. 105 crores in 1990-91, and Rs. 125 crores in 1991-92. In addition, NHB channelled Rs. 26 crores through HUDCO for special relief of housing needs following natural disasters in Andhra Pradesh and Uttar Pradesh.

Part II: Projecting the Supply and Demand for Funds

The Rise and Fall of Directed Credit

As noted above, the author is not aware of what considerations went into the determination of the general level of NHB's access to directed credit. It was probably partly based on an ongoing systematic analysis of NHB's needs for funds, and partly on opportunities as they arose. It appears that the specific windows open to NHB depended on the vagaries of bureaucratic decision-making, but the amounts available through each window also reflected NHB's needs for funds to meet the demands for refinance, under the existing eligibility guidelines. The steady relaxation of those guidelines presumably reflected the confidence that somewhat more funds would be forthcoming if needed.

Annex 1 shows the inflows of funds by source and cost to NHB by fiscal year and the average cost of those funds raised during that year is also calculated. For purposes of this analysis, a presumptive return on equity of 10 percent has been applied to roughly reflect inflation over the period.[3]

Several aspects of Annex 1 should be noted. First, the initial fundings were at quite a low average cost of funds. However, as rates in general rose and as NHB had to tap funding from additional sources, the average cost has risen by 2.6 percentage points.

Second, NHB is benefitting from loans granted to the GOI under both the AID housing guarantee program and a Japanese-sponsored program at quite a low cost, one that clearly reflects an additional implicit subsidy from the GOI, which is bearing the exchange rate risk.

Third, 40 percent of the funds raised in 1991-92 were borrowings from LIC, which were granted under an arrangement made with LIC in 1990-91 to lend NHB up to 5 percent of LIC's incremental assets. This agreement is subject to renegotiation at any time. The rate on these funds is on par with that under other forms of directed credit, but significantly less than the market rate.

Lastly, some borrowings in 1991-92 from UTI were at a rate close to market. This suggests that UTI could be amenable to providing additional funds at such a rate.

In total, fund raising in 1991-92 hit Rs. 628 crores, including a further contribution of Rs. 50 crores by RBI to capital, and a one-time loan under a Japanese aid program. In addition, operations netted a profit of Rs. 60 crore for a total increment to resources of Rs. 688 crores. (There were no repayments due on borrowings). The average cost of these

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[3] Some such cost of funds needs to be imputed. Otherwise, the real value of the capital base would be eroding over time.

funds (including additions to capital and reserves evaluated at 10.0 percent) was still a low 11.4 percent.

Thus, in 1991-92, NHB made extensive use of every means of directed credit open to it. RBI pumped in another Rs. 100 crores in capital and low-rate Long-Term Operations (LTO) lending. The government also authorized NHB to issue Rs. 165 crores in special bonds, including Rs. 88 crores of government-guaranteed bonds eligible for the Statutory Liquidity Reserves (SLR) requirement for banks and Rs. 77 crores of bonds that shelter capital gains from taxation. Although no HG funds were utilized, a similar amount of foreign funding came under a Japanese program. A surge in insurance sales permitted LIC to offer another Rs. 100 crores over the 1990-91 levels.

The total incremental funding for 1991-92 is likely to have been a high water mark for NHB for the near future. Just as NHB has gained maximum access to directed credit from a variety of sources, the system of directed credit is being progressively dismantled. For 1992-93, RBI has notified NHB that there will be no borrowing under the LTO facility, and that access to SLR bond issuances is being halved. The capital gains bond scheme has also been discontinued.

These steps may be the only immediate cutbacks on NHB funding for 1992-93. In the best case scenario, projected in Annex 2, there would still be a large inflow from LIC of about Rs. 300 crores and another Rs. 75 crores under the next tranche of HG funding. Combined with a further Rs. 50 crores in capital, Rs. 80 crores in profits, and the remaining SLR bonds of Rs. 45 crores, NHB could show incremental funds of Rs. 550 crores. Moreover, the repayment of principal on earlier refinancing is significant for the first time in 1992-93, returning another Rs. 80 crores for re-deployment.[4]

For 1992-93, available funding of Rs. 630 crores is probably the best case outcome, and also the most likely outcome. The major downsides relate to the LIC and HG borrowings. The LIC funding has to be negotiated each year and it is a major portion of LIC's investable funds. Thus it is subject to pressure both with respect to whether its full amount (5 percent of incremental funds) is really needed by NHB and with respect to the rate charged. The HG funding is subject to completion of a number of requirements early enough to raise the funds in the 1992-93 fiscal year. It is also subject to negotiation with the RBI as to the rate charged NHB for the rupees.

The worst case projection (Annex 3) for 1992-93 must reflect all that could go wrong, including a decline in LIC funding, a rise in its cost, and the possibility of a delay in HG funding. A cutback in LIC funding to Rs. 200 crores and a hike in its cost to 14 percent would leave NHB with only Rs. 455 crores (if no HG funds become available) and with an average cost of new funds of 12.4 percent.

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[4] As of January 1993, Rs. 37 crores of refinancings had been repaid during 1992-93.

The largest question mark over NHB's funding for the following two fiscal years remains LIC's lending to NHB. Even if LIC continues to direct 30 percent of its incremental funds to housing, it will face competing demands from LICHFL, HUDCO, NHB, and the various state housing boards, etc. for these funds. It will also be interested in earning more like a market rate on its investments because it is likely that private companies will begin to compete and because of heightened competition in general for household savings.

