

The Analysis of Fiscal Conditions for Public Rental Housing

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(Received September 5, 2011 / Revised September 30, 2011 / Accepted October 19, 2011)

ABSTRACT

This paper is focused on the sustainability of public rental housing policy. We have analyzed the general fiscal conditions of central government, the public welfare fiscal conditions, the public expenditure on rental housing, and the Korea Land & Housing Corporation (LH) financial structure. Central government fiscal conditions is controlled by the midium-term fiscal operation plan(2010~2014) and fiscal rules. And the fiscal mandatory expenditures on welfare is increased rapidly by the expansion of beneficiaries, but the fiscal discretionary expenditures particularly on public rental housing can be gradually cut down. LH, the dominant agency responsible for affordable housing, is now confronted with financial distress accruing to excessive burden for public rental housing construction.

As a result this paper, we find the discrepancy between the fiscal conditons and public rental housing policies. We suggest the fiscally sustainable rental housing policy. Firstly, the construction plan should be realized reflecting the market and fiscal conditions. Secondly, the provsion and financing system of rental housing should be rebuild within the government fiscal conditons and financial ability of LH.

Keywords: public rental housing, fiscal policy, public welfare finance, public expenditure for housing, LH financial conditons

1. Introduction

Regarding of public rental housing, public supports such as government grant, low interest loan from National Housing Fund (from now on NHF) and public provision of housing land are made. Despite these public supports, the participation is limited to Korea Land Housing Corporation (thereinafter called as LH) and local governments in the project of public rental housing. The participation of the private sector is extremely low. It's because the proper recovery of the investment is not guaranteed. The large-scaled fund is invested in the step of construction due to the nature of public rental housing project but it is impossible to collect the invested fund during lease duration and payback is possible only through conversion into sales or disposal after lease duration. Therefore, the public rental housing project can't help but depend on the public sector that is well equipped to raise large-scaled long-term funds.

However, recently as financial situation of Korea Land & Housing Corporation is largely getting worse, the question on continuous carrying out of the public rental housing project is being addressed.

From this point of view, this paper is intended to judge the sustainability in the aspect of financial affairs for the public rental

housing project through a check on mid and long-term operation policy of national finance, national conditions of welfare, and financial structure of LH.

Firstly, it is assumed that fiscal operation at the dimension of the central government is controlled by the medium-term national fiscal operation plan (2010~2014) and fiscal rule.

The medium-term national fiscal operation plan is estimated generally under the some assumptions and variables related to future conditions, therefore it have fundamental limit for the dependency on the exectiveness of assuptions.

Fiscal rule is introduced for the purpose of regulating the government fiscal operation within the boundary of balanced budget.

Secondly, under these fiscal constraints, we have analyzed welfare finance trends including housing sector expenditures. If we classify the welfare finance into mandatory expenditure by the law and discretionary expenditure according to political decision making, we tried to judge the perspectives of housing sector expenditures which occupied the biggest portion in the discretionary expenditure. In addition, we have judged the possible expenditure scale for rental housing.

Thirdly, we have diagnosed the financial structure of LH that is an exclusive organization for executing the rental housing policy

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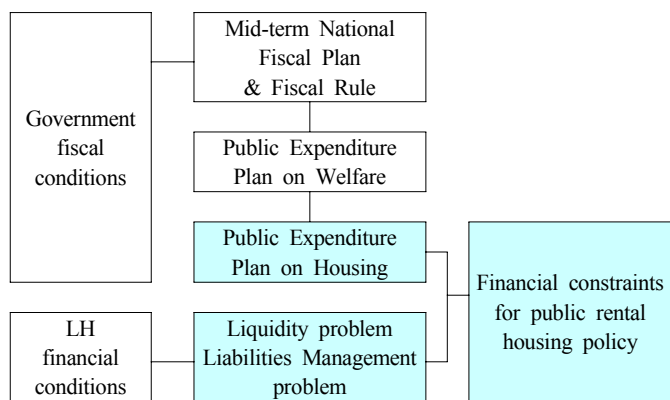


Fig. 1. Analysis Framework

and have evaluated the continuous carrying out competency of rental housing policy.

Finally, we suggest the direction of sustainable rental housing supply policy in terms of finance and financial affairs considering the previously analyzed national finance conditions and financial competency of LH.

Figure 1 shows the framework of this study as explained above.

On the other hand, previous studies on rental housing finance are mainly focused on the estimation of the necessary amounts of government financial supports. The recent representative study, Choi et al. (2009), also focused on the estimation of the total amounts of necessary money to accomplish the Boegumzari housing policy and the finding the alternative funding resources.

