

Restructuring the Role of the National Housing Fund and Policy Recommendations[#]

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Abstract

This paper analyzes various NHF loan programs and provides policy recommendations to enhance their efficiency and legitimacy. First, the analyses on household loan programs revealed that there exists a discrepancy between target households (total income of households is lower than the 6th decile) and actual beneficiaries. This is due to the fact that loan eligibility has been determined not by total household income but by the income of the head of the household. On the other hand, analyses on the financial status of construction companies, which were approved for loans from the NHF, show that the profitability of construction companies is not sound.

Based on the above evaluation and operational changes, the policy recommendations are as follows: First, financial support for housing construction should focus on the construction of rental housing. Second, financial support of the NHF to households should target lower-income groups and accessibility to NHF programs should be

[#] This paper originally in Korean written by Kim, Park, and Lim (2004) has been revised and translated into English.

improved. Finally, to mitigate the potential risk of short-term collateralized housing loans, NHF programs should focus on the long-term mortgage market.

This paper also proposes detailed operational improvements based on the analyses of existing NHF programs. First, loan eligibility should be modified to warrant the original NHF mission. In the long run, eligibility should be based on the total income and wealth of households. In the short run, eligibility should be based on total household income. Second, NHF programs for the construction of mid-size rental units should be modified to enhance the efficiency and soundness of the Fund. In addition, concerns that NHF programs for defaulted housing construction might overcompensate successor builders should be addressed. Finally, an ex-post monitoring system should be established to continuously improve NHF programs.

I. Introduction

The National Housing Fund (NHF) is a government-based fund established under the Comprehensive Housing Construction Plan to enhance the stability and quality of housing for Koreans.¹ At the time of the NHF's establishment in the late 80s, the housing supply rate (the number of housing units per one hundred households) was 71.2%. At the end of 2002, it rose to over 100%. Taking into account that the NHF supported 33% of housing units built between 1981 and 2003, it can be said that the objectives of NHF were achieved. Also, the NHF has continued to strengthen many of its programs, such as providing stable housing support and *Chonsei*² support for low-income households, and improving housing conditions, and so on. Over two trillion won of funding has been used for supporting the construction of rental housing since 2000. Also, funding in the form of supporting the *Chonsei* and housing improvement for low-income households was steadily increased to about 700 billion won in 2003.

However, the housing environment for low-income households, the main focus of the NHF's support, still needs to be improved greatly. Despite improvements in the housing stock and housing supply rate (the number of housing units per one hundred households), the home ownership ratio (number of houses occupied by owners per one hundred housing units) and the stock and proportion of small houses 85 m² or less - the primary means of housing for low-income households - continues to fall, while overcrowding due to multiple households living in a single house continues to rise. In terms of housing conditions, it is difficult to say whether the NHF has adequately accomplished its goals. Therefore, the housing policy must be changed from increasing quantity through construction to improving the stability and quality of the housing environment. Also, the objectives of the NHF need to be changed to reflect the changes in the economic and social environment such as persisting low interest rates, and the expansion of the housing finance market. From the perspective of household demand, there is demand for greater variety as housing preferences have become more diversified, as well as for improved quality for a more pleasant residential environment. Also, regulatory liberalization in the housing finance market following the economic crisis in the late 1990s opened the door for private financial institutions to enter the

¹ NHF was established in 1981 with the enactment of the Housing Construction Promotion Act.

² The *Chonsei* is the traditional Korean real estate finance system. In *Chonsei* system, a lump sum is deposited in lieu of rental payments and the leaseholder generates income through investment of the deposit over the period of the lease.

housing market. This, in turn, has eroded the NHF's effectiveness as a low interest rate financing method, as a financial support policy for low-income housing.

This study examines the NHF from various angles, and seeks to offer recommendations for enhancing the NHF's role and operational structure to meet the new demands that have emerged. While reaffirming the NHF's overall role as a public fund for improving the housing environment by addressing market failures and decreasing risk in the financial system, we seek to find ways to improve its efficiency by evaluating the various loan programs.

The analysis and policy suggestions in this report are based on two basic viewpoints. The first is that there remains a need for a funding policy to ensure stability by guarding against market failures in the housing finance market. Stable housing is a basic necessity, so there is a need for the government to actively intervene when market failure threatens stability. Second, the roles of the public and private financial institutions in the market must be clearly distinguished. The NHF must stay true to its pump-priming role as a public housing finance organization, and avoid performing the functions of private financial institutions.

With these two standpoints in mind, the report is organized in the following. Chapter 2 takes a look at the NHF's role and its importance in the housing finance market. Chapter 3 analyzes the NHF's loan programs and the structure under which individual loan programs are operated, and evaluates whether their objectives have been achieved. Chapter 4 considers results of the analysis and offers policy recommendations for the NHF, as well as, improving the management of the fund. Chapter 5 concludes by summarizing the analysis and offering policy suggestions.

II. NHF's Programs and Performance

1. NHF and Housing Finance Market

The NHF has continuously expanded funding to the housing finance market to support public housing³ and to alleviate the burdens housing finance of low-income households. After its establishment in the 1980s, the NHF has accelerated the

³ Public housing is defined as that constructed with the support of the public housing funds in Korea. Public housing has two tenure types: public for-sale and public rental. In Korea, NHF and KHB (Korea Housing Bank) housing loans were major financial sources for housing until the mid-1990s: the NHF and KHB loans combined accounted for more than 80% of housing related loans during the 1980s and 1990s. NHF has been allocated to low-income housing and KHB housing loan was allocated to middle income group's housing. After the late 1990s, when the KHB is privatized, KHB loans do no longer exist.

construction of public housing by financially supporting the construction of 150~200 thousand public rental or for-sale housing units each year. In addition, over 3.4 million houses have been financed through the NHF between 1981 and 2002, 35.7% of total houses constructed during that period.

The NHF was successful in that it helped low-income households gain housing stability and reduce their financial burden. In doing so, the NHF attained its original goal of increasing the supply of homes. Though the housing supply rate decreased to 70% in the 1980s due to rapid industrialization and rural-to-urban migration, the rate steadily rose after the NHF's establishment to over 100% in 2002, surpassing its initial goal of 100%.

The NHF's share in the housing finance market rose to 55% in 2001, as the role of public housing finance increased in order to revitalize the housing market following the economic crisis in late 1990s. Even with the expanded participation of private financial institutions, the NHF had total loans outstanding of 41.2 trillion won in 2002, which is 49.8% of the overall Korean housing finance market which totaled 82.4 trillion won.

<Table 1> NHF's Housing Support

(Unit: thousand houses)

Category	1981~90	1991~95	1996~ 2000	2001	2002	Total (1981~2002)
Newly Constructed Houses(A)	3,079	3,125	2,332	530	667	9,733
Constructed by Public Sector(B)	1,340	1,080	873	128	-	3,421
Housing Supported by the NHF(C)	1,017	1,140	1,036	148	131	3,472
C/A (%)	33.0	48.2	44.4	27.9	19.6	35.7

Source: Ministry of Construction and Transportation.

<Table 2> Overall NHF Loan Programs

(Unit: hundred million won, %)

Year	Loans to Housing Consumers	Loans to Housing constructors		Other Loans			Total
		Rental Housing Construction	For-sale Housing Construction	Housing Reconstruction	Other Programs	Capital Contribution	
1995	1,750 (4.0)	12,523 (28.7)	24,800 (56.9)	3,367 (7.7)	1,127 (2.6)	-	43,567
1996	1,730 (3.7)	17,211 (37.2)	22,379 (48.4)	3,601 (7.8)	1,362 (2.9)	-	46,283
1997	2,250 (4.9)	21,179 (45.8)	18,948 (41.0)	2,698 (5.8)	1,196 (2.6)	-	46,271
1998	22,721 (40.7)	19,555 (35.0)	9,102 (16.3)	2,262 (4.0)	2,254 (4.0)	-	55,894
1999	33,262 (44.7)	22,870 (30.7)	9,540 (12.8)	1,872 (2.5)	1,497 (2.0)	5,451 (7.3)	74,492
2000	37,931 (45.0)	34,355 (40.8)	8,945 (10.6)	1,303 (1.5)	1,665 (2.0)	-	84,199
2001	27,207 (26.6)	41,194 (40.3)	6,454 (6.3)	1,514 (1.5)	12,932 (12.7)	12,791 (12.5)	102,092
2002	22,171 (31.7)	36,904 (52.7)	4,146 (5.9)	1,485 (2.1)	5,273 (7.5)	57 (0.1)	70,036

Note: 1) Numbers in parenthesis are a percentage of the total.