Clearly, if LIC significantly reduces its lending to NHB, there will be a higher chance of large shortfall relative to expected demands on NHB refinance. If LIC continues lending at previous levels as a share of incremental revenues, say about 340 crores in 1993-94, NHB should be able to show an increment to assets of over Rs. 500 crores, despite the fact that Rs. 83 crores of capital gains bonds are scheduled to come due. Combined with projected repayments of Rs. 120 crores, NHB could experience a net cash flow as high as Rs. 657 crores. However, the most likely scenario (Annex 4) must show a decline in LIC funding and a rise in its cost. A worst case scenario could include an end to SLR bond issuances, no HG funding and a deeper cut in LIC funding. In that case, assets could expand by less than Rs. 200 crores in 1993-94 (see Annex 3), and total cash available would be less than Rs. 300 crores..

The 1994-95 year can only be guessed at. The best case (Annex 2)appears to be that LIC continues to provide the same portion of its incremental funds to NHB on the same terms and that RBI continues its build-up of NHB capital. (The statutory limit is Rs. 500 crores.) If additional HG authorization is available, and NHB's net profits total over Rs. 100 crores, incremental funds of over Rs. 600 crores appear to be possible from current sources, at a best-case average cost of only 12.2 pgrcent, even net of further redemption of capital gains bonds.

The worst case (Annex 3)would be that RBI discontinues contributions to capital and the LIC discontinues its lending. In that case, only retained profits of Rs. 120 crores would be available at less-than-market rate, plus the surplus of repayments by HFIs over repayments on capital gains bonds by NHB.

A more likely scenario (Annex 4) would be that LIC continue some lending to NHB, but at a more market rate, say 15 percent, and that HG funds are also available. If RBI either discontinues its capital infusions (which seem to be unnecessary for financial soundness reasons) or eliminates SLR funding for NHB, the net funds available for refinance would remain high, at over Rs. 500 crores, mostly because of rising repayments of earlier refinancings.

Even though Annex 4 is described as the most likely scenario, it is not necessarily very likely. Particularly for 1994-95, there is a significant chance that the major underpinning of NHB's incremental funds, LIC, could end its support.

Continued Growth in the Demand for Refinance?

As noted above, NHB has three major programs of refinance, including 1) the refinance of direct final loans for the purchase or upgrading houses, 2) the refinance of loans made to public, cooperative, or private developers of land, and 3) a line of credit to HUDCO for finance of housing schemes for the EWS. In all cases, the demand for refinance depends primarily on the eligibility parameters, and the incentives to lenders to seek refinance. The analysis here starts with the assumption that the eligibility parameters and incentives for all refinance programs remain the same in future years as they are today. Only once the implications for future demands are developed under this assumption, will modifications of those parameters be considered.

In addition to these basic parameters, there are other key determinants of future demands for refinance in each program that vary across programs. In the case of direct lending to home purchases and upgrading, these other factors include:

1) growth in overall lending for housing,

2) share of that lending going through eligible lenders, and

3) marketing efforts of HFCs with respect to the types of loans eligible for refinance.

The first factor, the overall growth in lending depends on the growth in real incomes and in the general price level, on the nominal and real interest rates on loans, and on the marketing efforts of housing lenders. The growth rate had been very high throughout the 1980s, because of the accelerated growth in real incomes and the expanding marketing efforts of HDFC, the banks, LIC, and so on. Precise figures for total lending for housing are not available for the whole period, but for the five-year period 1982-83 to 1987-88, total lending for housing by these three sets of institutions grew by 22 percent per year compounded. HDFC lending grew by 38 percent per year over the period and continued to grow at an annual rate of 42 percent through to 1990-91.

This growth reflected favorable trends in nearly all dimensions. Real incomes were rising, particularly among skilled workers in urban and semi-urban areas. At the same time, the resources and marketing efforts directed towards originating housing loans were being expanded, partly as a result of policy directives from the GOI. Simultaneously, the demand for housing as an investment was rising, as inflation accelerated, house prices rose in real terms, and real interest rates on other forms of investment declined.

NHB was started up in this environment of rapid growth in housing lending and the demand for its refinance facility also grew rapidly. For the 1989-90 year, only Rs. 132 crores of refinance was extended, even including the funding of loans sanctioned as early as January 1, 1989. Refinance activity expanded to Rs. 392 crores during 1990-91 and to Rs. 674 crores in the 1991-92 year.

As noted above, some of this growth in refinance resulted from progressive liberalization of the terms for eligibility for refinance and in the spreads to lenders. For purposes of projecting future growth, it would be useful to try to separate the effects of these liberalizations from the overall growth in lending and the growth in the number of recognized lenders. Unfortunately, some of the key data for such an analysis are not available. For example, NHB has not kept records as to the basis for their issuance of refinance, i.e., how many loans fell into each of the categories eligible for refinance. Thus the impact on the demand for refinance of changes to the eligibility parameters, as opposed to growth in overall lending, cannot be fully investigated.

Despite this, careful analysis of available data on NHB refinance gives some clues. First, it is necessary to dis-aggregate the total refinance by NHB into its components. As indicated in Annex 5, there are at least seven relevant breaks.

At the moment, we are interested in the trends in the first category, refinance of housing loans. It is immediately apparent that one major potential client of NHB refinance, the banks, have chosen not to utilize the program. Since this situation is unlikely to change in the near future, their behavior will not be examined further.

The co-operatives, however, have been expanding their participation. They come in a variety of types, but no systematic information has been gathered on them for this project and thus it is difficult to analyze the pattern of their participation. At this point, though, essentially four cooperatives, three of which have been participating for over a year, are using 90 percent of the refinance to this group. Future usage will be projected from the behavior of these four.