But we can hardly find previous researches about the fiscal and financial constraints itself in public rental housing policy. In this sense, this paper will suggest some implications to understand the fiscal and financial conditions for rental housing construction.

2. The Status of National Financial Supports on Public Rental Housing Project

2.1 The History of Public Rental Housing Policy in Korea and the Contribution of Government Financial Supports

The object of housing policy of the former governments was has been focused on the quantitative ways to solve the problem of housing shortage. And the solution was largely based on two approaches. One was the promotion of home ownership utilizing contract saving system or pre-sale method that can collect household capital, the other was the residential stability of low-moderate income households through construction of public rental housing supported by government.

The former governments before Kim, Dae Jung's administration focused on the promotion of home ownership, and Kim, Dae Jung's and Roh, Mu Hyun's administration focused on the residential stability of low-moderate income households. And

Lee, Myung Bak's administration is going together with two approaches.

This basic housing policy is also involved with the basic national finance operation policy.

The first public rental housing was started in 1960s but the lease duration was only one or two years and the quantity of it was insufficient. Despite the announcement of rental housing development program in 1982 and the enactment of promotional law for rental housing construction in 1984, government financial condition was not good enough to stably support rental housing. Therefore, to expand housing stock while minimizing the government budget burden, the key strategy was the promotion of homeownership, and the construction of rental housing for low-income households was relatively set aside.

As a part of the construction plan of 2 million households by Roh, Tae Woo's administration in the latter half of 1980s, the construction of 190 thousand housing units of Permanent rental housing that was supported more than 80% of government grant was a epoch-making success but the project was stopped in 1994. The project of permanent rental housing construction was a temporary remedy to respond to skyrocketing housing prices and social political unrest. So, it did not change the flow of housing policy in the meantime. Since then, 5-year rental housing played an important role of the rental housing construction program. This program received the financial aid from NHF but there still was a limit to accumulate the stock of rental housing because it was sold after 5-year rental.

Table 1 summarized what mentioned above.

Kim, Dae Jung's administration introduced National rental housing with 30-year rental. For this, government grant and NHF shared financial burden more than 50%. Roh, Mu Hyun's administration expanded the National rental housing construction up to 1 million until 2012 by 100 thousand units every year.

Lee, Myung Bak's administration also contained 800 thousand rental housing units among the construction plan of 1.5 million housing units. Even though the volume was reduced, National rental housing program was succeeded to 40 thousand unit construction per year until 2018. Besides, Permanent rental housing was resumed by construction 10 thousand housing units per year and additionally 10-year or 20-year rental housing program was started to construct 300 thousand housing units every year until 2018 (Table. 2).

2.2 Financial Support Plan for Public Rental Housing Construction

The constitution of financial resources for rental housing construction is largely made up of government financial support (government grant and NHF loan), residents' sharing (deposits on rent), and constructors' sharing.

The Ministry of Land, Transport and Maritime Affairs estimates that the amount of financial aid for the 150 thousand Boegumjari

Table 1. Construction Achievement of Main Public Rental Housing by Former Governments

(Unit: 10 thousand housing unit)

	Total Housing Construction	Rental Housing Construction	Permanent Rental	National Rental	5-year Public	Others
Roh, Tae Woo's Administration ('88~'92)	271.8	41.8	19.0	-	1.5	21.4
Kim, Young Sam's Administration ('93~'97)	312.6	41.8	-	-	38.7	3.1
Kim, Dae Jung's Administration ('98~'02)	234.2	48.2	-	11.9	36.2	-
Roh, Mu Hyun's Administration ('03~'07)	253.8	50.8	-	46.7	4.2	

Note: * 50-year rental, rental for employees etc.

Source: Reorganizing by Choi, Eun Hee et al., 19).

Table 2. Types and Construction Plan of Bogeumjari housing by Lee, Myung Bak's Administration (2009–2018)

(Unit: thousand housing unit)

Type of Housing		vol.	Main Contents
Public Distribution		700	Supply for members of subscription deposit for exclusive area less than 85m ²
Longterm Rental	Permanent Rental	100	level of 30% of surrounding lease market value
	National Rental (30 years)	400	level of 50-80% of surrounding lease market value
Public Rental	Public Rental (10 years)	300	Converted into distribution for sale after 10-year rental
	Installment Rental (10 years)		Divided payments of the price of conversion to distribution for sale without security deposit
	Long-term Jeonsei (20 years)		Supply at the level of 80% of surrounding lease market value

Source: Ministry of Land, Transport and Maritime Affairs (2008), *Vitalization of Downtown Supply for National Residential Stability and Construction Plan of Bogeumjari Housing*.