2) Capital Contribution includes capital investment to the KHGC (Korea Housing Guarantee Co., Ltd.), MBS, and KoMoCo (Korea Mortgage Corporation).

Source: Annual Statements of NHF accounts, Ministry of Construction and Transportation.

2. NHF Loan Programs

There are many ways to classify the NHF's various loan programs, but in this paper they are divided into 3 groups depending on usage; Loans to Housing Consumers, Loans to Housing Constructors, and other housing related loans. The Loans for Housing Consumers provides funding for *chonsei* and housing purchases to individuals who meet the conditions. The Loans to Housing Constructors supports the construction of various rental and for-sale housing units. Also, the NHF runs many different housing related loan programs, such as for the reconstruction of houses in poor condition, and so on.

From the <Table 2>, we can see two major changes after 1995 in the allocation of resources. First, Loans to Housing Consumers rose dramatically in years after the crisis in late 1997. Before the crisis, Loans to Housing Consumers totaled only less than 5% of all new loans while loans to housing constructors totaled 85%. After 1998, Loans to Housing Consumers took a higher proportion and in 1999 its proportion was greater than that of Loans to Housing Constructors. The large amount of Loans to Housing Constructors before the crisis is believed to have stemmed from the string of policies to increase the housing supply by constructing new houses. With the massive bankruptcy of construction companies after the crisis, the demand for Loans to Housing Constructors dropped while the supply of Loans to Housing Consumers increased as policies focused on ensuring a stable supply of housing. Second, Loans to Rental Housing Constructors steadily rose while the proportion and amount of Loans to For-sale Housing Constructors rapidly declined. This can be attributed to the shift in government's policy view of houses as a means of living.

A. Loan Programs for Housing Consumers⁴

The Loan to Housing Consumers is a program that provides loans with preferable terms such as low-interest rates to targeted low-income individuals and supports their purchase of homes or *chonsei*. For example, the loans for *Chonsei* Deposit program provides housing loans to low-income households who do not own homes, up to 70% of the *chonsei* deposit for a home of 60 m² or less at an annual rate of 3%. The Loans for *Chonsei* Deposit program also provides housing loans to wage earners with a annual income of 30 million won or less who do not own homes, up to 60 million won or 70% of the *Chonsei* deposit for a home of 85 m² or less at low interest rates. Loans to Housing Consumers accommodates households with a annual income of 30 million won or less who do not own homes and want to buy houses with a loan of up to 70% of the total price for a home of 85 m² or less with an upper limit of 100 million won at low interest rates. Besides the aforementioned programs, Loans for Housing Purchase Installment Payment, Loans to First-time Home Buyers, and others are run by the NHF.

<Table 2> and <Table 3> both show that the basic operational structure of the NHF changed after the crisis. No longer focusing on loans to housing constructors, it shifted towards loans to housing consumers. Also, Loans for Housing Purchase Installment Payment and Loans for *Chonsei* Deposit Repayment were added to the three major programs including the *chonsei* deposit loans for the low-income group, *chonsei* deposit

⁴ Discussions below are based on the statistics of NHF loan programs as of the end of 2003.

loans for wage earners, and housing consumer loans for wage earners. The data on Loans to Housing Consumers in <Table 3> show that these loans for housing purchase increased greatly, this increase was mainly in the new programs including Loans for Housing Purchase Installment Payment, Loans for *Chonsei* Deposit Repayment, etc. Second, as shown, Loans for *Chonsei* Deposit increased over Loans for Housing Consumers.

<Table 3> NHF Loan Programs to Housing Consumers

(Unit: hundred million won, %)

	Loans for low-incomers' <i>Chonsei</i> Deposit	Loans for wage earners' Housing Consumers	Loans for wage earners' <i>Chonsei</i> Deposit	Loans for Housing Purchase Installment Payment	Loans for Rental Housing Consumers	Loans to First-time Home Buyers	Loans for <i>Chonsei</i> Deposit Repayment	Total Loans to Housing Consumers
1995	750 (42.9)	700 (40.0)	300 (17.1)	-	-	-	-	1,750
1996	730 (42.2)	500 (28.9)	500 (28.9)	-	-	-	-	1,730
1997	750 (33.3)	800 (35.6)	700 (31.1)	-	-	-	-	2,250
1998	750 (3.30)	600 (2.64)	1,300 (5.7)	18,521 (81.5)	-	-	1,550 (6.8)	22,721
1999	3,000 (9.0)	9,000 (27.1)	-	20,913 (62.9)	-	-	349 (1.0)	33,262
2000	1,692 (4.5)	10,613 (28.0)	9,608 (25.3)	15,937 (42.0)	26 (0.0)	-	55 (0.1)	37,931
2001	2,442 (9.0)	4,282 (15.7)	7,169 (26.3)	9,502 (34.9)	256 (0.9)	3,555 (13.1)	1 (0.0)	27,207
2002	4,880 (22.0)	1,345 (6.1)	4,808 (21.7)	2,081 (9.4)	262 (1.2)	8,795 (39.7)	-	22,171

Note: 1) Numbers in parenthesis are a percentage of the total.

2) Loans for *Chonsei* Deposit Repayment Program were discontinued in 2002.

Source: Annual Statements of NHF accounts, Ministry of Construction and Transportation.

B. Loan Programs for Housing Constructors

The Loans to Housing Constructors program offers low interest loans to construction companies building rental or for-sale units under a certain size, with a preset amount of money. Loans for housing constructors can be divided largely into two groups: Loans for Rental Housing Construction and Loans for For-sale Housing Construction. The loan program for the construction of rental housing includes the Loans for National Rental Housing Construction, Loans for Public Rental Housing Construction, Loans for Middle-size Rental Housing Construction, Loans for Reconstructed Rental Housing, and Loans for Company Employee Rental Housing. The loan program for the construction of for-sale houses includes the Loans for Public For-sale Housing Construction, Loans for Middle-size For-sale Housing Construction, Loans for Welfare-enhancing Housing Construction, and Loans for Reconstructed For-sale Housing. Of these, the Loans for National, Public and Middle-size Rental Housing Construction and the Loans for Public and Middle-size For-sale Housing Construction are the largest and most important.

The Loans for National Rental Housing Construction program provides loans of 24.7 million won per household at an annual interest rate of 3% over 30 years, for homes with an expected rental period of over 10 or 20 years and 60 m² or less in size. The Loans for Public Rental Housing Construction provides loans of 45 million won per household at an annual interest rate of 3% over 30 years, for homes with an expected rental period of over 5 years and 60 m² or less in size. The Loans for Middle-size Rental Housing Construction was introduced to help revitalize the real estate market after the crisis, and provides loans of 60 million won per household at an annual interest rate of 5.5% over 18 years, for homes with an expected rental period of over 5 years and between 60 m² and 85 m² in size. Loans for Public For-sale Housing Construction provides loans of 45 million won in support per household at an annual interest rate of 6% over 3 years, for homes constructed for sale and 60 m² or less in size. The Loans for Middle-size For-sale Housing Construction provides loans of 60 million won in support per household at an annual interest rate of 7% over 3 years, for homes constructed for sale and 60 m² and 85 m² in size. The Loans for Middle-size Rental and For-sale Housing Construction were also introduced after the crisis.