The three cooperatives that had been eligible as of June 30, 1991 drew down Rs. 52 crores in refinance in the 1990-91 year and Rs. 58 crores additionally in 1991-92. Presumably, they have some additional scope for expanding their participation further, although nothing is known about trends in their general level of business. One other major user of refinance entered the program in 1991-92, and accounted for most of the increase in the flow of refinance to this sector. For the sake of projection, we will assume that all four will expand by only 10 percent in 1992-93 from the 1991-92 levels. If there are no other major entrants and thus these four constitute 90 percent of the demand, the total demand for the co-op sector is projected to be Rs. 91 crores in 1992-93.

The bulk of the refinance for housing loans, over 80 percent in 1991-92, is to HFCs. But, as in the case of the co-operatives, only four of the HFCs account for almost 90 percent of the refinance outstanding to HFCs. Thus, pending the appearance of an additional major HFC, the trends in refinance for these four will determine the trend in the demand for refinance for housing loans. Moreover, we have additional information on the trends in business for these HFCs and also on the share of originations eligible for refinance. We will analyze the prospects for each in turn.

The largest HFC, HDFC, has indicated that it expects overall growth in its loan sanctions to bring them back only towards the levels of 1990-91 (Rs. 874 crores), before HDFC cut back on sanctions in 1991-92 (to Rs. 712 crores). That would imply a 15 percent increase year-to-year in sanctions, but a somewhat lower rate of growth in disbursements, which would still be reflecting the 13 percent decline in sanctions in 1991-92. Thus, a rise in overall disbursements of only 10 percent may be more likely.

The second largest originator of new loans, LICHFL, is projecting a more rapid growth in sanctions and disbursements, as it continues to expand its branch network and to absorb the remaining home lending activities of LIC. Management expects disbursements to reach Rs. 400 crores or a 65 percent rise from 1991-92.

Other big users among HFCs of NHB's refinance include Canfin, Dewan, and India Housing. Canfin is expecting little growth in disbursements, because of slack demand due to economic considerations. Dewan is showing continuing growth, expecting to disburse at least Rs. 80 crores this year against Rs. 59 crores last year. India Housing is currently suspended from the refinance program, so it will be left out of the analysis.

Annex 6 shows the projected level of disbursements for these four HFCs for 1992-93. The aggregate level is projected to increase by 23 percent from 1991-92, mostly reflecting the continuing growth in LICHFL. The remaining question is whether the share of their disbursements that are refinanceable will also change.

The refinance share for 1991-92 is indicated in Annex 6, based on data for NHB's fiscal year, in order to capture the delay between disbursement and receipt of refinance. The shares projected for 1992-93 reflect the comments of the HFC managements as to their expected reliance on NHB for funding. In most cases, the projected rate of refinance is not very different from that estimated for 1991-92, except in the case of Dewan, which is planning to reduce its dependence on NHB refinance.

The result is a projection of total demand for refinance by these top four HFCs of Rs. 379 crores, an increase of only 17 percent from 1991-92 levels. If these four HFCs maintain their 1991-92 share of all refinance (86 percent) for housing loans by HFCs, the overall level of such refinance would be about Rs. 440 crores.

This projection is actually a worst case one for 1992-93, in the sense of the maximum drain on NHB resources foreseeable. The reason that it is not necessarily likely to occur is because all of the top HFCs other than LICHFL are flush with funds raised through successful deposit schemes. Moreover, short-term interest rates are declining, so temporary placement of additional funds, even at the low rates of NHB refinance, are not profitable. The situation is reflected in the very low pace of refinance disbursed between June 30 and December 31, 1992 to these three HFCs, only Rs. 70 crores. Thus the most likely projection (Annex 9) is for a more modest demand of Rs. 400, and a best case (i.e., lowest demand) of Rs. 360 crores (Annex 8). Any shortfall due to the surplus cash position of HFCs, however, will result in a deferral of demand to the next fiscal year 1993-94.

Projections beyond 1992-93 depend on the same three factors noted above. Overall lending for housing should continue to increase as inflation in incomes and house prices continues and especially if real incomes resume their growth in response to further GOI economic liberalization. However, it is important to recognize that the period of extraordinary growth in housing lending is probably over. The market for lending to the current type of target household, i.e., salaried worker seeking formal sector owner-occupied housing in a town of more than 100,000 people, is fairly saturated. Efforts to lend to the self-employed and to agriculturalists have run into rising credit risks and are being cut back by all lenders. Instead, the major lenders are seeking to expand their lending to "safer" borrowers in smaller towns previously not marketed to.

Thus, overall lending is not likely to expand at more than a 20 percent rate for the next two years. The share of that lending going through eligible lenders will remain stable, now that LICHFL has taken over most of LIC's former lending. However, the marketing efforts of HFCs will be in smaller cities, which have a higher proportion of homes eligible for NHB refinance. Thus, the overall share of lending that is eligible for refinance could rise.

All of these forces are reflected in the scenarios projected in Annexes 7 to 9. The worst case for NHB would be a 25 percent rise in demand for refinance of housing loans by HFCs. A "best" case would reflect slow economic growth, low inflation, and unsuccessful marketing efforts, yielding only a 10 percent growth each year. The most-likely scenario is for an acceleration in demand in 1993-94 because of both the deferral from 1992-93 and the expanded marketing to smaller cities, followed by a slowdown in 1994-95, as the renewed rise in the prices of houses puts more housing outside of the eligibility parameters.

Cooperative and bank refinance for housing loans is projected to follow the same pattern for 1993-94 and 1994-95 as for HFCs.

The projection of demand for refinance of LDSP loans follows different considerations. Essentially, banks and some of the bank-sponsored HFCs have become growing users of this refinance, as they have begun to understand it and draw down on it as previously sanctioned projects unfolded. Thus, LDSP refinance doubled between 1990-91 and 1991-92 and is running at an annual rate of Rs. 72 crores for the first six months of 1992-93.

Not enough is known about the nature of the pipeline for these loans to provide a good basis for projecting this refinance. Most indications, though, are that the program is attractive to a large number of scheduled banks and to PNB Housing Finance, which specialized in using the program. Given the large amount of sanctions (Rs. 479 crores) outstanding as of June 1992 relative to cumulative disbursements of only Rs. 87 crores through then, a high rate of additional disbursements through 1992-1995 seems likely. Moreover, for the last twelve months, HFCs have been expanding this refinance more rapidly than have banks. The projections are based on an even split between these sectors in the future.

The last component of the projections for the demand for refinance is for HUDCO. Refinance for HUDCO has been a major component of overall refinance, but HUDCO's participation has been on an ad hoc basis, separate from the basic refinance programs. Assuming that NHB remains committed to refinancing half of the EWS lending by HUDCO, projected demands by HUDCO depend on its projected EWS lending, plus whatever funding goes for special programs of disaster-relief housing. Such lending is, in fact, quite uncertain, because HUDCO is also facing a sharp reduction in its access to the below-market credit that it relies on for its overall operation and particularly for its EWS lending.

The best case scenario for NHB is that HUDCO cuts its EWS lending by half each of the next several years, resulting in a steady decline in refinance demands from the Rs. 125 crores in 1991-92. The "worst" case is that HUDCO is able to maintain its current 1992-93 level of EWS refinance activity (expected to be about Rs. 80 crores) for the next several years. The most likely scenario falls somewhere between these extremes.

Adding together all of these potential demands for refinance under different scenarios yields a wide range of possible outcomes, even for 1992-93. However, as discussed below, the implications of these projections are clear. As indicated in Annex 10, only in the very best of circumstances, under the best case scenarios for supply and demand, will NHB have sufficient funding to carry on its programs. The most likely scenario is for a gap starting as early as this fiscal year and expanding rapidly in 1993-94 and 1994-95. We turn next to NHB's options for bridging such a gap, with the focus on the "most-likely" projection of a Rs. 303 crores deficit for 1993-94.

Part III: Conclusions and Recommendations

General Conclusions

In 1988, NHB was given a broad charter to pursue a variety of activities that would foster the provision of housing finance in India. In keeping with the pattern set by IDBI and NABARD, NHB chose to emphasize its refinance function. Moreover, because the financial market environment that existed at the time of the formation of NHB gave NHB the opportunity to access substantial funding at below-market costs, NHB chose to mold its refinance function to channel these implicit subsidies through HFC's to certain borrowers. It has not yet developed some of the alternative functions of a refinance agency, such as to serve as a source of market-rate emergency liquidity or to redistribute funds regionally, or to specifically facilitate funding of smaller institutions.

There appear to have been several effects of this program on the HFCs and the public. First, in order to access the funds, HFCs have accepted NHB's specific determination of their interest rates for loans up to Rs. 100,000 and the setting of a floor rate for larger loans. Second, several HFCs have sought to cater specifically to the types of households targeted for NHB refinance. Third, many low- or moderate-income borrowers have benefitted from NHB's access to below-market funding sources.

However, in the 1992-93 year, it appears that aggregate demand for NHB refinance will exceed the funds that NHB can access under its current fund-raising options by at least Rs. 50 crores. This situation reflects both the continuing growth in the demand for refinance, and some shrinkage in the supply of directed credit to NHB. Moreover, there are indications that the supply of directed credit will shrink further in the 1993-94 year, while demand for refinance continues to grow, for a net gap of about Rs. 300 crores. In either case, NHB will soon have to alter either the supply of funds or the demand for refinance or both.

It appears that NHB faces short-term issues and longer-term issues that differ somewhat. In the near term, the shortfall of NHB resources from the demand for refinance may be small enough to be adjusted for by simple changes in the program. However, there is accelerating movement towards reducing the share of financial credit subject to government control of rates and usage. It appears that NHB should plan now for the disappearance of below-market funding. In fact, NHB should "re-envision" its activities to be consistent with, and even facilitate, the transformation of the financial sector in India.

Demand-Side Options

In principle, NHB's funding gap can be closed by increasing supply, decreasing demand, or doing both. There are a wide variety of options with respect to modifying the demand for refinance. Moreover, modifying demand can proceed more rapidly than developing new sources of supply. While none of these options may be preferable to the current situation, there are at least several which would continue NHB's past role as conduit of subsidies to lower-income households. However, any change in the current program involves policy judgements which should be thought out carefully. Options include:

1) Changing the eligibility parameters in specific programs.

2) Raising the relative interest rates on refinanceable loans.

3) Limiting the refinance ratio for one or more programs.

4) Eliminating entirely one or more programs.

5) Limiting the refinance ratio or amount, depending on the type of originating institution.

The choice of options in the short-run to achieve a small reduction in the demand for refinance may be different from what is desirable to accommodate a major decline in refinance funding in the longer term.

Restricting Eligibility Parameters. All of the refinance programs of NHB have experienced a process of gradual relaxation of the parameters determining eligibility of specific loans for refinance. Reversal of some of these relaxations could reduce the demand for refinance by enough to meet any near-term shortfall without changing the general thrust of the program.

The best example of this is found in the history of the program for refinance of direct lending. Initially, in urban areas, only houses smaller than 40 square meters and with loans of no more than Rs. 100,000 were eligible for up to Rs. 50,000 in refinance. In other areas, the home could be larger, but could not cost more than 65,000. These restrictions have been gradually relaxed to permit more refinance for more expensive homes, up until the current access to 100 percent refinance up to Rs. 200,000 as long as the total cost is less than Rs. 200,000 (or area is less than 40 square meters).

Some of this relaxation would have been necessary simply to keep pace with the high rates of general inflation and even higher rates of house price increases over the period. However, it appears that the effective ceilings on amounts per house and the cost of houses have at least been doubled, with presumably a much larger increase in actual refinanceable lending (because of the opening up of a more significant part of the market to refinance).