According to <Table 4>, the Loans for For-sale Housing Construction that were previously prevalent, decreased in proportion and amount to around 10% of total Loans to Housing Constructors in 2002. On the other hand, Loans for Rental Housing

Construction rose to 90%. This reversal in proportion is deemed to have been a result of policies focusing on increasing the supply of rental housing.

While there are small variances, funding support has been concentrated in the construction of public rental or middle-sized rental housing units which requires rental periods of only 5 years, especially in the construction of middle-sized housing which exceed public housing in size. In terms of Loans to For-sale Housing Constructors, loans for small for-sale houses under 60 m² decreased sharply especially after 2000, and accounted for only 2.3% of all Loans to Housing Constructors at the end of 2002, while Loans for Middle-size For-Sale Housing Construction took up the majority.

<Table 4> NHF Loan Programs to Housing Constructors

(Unit: hundred million won, %)

	1995	1996	1997	1998	1999	2000	2001	2002
Loans for Rental Housing Construction	12,523 (33.6)	17,211 (43.5)	21,179 (52.8)	19,555 (68.2)	22,870 (70.6)	34,355 (79.3)	41,194 (86.5)	36,904 (89.9)
National Rental Housing	924 (2.5)	-	-	-	2,620 (8.1)	1,600 (3.7)	8,134 (17.1)	11,665 (28.4)
Public Rental Housing	9,423 (25.2)	14,508 (36.7)	17,448 (43.5)	14,975 (52.3)	11,405 (35.2)	12,810 (29.6)	13,596 (28.5)	10,618 (25.9)
Middle-size Rental Housing	-	-	-	363 (1.3)	3,938 (12.2)	15,527 (35.9)	16,955 (35.6)	13,137 (32.0)
Reconstructed Rental Housing	134 (0.4)	228 (0.6)	918 (2.3)	737 (2.6)	2,226 (6.9)	1,966 (4.5)	694 (1.5)	0 (0.0)
Company Employee Rental Housing	1,055 (2.8)	1,115 (2.8)	696 (1.7)	209 (0.7)	19 (0.1)	0 (0.0)	14 (0.0)	55 (0.1)
Rental Housing Installment	987 (2.6)	1,360 (3.4)	2,117 (5.3)	3,271 (11.4)	2,662 (8.2)	2,452 (5.7)	1,801 (3.8)	1,429 (3.5)
Loans for For-sale Housing Construction	24,800 (66.4)	22,379 (56.5)	18,948 (47.2)	9,102 (31.8)	9,540 (29.4)	8,945 (20.7)	6,454 (13.5)	4,146 (10.1)
Public For-sale Housing	19,894 (53.3)	17,617 (44.5)	15,515 (39.7)	7,049 (24.6)	6,674 (20.6)	3,625 (8.4)	1,927 (4.0)	959 (2.3)
Middle-size For-sale Housing	-	-	-	-	1,343 (4.1)	4,717 (10.9)	4,275 (9.0)	3,072 (7.5)
Welfare-enhancing Housing	3,411 (9.1)	3,700 (9.3)	2,838 (7.1)	1,427 (5.0)	855 (2.6)	190 (0.4)	18 (0.0)	0 (0.0)
Multi-family For-sale Housing	498 (1.3)	262 (0.7)	117 (0.3)	9 (0.0)	57 (0.2)	121 (0.3)	143 (0.3)	71 (0.2)
Multi-household For-sale Housing	997 (2.7)	800 (2.0)	478 (1.2)	65 (0.2)	49 (0.2)	72 (0.2)	91 (0.2)	44 (0.1)
Redeveloped For-sale Housing	-	-	-	552 (1.9)	535 (1.7)	-	-	0 (0.0)
Reconstructed For-sale Housing	-	-	-	-	27 (0.1)	220 (0.5)	0 (0.0)	0 (0.0)
Total	37,323	39,590	40,127	28,657	32,410	43,300	47,648	41,050

Note: Numbers in parenthesis are a percentage of the total.

Source: Annual Statements of NHF accounts, Ministry of Construction and Transportation.

C. Other Loan programs

Aside Loans to Housing Consumer and Loans to Housing Constructors, the NHF provides loans for housing reconstruction and improvement, and various other special purpose activities.

The Loans for Housing Improvement provides support to homes under 85 m² in size in “residential environment improvement areas” for restoring, and making additions and improvements. Similarly, funding support is also given to old homes or houses in poor condition outside of “residential environment improvement areas.” The Loans for Rural Housing Improvement and Loans for House Remodeling are also included under housing improvement loans.

Other housing loans as of 2003 include the Loans for Bankrupted Construction Business Normalization, Loans for Housing Site Preparation, Loans for Repairing Disaster Affected Houses, etc., but only the Loans for Housing Site Preparation was significant in terms of size or performance. The NHF also operated funds for capital contribution to housing-related organizations such as, the Korea Housing Guarantee Company (KHGC), and the Korea Mortgage Corporation (KoMoCo).

D. Revisions to Loan Programs in 2004

As this study tries to offer policy direction and suggestions for the NHF, the various programs operated by the NHF as of 2003 were outlined. However, in 2004, the NHF made sweeping revisions on its loan programs, so these changes must be mentioned before proceeding further.

Of the 25 loan programs under NHF in 2003, three programs were terminated, 12 were reorganized under four programs, and two new programs were introduced, bringing the total to 14 loan programs as of 2004.

Specifically, loan programs for Public Rental Housing Construction, Middle-size Rental Housing Construction, and Company Employee Rental Housing Construction were combined with the Loans for Public Rental Housing Construction. Loan programs for Public For-sale Housing Construction, Middle-size For-sale Housing Construction, Welfare-enhancing Housing Construction, and Reconstructed For-sale Housing were combined into the Loans for Public For-Sale Housing Construction. The loans for Housing Improvement were combined into the Loans for Residential Environment Improvement, while the Loans to Housing Consumers for wage-earners, Loans for

First-time Home Buyers, and Loans for Housing Purchase Installment Payment were combined into the Loans for Public Housing Consumers.

The Loans for Housing Site Preparation and Repairing Disaster Affected Houses programs were terminated due to a lack of demand and need.

III. Evaluation of the NHF's Loan Programs

1. Loans to Housing Consumers

A. Scope and Criteria of the Evaluation

The 'Housing Construction Promotion Act' states the NHF's purpose which is to “effectively secure and supply funding to carry out the government's comprehensive housing construction plan of stabilizing and improving housing conditions for Korean citizens.” Also, the ‘Housing Act’, which replaced the 'Housing Construction Promotion Act', states the NHF's role which is to “effectively secure and supply funding to carry out the government's comprehensive housing construction plan.” Under these legal definitions of the NHF's role, it is difficult to assess whether the NHF's has implemented appropriate loan programs, as well as, properly executed them out.

The Ministry of Construction and Transportation, which manages the NHF announced the 「Plans to improve the residential welfare of low-income households」 in 2003, which states the objectives of the government's housing policy towards low-income households and clearly sets the criteria for beneficiaries of the policy. So, in carrying out the evaluation of the NHF, this paper will use the criteria set in the “Plans” as the benchmark.

The “Plans” states that the households in the lowest 10% income bracket, which cannot afford to pay even rent, should be supported through the provision of low interest loans for *chonsei* or rent, or small-size National Rental Housings. Though the next 2~4 decile income households are somewhat considered to be able to pay rent, they still are unable to purchase a home. For these groups, the government also recommends the provision of financial support through *chonsei* and rent funds, or National Rental Housings. In this respect, the NHF's loan programs for *chonsei* deposit was established for the bottom 4 decile income group.

The next 5~6 decile income group are considered to be able to purchase a house with government support. Hence, policy efforts have focused on providing small-size for-

sale housing and expanding home financing. The loans for purchasing houses for wage earners and low-incomers and *chonsei* deposit are programs aimed at this group. The last group of 7~10 decile, middle income households and above, are considered to be able to purchase houses without government support, and are excluded from the NHF's coverage.