Clearly, an option for reducing demand for refinance by HFCs would be to roll-back eligibility requirements. Additional information and analysis is needed to determine what impact any roll-back would have on demand. For example, restricting the amount of a refinanceable loan to Rs. 100,000 may have little impact, because most households buying houses either less than 40 square meters in area or two lakhs in price, in fact borrow less than Rs. 100,000. On the other hand, restricting the house price to even Rs. 150,000 would significantly reduce demand.

The various land development and construction finance schemes have also seen some relaxation of lot size and house size restrictions. There is no data on which to base an assessment of the impact of these relaxations on the demands for refinance. However, the overall LDSP program seems to be growing rapidly enough to make some further analysis worthwhile.

Other criteria entirely could be adopted instead to reduce demand, such as only loans of an amount affordable by the median income household in the country (about Rs. 60,000), or only for those loans to households with incomes below some median (that could vary across areas.) Unfortunately, both of these criteria can actually reduce the accuracy of the targeting of subsidies, because loan size and reported income are not always related to true income levels. A blend of limitations, such as an income cap as well as house price cap could be utilized, but at the risk of unfairly discriminating against those who cannot or choose not to hide income.

Such rollbacks could be effective and relatively easily understood. However, they could be disconcerting to the HFCs, especially those dependent on NHB refinance. They would also probably require an upward shift in the interest rates on loan categories that are no longer eligible for refinance or lenders will avoid those categories. Other ideas along these lines could be explored.

Raising Interest Rates. A second method of balancing supply and demand would be to gradually raise the interest rates on each slab of refinance. This step would have two effects. First, the demand for mortgages among eligible households would decline somewhat. It is not clear that the decline would be very dramatic, at least among those households seeking a loan over Rs. 25,000 for purchase of a conventional house. Such households have already seen their interest rate go from 13.5 percent in 1989 to 15.5 percent (including interest tax) today without any dramatic decline in demand. On the other hand, the resources going into smaller loans through HUDCO and AB Homes may be going to households more sensitive to an increase in rates.

Even if a rise in rates does little to slow down the demand for refinance, it would have the important effect of providing coverage of the higher rates NHB would have to pay on any market borrowing. As long as NHB retains access to a significant amount of low-cost directed credit, blending it with some market-rate borrowing would permit the offering of below-market refinance for eligible households. This would permit preservation of the existing program rules, except for a narrowing of the range of interest rates.

Reducing the Refinance Ratio. Another alternative with a somewhat similar effect would be to reduce the proportion of each eligible loan which is re-financeable, say from 100 percent to 80 percent, depending on the supply of funds relative to demand. For those HFCs with alternative sources of funds, this change would require them to blend in some of those funds for a net higher cost of funding. Beyond some point, their interest margin on eligible loans would be squeezed so much that the loans would be unprofitable unless NHB raised the permitted interest rates.

Reducing the refinance ratio effectively raises the cost of funds for all HFCs, but more so for the HFCs which have poor access to market sources of funds. In the extreme case of no access to market funds, lending would have to stop, because of incomplete funding. For those with a relatively higher cost of additional funds, they will now have a competitive disadvantage in a portion of the market where they did not before. For these reasons, the above option may be preferable to this one, i.e., NHB raises the market-rate funds and blends them with below-market funds to provide higher cost refinance rather than require the HFCs to do so.

Eliminating a Program. Another approach to limiting demand would be to simply end one or more of the distinct programs that NHB operates. Some of the differentiations by program are related to type of institution (banks, HFCs, cooperatives); these are discussed below. The single most important substantive difference is between the refinance for direct lending and the LDSP lending. The author does not have a detailed understanding of the strengths and weaknesses of the LDSP program. However, it appears that it does not directly benefit households (there is no guarantee that house prices are lowered by the concessional lending), nor does it promote the HFC industry (most funds go to banks). In contrast, the direct lending program promotes the growth of HFCs, supports the gradation of interest rates by size of loan, and provides leverage for NHB regulation.

Another possible distinction by program is the special sub-program for HUDCO. This program appears to be wonderfully targeted towards lower-income households. However, HUDCO is not really an HFC and it also has traditionally had its own access to below-market resources. The political system has allocated each institution a limited amount of below-market funds to channel to target groups. Thus, it is not obvious that HUDCO's funding should be NHB's concern. The stated reason that sponsoring a scheme for EWS housing is required under NHB's statute, is not quite accurate. Such a scheme is only one of many initiatives NHB can choose to pursue if it so desires, according to its statute.

Differentiating by Institution. Another strategy that could either substitute or complement the other strategies is to differentiate between types of institutions. Such differentiating raises basic issues as to the purposes of NHB and, in general, as to the levelness of the competitive "playing field" in housing finance. However, the option is worth some detailed consideration.

There are many distinctions that can be drawn among current recipients of NHB refinance. Among the banks, there are public and private banks. Among the cooperatives, there are four different categories. Among HFCs, there are those sponsored by private banks, those sponsored or having significant overlap by non-bank public sector institutions, and those having primarily private, non-bank ownership.

One approach would be to provide 100 percent refinance only to those institutions with less access to other funds because of the absence of implicit public sector support. All other institutions could be required to come up with a portion of the funds themselves, and concomitantly be allowed to charge a higher rate of interest. Alternatively, the funding to NHB from USAID Housing Guaranty funds could be made available solely to institutions meeting certain special eligibility requirements, with the same end result of full refinance at a low-cost being available only to such institutions.

While such a policy shift might sgrve to reconcile supply and demand and also encourage the growth of private sector HFCs, it sharpens the existing question of whether it is an acceptable situation to have institutions essentially dependent on NHB refinance. Current limitations on the dependence on refinance may be sufficient, but they would need to be reviewed, particularly in light of the potential for the flow of below-market funding to end entirely and abruptly.

Even if a distinction between public and private is not made, a distinction could be made between entities whose principal purpose is retail housing finance and those with other purposes. This could exclude the banks in general from the program as well as HUDCO. Alternatively, the refinance could be available essentially only to those institutions for whom NHB is the primary regulator.

Another way of reducing demand is to raise directly what to some is an obvious question. Two institutions, HDFC and HUDCO, utilize half of the total funds. Both would exist without the funding. It is arguable that both would generate the same pattern of lending in the absence of the refinancing (at least until recently). The argument could be made that an overall cap should apply to the share of NHB funds going to any one institution (e.g., 10 percent).

Currently, the refinance program has the dual purposes of funding fledgling HFCs and to channel below-market funds to target households. If HDFC's and HUDCO's participation were limited, especially if their other access to directed credit is more limited in the future, this will reduce the effectiveness of the program. On the other hand, if support for fledgling institutions is the key goal of the program, then differentiations based on size could be made to preserve this goal.

Supply Side Options

NHB's supply of funds can be increased through:

1) Political pressure to gain access to additional supplies of below-market credit,

2) Drawing funds from the "market" using existing instruments, or

3) Creating new instruments that might provide advantages in attracting funds.

The author cannot properly assess the possibilities of NHB accessing additional sources of directed credit. Such access depends on official decisions influenced primarily by political considerations. There are indications that the prospects for such additional supply are not good. For example, the RBI has ended NHB's access to the Long-Term Operations Fund and has not offered NHB the special funding going to NABARD and IDBI. Furthermore, the HFC industry is the primary direct beneficiary of the refinance window and it does not have significant political influence. Other direct and indirect lenders for housing, such as the banks and LIC, would rather see less credit directed to housing, at least at below-market rates. The only HFC with significant political influence, HDFC, is also the best-equipped to prosper in the absence of refinance.

These considerations suggest that NHB must look to the market in one way or another if it wishes to raise additional funds. This pushes NHB into new territory, but one that has been entered previously by a similar institution, IDBI. In principle, NHB could issue unsecured long-term debentures for sale to all types of long-term investors. A key question is whether they would be rated by CRISIL as if they were backed by the GOI. In the U.S. context, there would be no real question that debt of a subsidiary of the central bank would have implicit government backing. However, even if the debt were rated as practically riskless, it may carry an elevated yield because of the low name recognition of NHB among potential holders of the debt. This could imply a rate as high as 16 percent under current market conditions.

Such market-rate fund-raising is not easy, because the market for long-term debt is not well-developed in India, outside of the traditional channels of directed credit (i.e., bonds for the SLR, capital gain bonds, LIC lending, etc.) Each issue has to be designed and marketed to a specific audience. In NHB's case in particular, it is important that the interest rate on the bonds be fixed for 10 years, but the bonds should be pre-payable. Presumably, however, some limited funding could be secured through such an approach in the next six to twelve months.

NHB could explore methods of fund raising other than offering unsecured bonds. One method that is already being pursued is through the contract-savings scheme, the Home Loan Account. The evidence so far is that such a scheme, unless backed by substantial tax advantages, does not appeal to many Indians. Nor is it really a method of raising funds that are available for the general NHB refinance programs, where they are needed.

Other approaches, such as securitization or setting up a mutual fund in mortgages, might involve basic changes in the way NHB operates, turning from refinance to the acquisition of loans. Moreover, NHB is not currently designed or staffed to be an innovative financial services firm, managing or marketing investments. It would be more advisable for

NHB to promote the creation of investment instruments by professional intermediaries that would attract funds from pension schemes or mutual funds run by others, preferably private sector, entities.

Such fund raising would benefit from the implicit GOI guarantee, name recognition, and economies of scale to fund raising, and could yield a cost of funds lower than for all but the largest HFCs.[5] However, it cannot provide substantially cheaper funding than other "market" funding for HFCs,, especially after adding 0.5 percent for NHB overhead.[6]

Recommendations

This discussion has explored various options for reconciling the demand for NHB refinance with the supply and cost of funds available. In judging among these options, a broad perspective is needed. We start from the propositions that:

(1) the supply of advantaged funds will shrink relative to the demands on NHB, and it even could disappear entirely; and

(2) NHB can develop some alternative sources of market rate supply, especially if the debts of NHB are judged to be guaranteed by the government.

(3) sharp changes in the eligibility criteria are probably not desirable, especially since certain HFCs are fairly dependent on the refinance window.

These considerations suggest that NHB embark on a three-stage program to respond to the changing financial environment. First, since it will take some time for NHB to raise long-term funds from the market, it may be necessary to truncate some portions of the overall program immediately in order to bridge the 1992-93 gap. Based on the above considerations, a relatively good way of doing this would be to reduce HUDCO's access to the program, at least for a period. As noted, NHB is not HUDCO's primary regulator, nor is retail housing finance HUDCO's major business, nor does HUDCO utilize one of the standard NHB programs. Presumably, HUDCO's lending functions could be taken over by specialized housing lenders. The negative to such a step is the exclusion of some very low-

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[5] This statement refers to raising funds through long-term debt issuance. HFCs may find that raising deposits from households may be still cheaper and deposit raising is not something that NHB is designed to do. However, heavy reliance on deposits can produce too much interest-rate risk and thus most HFCs may have some interest in accessing NHB refinance, even if it is at a higher net cost than deposits.