B. Analysis and Resources

The NHF's Loans to Housing Consumers are currently being provided through Kookmin Bank, Woori Bank, and National Agricultural Cooperative Federation (NACF). Kookmin Bank has taken over the NHF programs from Korea Housing Bank through a merger. Woori Bank runs the programs including the Loans to Housing Consumers for wage earners, Loans for *Chonsei* Deposit for wage earners, and Loans for Housing Purchase Installment Payment Program, which it took over after the merger with Peace Bank. To increase competition amongst the financial institutions and to enhance accessibility to the programs, NACF was allowed to participate and run the NHF's programs since January 2003.

Through the data obtained, we were able to evaluate the appropriateness of fund operation and whether the NHF has achieved its goals. Due to data limitations, however, not all of the housing consumer loan programs were evaluated. For example, financial institutions do not have detailed information on income of households in the low income group who received loans for *chonsei* deposit, since the only requirement needed to qualify for this loan is meeting the local government's criteria of being a 'poor household'. Thus, we were able to only carry out a limited analysis on the Loans to Housing Consumers and *Chonsei* Deposit for wage earners. There were 114,258 cases of unpaid loans in May 2003. While the structure of the data set differs for each individual loan program, information on the borrower including gender, age, address, size of loan, and housing type were included. Also, there was some data on home size, home price, and income level of borrower. Cases of borrowers with multiple loans were considered as one case, while cases without income or employment information were removed, leaving a total of 46,063 cases.

This paper uses the National Statistical Office's 「Annual Income and Expenditure Trends of Urban Households in 2002」 for the analysis. This provides a large set of survey data taken from sample households in urban areas, excluding farmers, fishers, and self-employed workers. When only including households in urban areas and excluding self-employed workers, problems arise in using this sample as an indicator of

income distribution for all households in Korea. Since housing is an issue that corresponds more to urban areas, however, we thought that the sample problem would not be significant in our analysis.

<Table 5> Statistical Data by Income Group: Total Household Income

(unit: 10,000 won, Age, Persons)

Decile	Annual Income	Average Income	Average Age of Head of Household	Average Household Size
		3,305	42.0	3.41
1	~1,442	1,124	44.7	2.72
2	1,442~1,850	1,656	41.5	3.00
3	1,851~2,198	2,026	40.4	3.27
4	2,199~2,547	2,373	41.6	3.34
5	2,548~2,906	2,720	40.7	3.51
6	2,907~3,299	3,097	40.0	3.48
7	3,300~3,804	3,533	41.5	3.62
8	3,805~4,516	4,136	42.2	3.62
9	4,517~5,543	5,006	42.8	3.69
10	5,544~	7,389	44.9	3.83

Note: Sample consists of 6,121 households.

Source: National Statistical Office, 「Annual Income and Expenditure Trends of Urban Households in 2002」.

<Table 5> provides average income, average age and average household size of 10 evenly divided income groups using data from 「Annual Income and Expenditure Trends of Urban Households in 2002」. The upper range of annual household income in the first low-income group is 14.4 million won (1.2 million won a month), and this is nearly equivalent to the annual income criteria - 10 million won or less - to qualify for the government's loan program that provide small-size National Rental Housings as described in the 「Plans to improve the residential welfare of low-income households」 in 2003. The annual household income in 2~4 decile group ranges from 14.4 to 25.5 million won, and this is also similar to the Plans' income criteria for programs that provide loans for *chonsei* deposit, or National Rental Housings that requires applicant's annual income to be 22.8 million won or less. The annual household income in 5~6 decile group, which is on the verge of being considered as the middle income group, qualifies for programs providing small for-sale housing and housing finance is in the

24.5~33.0 million won range, again similar to the income criteria of 30 million won or less as presented in the Plans.

C. Evaluation of Loan Programs Housing purchase and *Chonsei* Deposit for Wage Earners

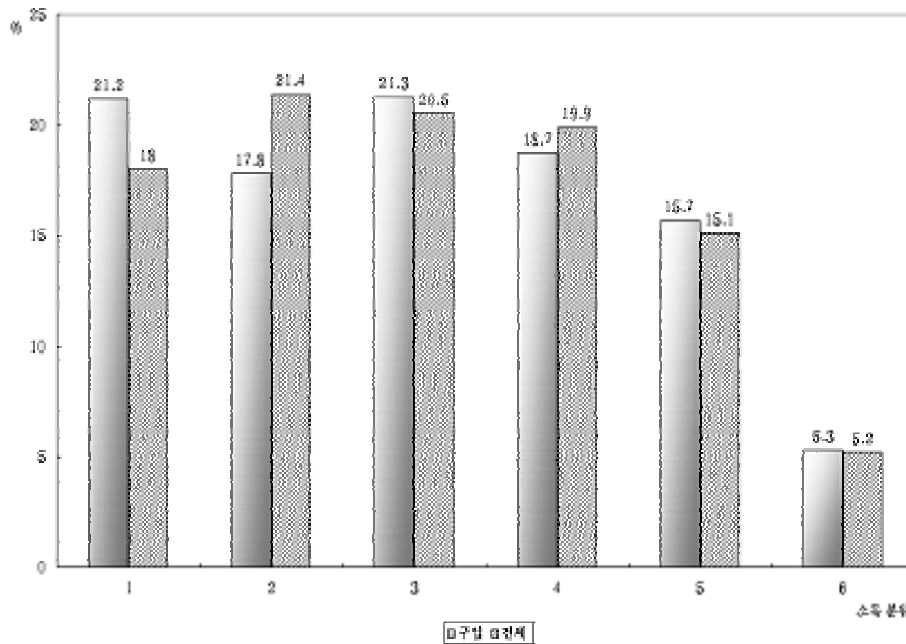
The loan programs for housing consumers and *chonsei* deposit for wage earners require the borrower's annual income to be less than 30 million won, which is similar to the average household income of the 6th decile of the urban households. [Figure 2] shows detailed information on the distribution of borrowers separated by 10 income groups defined above using the 「Annual Income and Expenditure Trends of Urban Households in 2002」. Since households earning more than 30 million won a year do not qualify for the loan programs, subsequently, the borrowers fall in the 6th decile and below. The first decile group, which is determined as being unable to purchase a home or use *chonsei* and were provided national rental housing, accounted for 21.2% of all Loans to Housing Consumers for wage earners, and 18% of Loans for *Chonsei* Deposit for wage earners. This implies that, surprisingly, a large portion of the lowest income group is attempting to purchase houses or secure *chonsei*, both of which are very burdensome financially to those households.

The fact that the proportion of lowest income group is greater than the proportion of other income groups among the beneficiaries of loan for housing consumers and *chonsei* deposit for wage earners is of particular interest and warrants further interpretation. In a system where a loan is available as soon as certain conditions – such as upper income limit – are met, motive always exists to under-report income, and the financial institutions themselves have no incentive to question the accuracy of a borrower's income if they are sure their income is lower than 30 million won a year. Thus, the number of borrowers from the 1st decile in [Figure 2] has been inaccurately recorded as too high.

While there are small differences between the groups targeted by the Loans to Housing Consumers for wage earners and the Loans for *Chonsei* Deposit for wage earners there is actually no real difference in the income distribution of the borrowers. According to the Plans, the *chonsei* deposit for wage earners mainly targets households in the 2~4 decile group, while the loans to housing consumers for wage earners targets the 5~6 decile group. However, the 2~4 decile group accounts for 61.7% of loans for *chonsei* deposit, only slightly more than its 57.8% share in the loans to housing consumers. This is simply due to the 30 million won income criteria applied on both

programs, which differs from the standards found in the Plans. To be in line with the principles of the Plans, there should be different criteria for borrowers of each program. Hence, there should be deep consideration of whether that would be realistically needed.