[6] As a practical matter, all of NHB's operating expenses could be covered by the implicit return on the capital base already provided by the RBI, i.e., 13 percent per year on Rs. 250 crores (35 crores) compared to less than 10 crores in overhead. However, this could cause the real value of the capital to run down over time.

income beneficiaries from the program.[7] But if the program is to move towards market-rate refinance, this benefit flowing to the poorer households will be shrinking anyway. This consideration, combined with the fact that excluding HUDCO may solve the near-term shortfall without unsettling the specialized HFCs, makes this option attractive.

It also seems advisable to defer any further sanctions under the LDSP program. This should be done as soon as possible, to preserve the greatest amount of flexibility for NHB in evolving its core program, the refinance of housing loans by HFCs.

Finally, if necessary, NHB could end refinance for all loans over Rs. 100,000. The interest rate on this slab is already unsubsidized and unlimited, so the HFCs can adjust to using their own funds without NHB having to make any overt change to the slabbing of rates. Alternatively, the spread on refinance of loans over Rs. 100,000 could be cut to 1.0 percent. This would discourage the lenders who have low-cost alternative sources of funds from utilizing this portion of the refinance window.

A modified version of such a step would be to restrict refinance of loans over Rs. 100,000 to only smaller HFCs and Cooperatives such as those with total annual lending less than Rs. 100 crores. This would be a first step towards re-directing the refinance function towards the promotion of smaller HFCs.

The second stage is for NHB to embark on a process of flexible evolution of the refinance window, towards having it play a smaller role in subsidizing the housing of moderate income households and more towards being a method of mobilizing market-rate funds for purposes of liquidity for the sector and perhaps a funds-raiser for certain types of lenders, or for areas of the country with poorer access to financial resources. To do so, NHB should immediately begin to develop its access to the long-term funding market, utilizing these funds on a blended basis with below-market funds and modifying the interest rate structure over time to reflect its average cost of funds. This approach assumes that the major funding currently forthcoming at below market rates from LIC will continue. If this is not the case, the NHB should prepare for the rapid conversion of its refinance window towards a lender-of-last-resort function, with perhaps some buffering for those HFCs currently highly dependent on refinance.

In the short-term, NHB should concentrate on raising market-rate funds in the simplest manner possible, which is probably through the issuance of unsecured debt. In doing so, it may want to imitate IDBI by having the interest rate re-set every five years, both to improve marketability and to protect itself from a sharp decline in interest rates.

The third stage involves taking full advantage of the current program of technical assistance from USAID to do a complete review of the options for NHB to facilitate the funding of housing finance in an environment of no access to directed credit. Studies are

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[7] It seems likely that reductions in refinance to HUDCO, while formally coming out of amounts targeted for EWS housing, will have a net effect of shrinking HUDCO's program overall, thus spreading the cuts over the higher income groups as well.

already planned for securitization, contract-savings, variable rate mortgages (necessary if short-term deposits are tapped), and strengthening foreclosures (useful to facilitate securitization). Further work is also probably needed on developing a vision of how the long-term funding markets, involving trust insurance and provident funds, will be deregulated over time and how investment instruments based on mortgages can be best designed to suit those investors.

This analysis should start with the premise that no below-market funding will be available in the future and that the slabbing of interest rates will end. The first key question would be the degree to which NHB can serve as a credit enhancer, either on its own capital or through an implicit guarantee of the government. If it can serve a credit enhancing function, then it probably can facilitate the development of mortgage-backed securities.

The second key question is the prospects for improving the foreclosure process. With foreclosure and a government guarantee for NHB available, a variety of secondary market systems could be designed, building on mortgage insurance, careful regulatory oversight, and development of the market for long-term financial instruments.

Of course, it should be emphasized that NHB has many roles to play in Indian housing finance, whether or not the refinance function is continued in any form. These include regulation and supervision (which may need statutory strengthening in the absence of below-market refinance), lender of last resort, policy advocate in Delhi, provider of training for HFC personnel, promoter of a trade association, and facilitator of efforts to serve under-served sectors of the market. These functions should probably be enhanced under any circumstances. But they are all the more critical in the current situation of rapid changes in the Indian financial markets.

Annex 1

Incremental NHB Funding, By Year[8]

Source	***1988-89***	***1989-90***	***1990-91***	***1991-92***
Capital (RBI)	100 (10.0)	50 (10.0)	50 (10.0)	50 (10.0)
Loans (RBI)	50 (5.0)	25 (6.0)	50 (6.0)	50 (6.0)
SLR Bonds	20 (11.5)	60 (11.5)	80 (11.5)	88 (12.0)
Cap. Gains Bonds			83 (9.0)	77 (9.0)
HG Funding			49 (10.5)	
OECF (Japan)				42 (10.5)
LIC Loans			171 (12.0)	271 (12.7)
UTI Loans				50 (15.5)
Reserves	11 (10.0)	20 (10.0)	45 (10.0)	60 (10.0)
TOTAL (Weighted Rate)	181 (8.8)	155 (9.9)	528 (10.4)	688 (11.4)

[8] All amounts in Rs. crores. Interest rate appears in parentheses. Capital and reserves are assumed to earn a 10 percent return to maintain their real value.

Annex 2

Best-Case Projected NHB Funding (By Source, Year and Cost) [9]

Source	***1992-93***	***1993-94***	***1994-95***
Capital	50 (10.0)	50 (10.0)	50 (10.0)
SLR Bonds	45 (13.0)	50 (12.0)	55 (12.0)
HG Funding	75 (10.5)	80 (10.5)	90 (10.5)
LIC Loans	300 (13.0)	340 (13.0)	375 (13.0)
Reserves	80 (10.0)	100 (10.0)	120 (10.0)
Cap. Gain Bonds		<83> (9.0)	<74> (9.0)
Net New Funds	550 (12.0)	537 (12.3)	616 (12.2)
Repayments of Refinance	80	120	150
Net Cash Available	630	657	766

[9] All amounts in Rs. crores. Interest rate appears in parentheses. Capital and reserves are assumed to earn a 10 percent return to maintain their real value.

Annex 3

Worst-Case Projected NHB Funding
(By Source, Year and Cost)[10]

Source	1992-93	1993-94	1994-95
Capital	50 (10.0)	50 (10.0)	
SLR Bonds	45 (13.0)		
HG Funding			
LIC Loans	200 (14.0)	100 (14.0)	
Reserves	80 (10.0)	100 (10.0)	120 (10.0)
Cap. Gain Bonds		<83> (9.0)	<74> (9.0)
Net New Funds	375 (12.5)	167 (12.9)	46 (11.6)
Repayments of Refinance	80	120	150
Net Cash Available	455	287	196

[10] All amounts in Rs. crores. Interest rate appears in parentheses. Capital and reserves are assumed to earn a 10 percent return to maintain their real value.

Annex 4

Most Likely Projected NHB Funding (By Source, Year and Cost)[11]

Source	***1992-93***	***1993-94***	***1994-95***
Capital	50 (10.0)	50 (10.0)	50 (10.0)
SLR Bonds	45 (13.0)	50 (12.0)	
HG Funding	75 (10.5)	80 (10.5)	90 (13.0)
LIC Loans	300 (13.0)	200 (14.0)	200 (15.0)
Reserves	80 (10.0)	100 (10.0)	120 (10.0)
Cap. Gains Bonds		<83> (9.0)	<74> (9.0)
Net New Funds	550 (12.0)	397 (12.9)	386 (13.5)
Repayments of Refinance	80	120	150
Net Cash Available	630	517	536

[11] All amounts in Rs. Crores. Interest rate appears in parentheses. Capital and reserves are assumed to earn a 10 percent return to maintain their real value.

Annex 5

NHB's Refinance Programs by Year and Sector[12]

	1989-90	1990-91	1991-92
Refinance of Housing Loans:			
Banks	1.1	3.7	7.2
Cooperatives	8.3	55.3	83.1
HFCs	65.5	203.0	377.2
SUBTOTAL	74.9	262.0	467.5
Refinance of LDSP:			
Banks	6.9	17.2	30.6
HFCs		8.0	24.9
SUBTOTAL	6.9	25.2	55.5
Refinance of HUDCO:			
HUDCO-EWS	50.0	105.0	125.0
HUDCO-other			26.1
SUBTOTAL	50.0	105.0	151.1
GRAND TOTAL	131.8	392.2	674.1

[12] All amounts in Rs. Crores.

Annex 6

Projecting HFC Demand for Long-Term Refinance in 1992-93 [13]

HFC	Projected Disbursements in 1992-93	Rate of Refinance in 1991-92[14]	Projected Rate of Refinance in 1992-93	Projected Refinance in 1992-93
CHFL	100	33.0%	30.0%	30
DHFL	80	78.0%	70.0%	56
HDFC	691	27.7%	25.0%	173
LICHFL	400	29.6%	30.0%	120
TOTAL	1271			379

[13] All amounts in Rs. crores.

[14] The rate of refinance in 1991-92 is based on the ratio of refinance drawn down during NHB's fiscal year ending June 30, 1992 to the amount of disbursements during the HFC's fiscal year ending March 31, 1992.

Annex 7

Best-case Projected Demand for Refinance [15]
(By Program, Sector, and Year)

	1992-93	1993-94	1994-9
Refinance of Housing Loans:			
Banks	8	9	10
Cooperatives	80	88	97
HFCs	360	396	436
SUBTOTAL	448	493	543
Refinance of LDSP:			
Banks	35	40	50
HFCs	35	40	50
SUBTOTAL	70	80	100
Refinance of HUDCO:			
HUDCO-EWS	63	32	16
HUDCO-other			26.1
SUBTOTAL	63	32	16
GRAND TOTAL	581	605	659

[15] All amounts in Rs. crores.

Annex 8

Worst-Case Projected Demand for Refinance [16]
(By Program, Sector, and Year)

	1992-93	1993-94	1994-95
Refinance of Housing Loans:			
Banks	10	13	16
Cooperatives	91	114	143
HFCs	440	550	688
SUBTOTAL	541	677	847
Refinance of LDSP:			
Banks	50	70	90
HFCs	50	70	90
SUBTOTAL	100	140	180
Refinance of HUDCO:			
HUDCO-EWS	80	80	80
HUDCO-other	30	30	30
SUBTOTAL	110	110	110
GRAND TOTAL	751	927	1137

[16] All amounts in Rs. crores.

Annex 9

Most-Likely Projected Demand for Refinance (By Program, Sector, and Year) [17]

	1992-93	1993-94	1994-95
Refinance of Housing Loans:			
Banks	10	13	15
Cooperatives	90	117	130
HFCs	400	520	576
SUBTOTAL	500	650	721
Refinance of LDSP:			
Banks	40	55	65
HFCs	40	55	65
SUBTOTAL	80	110	130
Refinance of HUDCO:			
HUDCO-EWS	80	60	40
HUDCO-other	20		
SUBTOTAL	100	60	40
GRAND TOTAL	680	820	891

[17] All amounts in Rs. crores

Annex 10
Comparison of Projected Funding and Demands [18]

	1992-93	1993-94	1994-95
Best Case:			
Supply	630	657	766
Demand	581	605	659
Difference	49	52	107
Worst Case:			
Supply	455	287	196
Demand	751	917	1137
Difference	<296>	<630>	<941>
Most Likely Case:			
Supply	630	517	536
Demand	680	820	891
Difference	<50>	<303>	<355>

[18] All amounts in Rs. crores.