[Figure 2] Distribution of Borrowers by Income Groups: Total Household Income



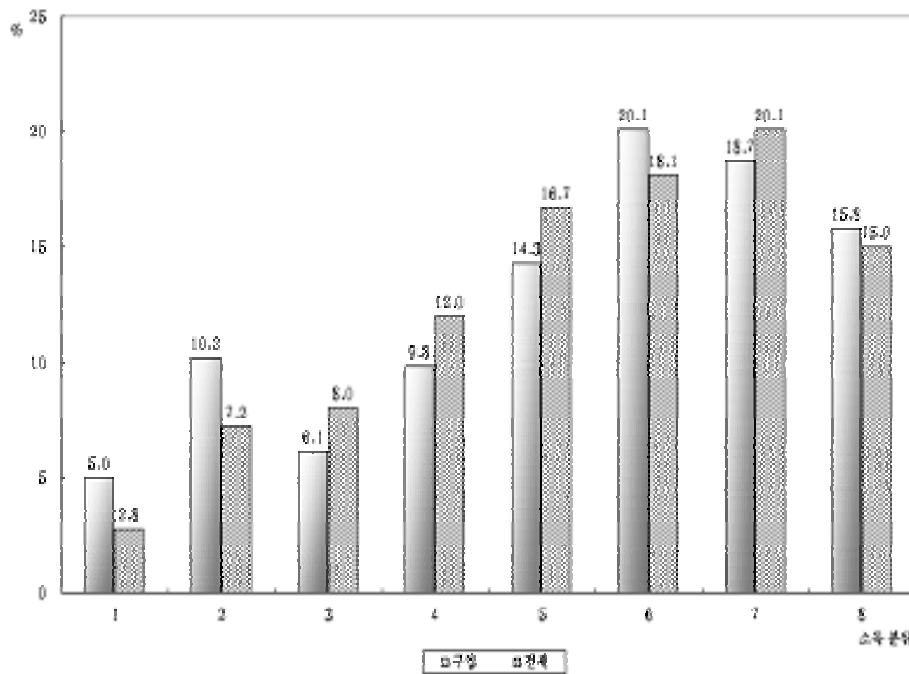
Note: 1) Includes loan programs for wage earners, where the left numbers are of the Loans to Housing Consumers and right numbers are of the Loans for Chonsej Deposit.

2) Income groups are divided according to the same ranges of annual income that is used to divide the households in the 『Annual Income and Expenditure Trends of Urban Households in 2002』 by 10 income groups.

[Figure 2] has two major short-fallings in assessing the operations of the NHF's Loan to Housing Consumers in the way support is actually provided to its target groups. First, there is the problem of measuring or defining household income. Our analysis is based on the premise that income includes the entire household, not the individual borrower. However, an official from a bank running the loan program brought to our attention that the definition of annual income that is being used as the income criteria for the loans in practice only includes the income of individual borrowers, not the total income of all household members. This is contrary to the interpretation of the income criteria set in the “Plans,” which refers to income as total income of all household members. Since only the borrower's income is reported in practice, and the borrower is usually the head

of the household, the comparison should be done using the income of the head of the household rather than total household income. Using the data from the 「Annual Income and Expenditure Trends of Urban Households in 2002」 on head of household income, we can compare the income distribution of the borrowers from the different standard. When only the head of household income is used, we can find a discrepancy between the group to which these loan programs are supposed to target and the groups that are actually benefiting.

[Figure 3] Distribution of Borrowers by Income Groups: Income of Household Head



Note: 1) Includes loan programs for wage earners, where the left numbers are of the Loans to Housing Consumers and right numbers are of the Loans for *Chonsej* Deposit.

2) Income groups are divided according to the ranges of annual income of household head that is used to divide the households in the 「Annual Income and Expenditure Trends of Urban Households in 2002」 by 10 income groups.

[Figure 3] shows that, when we use the head of household income for wage earners rather than total household income, 34.5% of total borrowers of Loans to Housing Consumers, and 35.1% of total borrowers of Loans for *Chonsej* Deposit are in the 7th and 8th decile, which are outside the NHF's target group. This discrepancy can be easily expected when we consider that heads of households with an annual income of 30 million won, the upper limit for income as presented in the “Plan,” now falls in the 8th

decile income group. In fact, over half of the borrowers – most being heads of households – in these loan programs reported an annual income of over 20 million won, which places them in the 7th decile when we only income of the head of the household is considered.

The second reason [Figure 2] should be interpreted with caution is the different definition applied to "wages" between the "Plans" and what is actually applied. The financial institutions running the loan programs determine wages by including the base salary only, rather than total salary. In the case of the manufacturing industry, usually only 2/3 of total wages is paid in base salary, while the remaining 1/3 is paid in extra wages such as bonuses. This leads us to believe that there is a larger difference between the target group and the groups actually receiving support than shown in [Figure 3]. Some are expected to be in the 7th decile or above, and a very small number may even be in the 10th decile.

The NHF seems to be providing these loans to its target group in the 1st~6th decile income group if the income criteria includes total income of all household members, however, differences in how 'income' is interpreted causes significant discrepancies in actual practice. If the 30 million won annual income limit is to be kept, the borrower's entire household income should be reported and utilized in the qualification process. However, it is difficult to even record the income of the individual borrower, let alone the entire household. Because of this problem of practicality, the next best thing would be lowering the income limit to 25 million won, and firmly defining 'wages' as total wages. If the limit is lowered to 25 million won, it seems that over 65% of wage earners would meet the requirements and be eligible for loans.

2. Loan Programs for Housing Constructors

As the NHF's Loans to Housing Constructors can mostly be converted to Loans to Housing Consumers, loans to constructors is a key part of the NHF's soundness and operational efficiency. Loans to Housing Constructors have contributed to the stability of housing by stimulating housing constructions and supplying rental housing. However, changes in real estate and financial markets are forcing a large scale re-examination of these programs' objectives and operation. Since 1981, the NHF has supported the construction of 150,000~250,000 rental and for-sale housing units a year through various loan programs to construction companies. With the housing supply rate over 100%, and facing competition from private housing finance firms, the NHF's loan programs to construction companies must take a new direction.

If we take a look at the state of the Loans to Housing Constructors, the amount of bad loans in NHF's construction companies was approximately 2.5 trillion won, 6% of the total 41 trillion won of loans. This is a very high rate compared to the 2.0% non-performing loans ratio at commercial banks. However, a direct comparison is not wise, as banks have paid off a large amount of the bad loans while the NHF has not yet.

The Ministry of Construction and Transportation tries to minimize the NHF's bad loans by using a loan screening system and continuously updates the system. After the 2001 revision of the loan screening system, there have been no cases of bad loans. However, this may also be a result of the favorable business conditions in the construction market in the period between 2001~2003. In particular, with recent concerns about the housing market, there is a need to observe the financial soundness of construction companies receiving the NHF loans. Thus, this section examines the system used to screen Loans to Housing Constructors, the current condition of companies receiving loans, the risk of bad loans, and the performance of private banks running the NHF loan programs.

A. Loan Screening System

In this subsection, the composition and current status of the loan screening system used for Loans to Housing Constructors will be examined, and recommendations will be offered for improving the system. In the scoring and screening process, only loans that scored 40 points and over is being approved. The items subject to scoring were roughly profitability, business capability, current status of company, with some other considerations regarding financial status and non-financial status that may result in the addition and reduction of points.

<Table 7> Distributions of Screening Scores for Loan to Housing Constructors

(unit: million won)

	Score	Number of Loans	Approved Amount	Average
public for-sale housing	70 and over	1	9,360	9,360
	60~69	14	57,334	4,095
	50~59	23	66,028	2,871
	40~49	21	69,225	3,296
middle-size for-sale housing	70 and over	8	138,434	17,304
	60~69	36	422,077	11,724
	50~59	41	299,905	7,315
	40~49	23	145,077	6,308
public rental housing	70 and over	3	58,860	19,620
	60~69	17	128,257	7,544
	50~59	69	373,458	5,412
	40~49	76	269,386	3,545
middle-size rental housing	70 and over	0	0	0
	60~69	28	13,980	16,023
	50~59	68	891,449	13,110
	40~49	61	637,151	10,445

Source: Loans to housing construction companies approved during the period of March 2001 to December 2002.

The analysis uses data on 165 loans to public rental housing constructor, 59 loans to public for-sale housing constructor, 157 loans to middle-size rental housing constructor, and 108 loans to middle-size for-sale housing constructor approved during the period of March 2001 to December 2002. In <Table 7>, there are many companies that scored just slightly above 40 points. This means that, if threshold point for loan approval were raised to guard against bad loans without any back-up policy, the NHF would have difficulties meeting its operational objectives.

B. Financial Status of Construction Companies

As seen in the table above, there is a possibility that financially unsound construction companies are being approved for loans. However, it is difficult to measure the risk of bad loans from just examining these statistics, so detailed statistics for individual

companies must be acquired. Assessing the negative impact of loan borrowers' defaulting on the NHF's Loan Programs for Housing Constructors warrants an analysis of the companies' financial statements. Thus, we used financial statements of construction companies listed in the D&B Korea Co.'s database and compared financial conditions of companies that received the NHF loans to those of other companies.

Among the companies with records of the NHF loans, 117 companies are listed in the database and their financial statements were used. The comparison group consists of companies from the D&B Korea database that were classified as general construction companies.

The analytical method used was to divide all construction companies in the D&B Korea database into 10 groups by each selected items in financial statements. Then we checked which group the companies that received the NHF loans fell in. The selected items for comparison were total capital, total assets, owners' capital, debt ratio, ratio of return on asset (ROA), ratio of return on sales, and interest coverage ratio.

First, total capital, total assets, and owners' capital can be used to measure company size. There are many companies which rank high in those three criteria, showing that large companies tend to receive NHF loans. This is due to the many scoring items in the screening system that are related to company size, such as the ratio of owners' capital to total cost of construction planned, and size of constructions (in the case of Loans to For-sale Housing Constructors).

On the other hand, the debt ratio which is an indicator of a company's financial soundness, tells a different story. 76 of the 109 companies (about 70%) fell in or below the bottom 6th group, indicating that a large amount of companies were financially unsound. However, it should be noted that the companies, which received loans for rental housing construction, with rental housing businesses recognized collected deposits on rental housing units as their debt, and thus may have a higher debt ratio until their rental units are converted into for-sale houses. This should be taken into consideration before using the debt ratio as a measure of a company's soundness. Unfortunately, even if only for-sale housing constructors are taken into consideration, 68% of borrowing companies in the loan programs for public for-sale housing constructors fall in the below 6th group, and 80% in the case of the loan programs for middle-size for-sale housing constructors.

<Table 9> Comparisons of Financial Status of Construction Companies that Qualify for NHF Loans

(Unit: hundred million won, %)

Decile	Total Capital	Total Assets	Owners' Capital	Debt Ratio	ROA	Return on Sales	Interest Coverage Ratio
1	14 (24443~94)	18 (52665~1127)	14 (17343~239)	4 (0.2~52.9)	5 (690.2~13.6)	15 (~13.9)	9 (~3963)
2	20 (93~45)	22 (1118~467)	18 (229~91)	5 (54.3~111.9)	9 (13.6~9.0)	19 (13.9~9.1)	7 (3951~1216)
3	18 (45~30)	17 (462~251)	9 (91~58)	4 (111.9~178.5)	3 (8.9~6.1)	17 (9.1~7.3)	6 (1208~629)
4	15 (30~22)	8 (250~160)	14 (57~37)	9 (178.9~268.6)	5 (6.1~4.2)	10 (7.3~5.9)	8 (627~380)
5	15 (22~18)	7 (159~117)	12 (37~24)	11 (270~391.2)	16 (4.2~2.9)	9 (5.9~4.7)	11 (379~257)
6~10	27/109 25% (18 ~)	37/109 34% (117 ~)	42/109 39% (23 ~)	76/109 70% (392.7 ~)	71/109 65% (2.8 ~)	37/107 35% (4.7 ~)	65/106 61% (257.2 ~)

Note: Numbers in parenthesis are the range of each financial indicators of companies included in each group. And numbers with % in the last low indicates a percentage of companies with loan approval and included in 6~10 decile group to the total.

Many of the approved companies fell below the 6th group also in terms of ROA and interest coverage ratio. This shows the low profitability of companies receiving loans. In particular, 40% of the companies are not even able to cover interest payments with profits, suggesting that the threshold for loan approval must be raised accordingly. If companies involved in rental housing are removed from the sample, 62~78% of companies that received Loans to For-sale Housing Constructors are not able to make interest payments with their profits.

To summarize, the lack of financial soundness in most companies receiving the Loans for Housing Constructors is an issue that must be addressed to ensure stable housing. So, policy efforts should focus on the stability of rental housing supply, as well as the soundness of the NHF.

IV. Re-establishing the Role of the NHF

1. Changes in the Operational Structure and Objectives of the NHF

A. NHF's Operational Structure

Changes in the housing market and housing finance environment are causing problems in the NHF's operations. Improvements in the operation of the NHF are being proposed for its long-term viability. Continuing low-growth and low-interest trends are some of the most important changes in the environment for the NHF. The expanded money supply, decrease in capital demand, and price stabilization after the foreign currency crisis have brought about a steady fall in the interest rate. This low interest rate regime does not appear to be a short-term trend, but rather looks like it is settling into a long-term trend. The continuing low interest rate environment has eroded the NHF's attractiveness it once held when interest rates were more competitive. In fact, there are instances where private financial institutions are offering the same or even lower interest rates than the NHF. As the number of private financial institutions entering the housing finance market increases, we can expect severer competition between the NHF and these financial institutions for the same consumers.

The second change in the NHF's environment is that private institutions are expanding into the housing finance market using short-term loans. The most noticeable change is the expansion of short-term home equity loans. In this respect, the need for an active response from the NHF has been looked at. The lengthening of home equity loan maturity was not the original purpose of the NHF, but it must take a leading role in the immature housing finance market, as it has played the sole role in the long-term housing finance market.

The third environmental change is due to housing demand. With individual housing preferences varying, many other types of housing have become available. Also, there is a demand for a more enhanced residential environment and improved quality of housing. In this environment, housing policies must be changed from focusing on increasing the supply of housing to providing a more desirable housing environment to meet the new needs. The NHF's loan programs must be changed, within the boundaries of staying in line with its purpose and maintaining efficiency, in order to meet the new demands.⁵

⁵ Another issue is that Korea must prepare for changes in housing demand as it enters an aged society. According to the National Statistics Office's population housing census of 2000, Korea's population growth will steadily fall and flatten out in 2030. In that situation, special rental housing for the elderly must be increased.

B. Structural Changes in Public Institutions Regarding Housing Finance

To actively support housing finance in Korea, the NHF, the Housing Finance Credit Guarantee Fund, Korea Housing Guarantee Co., Ltd. (KHGC), and Korea Mortgage Corporation (KoMoCo) were established. In 2004, the Housing Finance Credit Guarantee Fund and KoMoCo were merged with the Korea Housing Finance Corporation (KHFC). The Housing Finance Credit Guarantee Fund and KHGC have the function of providing guarantees that cover credit risk of loans that cannot be covered by the collateral provided by housing consumers and constructors. Thus, they can be differentiated from the NHF, which has a function of providing credits through the loan programs. Also, the KHFC and NHF have different roles in vitalizing the long-term housing finance market in which the NHF is the supplier of housing finances in the primary market, whereas the KHFC deals in the secondary market.

C. Changing the NHF's Objective

In November 2003, the Housing Construction Promotion Act which called for the establishment of the NHF, was changed into the Housing Act, under the new objective of "effectively providing the funds to assure a pleasant residential environment for Koreans." The change was made to meet the same environmental changes the NHF was and is facing. The new Housing Act calls for a "pleasant residential environment," to meet the needs of the socially underprivileged (low-income class, homeless). In this respect, the NHF's ultimate goal should change as well, from "promoting the construction of homes and effectively supplying homes" to "improving the quality of residential life."

Thus, a change in the operational structure and objective is unavoidable for the NHF, in order to meet the new objectives set out by its act. Specifically, the NHF must be given the support needed to meet its goal, and the "low-income households" must be clearly defined to prevent conflicts and overlap with private financial institutions, which would distort the housing finance market. Since many of the NHF's support programs such as the loans to public for-sale and public rental housing constructors use home size as one of its qualification criteria, it is difficult to distinguish what income group the borrower is in. Presently, the loans to housing consumers for wage earners and low-incomers are unable to accurately calculate the income level of the borrowers, as it includes only base salary and not bonuses etc. Also, these loans are based on the individual borrower's income level, instead of taking into account the entire household's

income, which often leads to those that should be outside the low-income group receiving access to loans. The existing requirements should be reinforced, such as value of assets, income from assets, household members' income, bonuses, and so on, so the NHF may measure the borrower's actual economic standing more accurately.

2. Re-establishing the Role of the NHF

A. Premise for Re-establishing the Role of the NHF

Recent changes in the environment, especially the achievement of a 100% housing supply rate, has led to claims that the future of Korea's housing policy should be changed from increasing the supply of housing based on financial assistance to stabilizing the housing environment by assisting the low-income group. In other words, the NHF has already achieved its goal of increasing the housing supply through financial assistance, and should now turn its attention to assisting the lowest-income households with fiscal resources. While changing the NHF's operational structure continues to garner attention, there is conflicting views on what the exact direction of NHF should be.

However, the housing policy should be drawn to maintain NHF's role as a financial support organization for the time being, to provide an active counter to market failures in the housing and finance markets. Even though the housing supply rate is rising, the home ownership ratio is still low, the general trend of greater housing may worsen the housing service conditions for the low-income households. Also, stronger risk management at financial institutions could make housing finance less accessible for the low-income group.

In this respect, we set out the basic foundations for a housing finance support policy utilizing public funds such as the NHF. First, funding should adapt to changes in the financial market, but continue to provide a stable supply of funds for housing finance. Second, housing finance should be made accessible to a wide range of income groups through a loan scoring system. Third, functions that do not present the risk of a market failure or ones for which such risk can be removed should be left to be performed by private financial institutions.

B. Future Role of the NHF

The housing finance support policy can be divided into loans for housing construction and housing consumers. First, support for housing construction should come as an intervention policy to offer construction companies access to funds at low interest rates when there is a need to increase the housing supply. Loans for housing construction tend to be very risky, and consequently, construction companies would face problems of very low accessibility and/or very high interest rates if there was no policy at all. If the housing supply cannot be increased through just financial support, the public sector may directly intervene in the construction of houses. Financial support for housing consumers lowers the financial burden of the citizens when purchasing a home to increase the home ownership ratio. Homes and housing services is a very costly commodity compared to other assets or household income, so most income groups require a loan to purchase a home. The middle and low income groups hold a high credit risk, making it nearly impossible to get approval for a loan at an acceptable interest rate, hence, making intervention unavoidable.

1) NHF's Role in Supporting Construction of Housing

The NHF's financial support of housing constructors must be restructured to focus on supporting the construction of rental housing. The NHF must play a key role in constructing a mid-to-long-term support system to improve the residential stability of the low-income group. To that end, the direct supply of small-size housings, or supplying construction support funds for that purpose, will be an important part of the NHF's future loan programs. In particular, the supply of small to mid-sized housing for the low-income group in the lower 1~4th decile should be focused on rental housing rather than for-sale housing. As of 2002, 23.4% of all regular households were below the minimum housing standard. Considering the income level of these households, it would be very difficult for them to purchase even a small house, making the supply of public rental housing critical in addressing this problem.

As mentioned before, the recent low interest trend has weakened the NHF's past competitiveness in interest rates. Because large construction companies with credibility and technology bypass the rental housing business, many of the companies receiving support for the construction of rental housing are companies with inadequate technology and unsound financial standing. This will continue to be the trend unless there is a dramatic shift in policy. The rental housing units built by these companies are mostly converted to for-sale housing after 5 years. This has left the rental housing stock at 0.9

million homes in 2001, only 8% of the total housing stock of 11.9 million homes. The NHF must play an active and direct role in continuously supplying rental housing.

Since competent construction companies are avoiding the rental housing market in the first place, there is no need in trying to use market mechanisms. Accordingly, directly implementing adjustment measures to counter market failures may bring about better results. In other words, public measures such as the Korea Housing Corporation and local governments should be used to actively expand the supply of rental housing. The housing supply rate has already surpassed 100%, so there is no longer such a great need to rely on private companies to supply mass housing within a short amount of time. The construction of long-term rental housing and improvement of the long-term soundness of the NHF are not unrelated to the long-term stability of Korea's housing environment. So, competent construction companies should be incentivized to entering the long-term rental housing market by offering attractive interest rates.

2) NHF's Role in Supporting Housing Consumers

The NHF should focus its financial support for housing consumers by improving the accessibility of the private housing finance market for the low-income and under-privileged groups. The recipients of Loans to Housing Consumers have a relatively higher income and more assets than the group that directly receives rental housing. However, this low-income group is unable to access the private housing finance market not just because of higher interest rates, but also because of the higher risk of default. In a loan market with information asymmetry, borrowers with a higher risk of default are offered loans at higher interest rates and lower Loan-to-Value (LTV) rates even when the house is put up as collateral. The low-income group often does not even get access to the private housing finance market from the start since their accumulated assets are unable to cover the initial down-payment required to purchase a home. Thus, financial support for housing consumers should be focused on those who do not have access to the private housing finance market in the first place, rather than providing low interest loans to those who can participate on their own means.

As seen in the analysis above, those who could easily gain access to the private housing finance market are receiving support from the NHF. So, the conditions for eligibility must be reestablished. In the case of urban workers, the fund's primary target, the requirements must be clarified so only the lower 6th income decile is eligible. Also, support for those below the 4th decile and those in the 5th and 6th decile should be differentiated. Those in the 4th percentile and below should be given a lenient loan limit

and low interest rates to offset the disadvantages of a higher default risk. The program for those above the 5th percentile should focus on reducing the interest burden. These policy measures should work to improve vertical equity.

3) NHF's Role in Developing the Housing Finance Market

In addition to providing stable housing, the NHF's secondary function is to help in developing the private housing finance market in a stable manner. In particular, the NHF must move towards actuating the long-term housing finance market. Doing so is required to establish stability in meeting housing demand. Household loans and home equity loans rose greatly after the crisis caused a sharp increase in home prices, revealing the risk factor in the financial system. The lengthening of the housing finance market has been pointed out as the fundamental solution. In its role in developing the long-term housing finance market, the NHF helped in the establishment of the Korea Mortgage Corporation (KoMoCo) which is now the KHFC. The NHF also played an active role in the issuance of Mortgage-Backed Securities (MBS), but neither of the two approaches can be said to have achieved their aims. The Korean MBS market started when KoMoCo received funding from the NHF, then structured and securitized them as MBSs. However, there is a lack of issuance of new MBSs and the existing bonds are poorly traded. The reasons for this poor performance are difficulty in acquiring the mortgages to securitize, and low demand for new loans from financial institutions due to the low interest trend. In 2004, the government consolidated KoMoCo into the Korea Housing Finance Corporation (KHFC) to try and stabilize the long-term housing finance market. However, the real problems related to the current state of the market cannot be easily overcome over a short period of time. Even so, prior policy restrictions (inability to purchase and hold the mortgage assets and fixed maximum guarantee limit of 30 times of capital when it suffers a low capital condition, etc) have been eliminated, so the KHFC should be able to help improve the environment of mortgage securitization.

3. Improving the Operational Structure of NHF

A. Improving Loans for Housing Consumers

We must recognize the NHF's true role as a policy fund in the housing finance market, and the most efficient way it can achieve its goals, when planning a way to improve the NHF's housing consumer loan program.

The NHF's Loans for Housing Consumers focuses on those who are able to purchase a home through their own means or private financial institutions when given support. The lowest-income groups unable to purchase a home even with support can be excluded from the NHF's program, as they are covered by other public social welfare programs under various welfare acts such as 「National Basic Livelihood Security Act」. However, the criteria for whether one can purchase a home or not is very vague, so a level of wealth (including income, assets etc) should be determined and benefits differentiated depending on the level of wealth.

The loans for housing consumers also covers the middle and low-income group that have not accumulated enough assets to purchase a home, but may include areas already covered by the private housing financial market if it does not select its targets carefully. If the loan approval criteria can be properly differentiated for each income group and type of loan, the NHF can minimize interference with the private market and focus on its own target group. However, the current system can possibly lead to unfair practices on the part of the managing financial institutions, damaging the soundness of the fund.

With this in mind, the biggest problem with NHF's loans for housing consumers is that the definition and classification of the target groups is neither clear nor adequate. The NHF targets the socially disadvantaged groups, generally groups with low income, low assets, and are poverty stricken. The NHF tries to improve their housing welfare so all Koreans can improve their housing situation. However, as seen in chapter 3, 34.55% of the borrowers in the wage earners and low-income housing purchasing fund are in the 7th income decile or higher. The inadequate definition of income causes this large discrepancy between the target group and the receiving group. In particular, only the head of household's income is considered when a loan is actually given, so there is great difficulty in supplying the loans to the actual targeted groups. Also, annual wages for wage-earners includes only base salary, excluding a large amount of extra wages, distorting the target group even further. The NHF can focus its support to the appropriate groups by including income, house size, assets held, assets income etc. as part of its loan criteria.

However, implementing a new evaluation system would take a very long time, so some of the more urgent problems should be addressed first. The annual wages for wage earners and low-income households seeking Loans for Housing Purchase and *Chonsei* Deposit should be clearly defined as total wages. Also, a new income criteria should be introduced, using the total income of a household divided by the number of household members. For the self-employed, whose salary is very difficult to measure, the NHF should work with the National Health Insurance Corporation or National Pension

Corporation and other sources to acquire information on income and asset and compare this with the National Tax Office's statistics.

While the overly complex loan programs for housing consumers had many of their individual loan programs consolidated in 2004, there are still programs which are difficult to evaluate. The NHF should continue to modify such programs, abolishing them or otherwise.

B. Improving the Operational Structure of Loans to Housing Constructors

As the NHF is reestablishing its mission of creating a stable residential environment, the time is right to also change the operational structure of the loan programs to housing constructors. While the NHF has changed its overall operational structure by shifting its focus from for-sale housing to rental housing, the operational structure at the individual funds do not yet reflect the changes in the housing market.

In addition, financial support for the supply of rental housing should be carried out so it is in line with the NHF's goal of supplying rental housing to the income groups that are unable to accumulate the assets for purchasing a home. The area in which the NHF's housing construction business covers should be clearly defined, so as not to encroach into the private sector. As can be seen from the recent increase in support for rental housing construction from increases in middle-sized rental housing construction, the NHF must adjust its loan approval criteria, especially in the required rental period. The Loan Programs for Middle-size Rental Housing Construction target private construction companies, and require a rental period of only 5 years. This is much shorter than the required leasing period of 10 to 20 years for the Loan Programs for National Rental Housing Construction. Considering that the NHF's support should be used to provide stable and long-term housing for the low-income groups, the 5 year required leasing period is far too short. Instead of focusing on mid-sized rental housing with a short lease period, the NHF should increase support for small-sized rental housing while increasing the required rental period for other loans.

While there have been no reported bankruptcies after the latest revisions on the loan evaluation system, this is most likely because the last assessment was made during 2001~2002 when the real estate market was recovering. As stated before, most of the companies that received loans were of average size, but generally ranked low in terms of debt ratio and profitability, both of which are indicators of financial soundness. As the fund's objective is to ensure stability in the housing environment, and not promote

the construction industry, the NHF must go further by focusing on financial soundness when screening and processing loans.

V. Summary and Conclusion

This paper evaluated the performance of the many programs at the NHF. We also suggest redefining the NHF's role, and offer ways to improve the operational structure of the fund. First, after assessing the Loan Program for Housing Consumers, we find that there may be a discrepancy between the targeted group and the actual group receiving support. This is a result of the method the NHF measures household income, in that household income is based on the income of the individual borrower (head of household) rather than the entire household. In the case of loans to wage earners, the "wages" being reported included only base salary, and not the total wages which were intended. Thus, a significant possibility exists that there are large differences between the targeted groups and the groups receiving support.

To find ways of improving the Loan Programs for Housing Constructors, the loan screening system was examined and the present conditions of the companies having received loans were evaluated. The spread of approved companies across the evaluation showed that most of the companies fell slightly above the required level. A sharp increase of the required score for the preventing bad loans was deemed to be able to create a significant negative effect in reaching goals in expanding supply of for-sale and rental housings. Analysis of the financial statements of companies showed that many had poor profitability. Finally, assessing the bank's management of the NHF funds showed that there was much room for improvement in terms of loan monitoring.

The need to reassess the NHF's role and function in the changing marketplace has been proposed. The continuing low interest rate environment has eroded the NHF's advantage in offering loans at low interest rates. Though the NHF is the government's main instrument of market intervention in the housing financial market, expectations for the NHF continue to drop and its relevance is being questioned. Hence, an evaluation of the NHF's role in the economy and its future operational direction are desperately needed. The expansion of short-term home equity loans has had the most significant impact on the NHF, subsequently, addressing this issue has been emphasized. The lengthening of home equity loans was not one of the NHF's original goals, but since the market is not mature enough, the NHF should take a leading role.

The role of the NHF should be redefined in the following. In terms of housing construction, the NHF's support should be focused on rental housing. In terms of housing consumers, the NHF should strive to improve the accessibility of housing financing to the low-income and underprivileged groups. Finally, the NHF should take a secondary role in helping the stable development of the private housing finance market, aside its main role of providing stable housing to the low-income group. Especially, the NHF must move towards vitalizing the long-term housing finance market. With an inadequate supply of long-term mortgage loans in the private sector, the NHF should refocus its operational structure so that the financial institutions it supports will focus on long-term loans.

To improve the loan programs for housing consumers, criteria for loan approval should be changed to improve the efficiency of the operation. Ultimately, the targeted group should be divided by wealth (including income and assets), and the benefits should be differentiated for each group depending on level of wealth. In the short run, the criteria for loans should be changed from including only the borrower's base salary to including the total income of the entire household. As a result, low-income households should receive longer-term, lower interest loans, while households that are relatively better off can utilize the private housing finance market.

To improve the loan programs for housing constructors, conditions of loans for middle-sized rental housing construction – required rental period, in particular – should be changed. While the screening system should be improved to reduce poor performance, strengthening the criteria could lead to a drop in the housing supply. Thus, an effective counter measure should be in place for the unused funds.

Though the report does not delve deep into this issue, some discussion on reducing the issuance of National Housing Bonds (NHB) as the NHF gradually reduces the size of its operations is expected. The method of issuing the NHB as part of the treasury bonds should be reexamined as well. Changing the method of fund raising can lead to more efficiency, so it should be considered. This paper is limited in that it focuses on the NHF's operational structure and does not assess the method of fund raising. However, since the operation and acquisition of funds are closely intertwined, there must be a need for improvement from a policy standpoint. It is also an academically interesting topic, and we look forward to a future studies in this area using various analyses.

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