Table 3. Annual Average Financial Aid Plan of Bogeumjari Housing (as of constant price in 2009)

(Unit: trillion won)

Type of Project	Government Grants	National Housing Fund Loan	Total
Total (Annual Average 150 thousand housing unit)	1.2	9.3	10.6
Public rental housing (80 thousand)	1.2	3.7	4.9
-Permanent Rental (10 thousand)	0.5	-	0.5
-National Rental (40 thousand)	0.7	1.6	2.3
-10 & 20-year Rental (30 thousand)	-	2.1	2.1
Public sales housing (70 thousand)	-	5.6	5.6

Source: Ministry of Land, Transport, and Maritime Affairs (2010), *Handbook on Bogeumjari Housing, 2010*, 50.

housing units construction every year from 2009 to 2018 will be approximately 10.5 trillion won (as of constant price in 2009), which comes 1.2 trillion won from government grant and 9.3 trillion won from NHF loan. Among these, the amount for rental housing support is 4.9 trillion won that is made of 1.2 trillion government grant and 3.7 trillion NHF loan (Table 3).

3. Fiscal Conditions of Central Government

To diagnose the fiscal conditions for the housing sector, we try

to look into the basis of governmental fiscal policy, the national financial operation plan (2010~2014), the structure of public expenditure on welfare, and the fiscal conditions for the expenditure on housing sector.

3.1 Operational Basis of National Finance

The structure of Korea's national finance is largely composed of the general government budget and public funds¹⁾. In a large

1) The budget is divided into the general account and the special

point of view, the budget contains public funds.

There are largely the concept of the consolidated finance²⁾ and of total expenditure in the scale of financial operation. Internationally, the concept of integrated finance is used by IMF recommending. Korea government also has made and declared the scale of integrated finance since 1979. However, the review and authorization by National Assembly in Korea are based on the concept of total expenditure. The total expenditure has been introduced since 2005 when starting to make medium-term financial operation plans.

The operation basis of national finance in the government is primarily based on the recovery of financial soundness. Recently, the fall of sovereign credit rating according to the concern of weak finance of U.S. followed by financial crisis of Southern Europe proves that the recovery of financial soundness in this century becomes a prerequisite of macroeconomic operation. According to OECD (2010), government debt ratio, compared with OECD average GDP, greatly increased from 78.4% in 2008 to 90.0% in 2009, and it is expected to increase up to 103.5% in 2011. U.S. also about 100% and Japan in the state of exceeding 200%. According to IMF (2009), the average of G20 countries was at the level of 75% (the year of 2009). Unless main developed countries reduce their high government debt ratio, IMF (2010) expected that their potential growth rate would fall by 0.5% every year.

Government debt was 407.2 trillion won at the level of 36% in 2010 compared to GDP. With the criteria of IMF, it was 39.4%, which was in good condition compared with 80.2%, the average government debt level of G20 countries but considering 272 trillion won of the debt of public corporations, government debt would become to increase up to 60.2%. Korean economy, small-scaled open economy that is vulnerable to external shocks, would confront with potential fiscal crisis according to the sudden rise of welfare expenditure corresponding to low birth rate and aging society in the future (Fig. 2).

Our government has established medium-term financial operation plans for the management of national financial soundness since 2004. The medium-term financial plans are established with the unit of 5-year every year, and the scale of finance, financial revenue and expenditure and government debt in the medium-term financial plans come to be modified by economic and financial conditions every year. The purpose of the plan is to manage systematically the financial soundness by distributing national financial resources more strategically and suggesting gross weight target such as financial revenue and expenditure, government debt etc. under the mid and long-term prospect.

account again. The funds are total 63 ones and are classified into Social Insurance Fund, Financial Fund, Account Fund and Project Fund.

2) The consolidated finance of the central government is a concept that collection of loan is deducted from total expenditure.

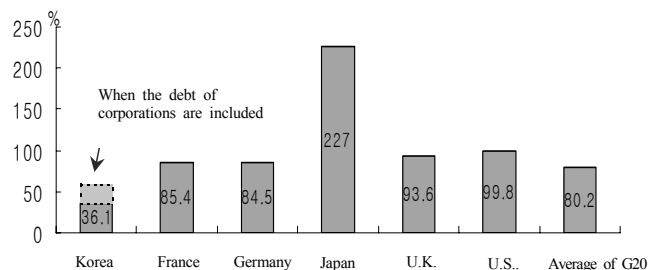


Fig. 2. Government Debt Ratio (Compared to GDP) International Comparison (As of 2010)

Note: The government debt is 407.2 trillion won in 2010 and the debt of 27 corporations is 272.0 trillion won including 125.5 trillion won for LH.

Source: Made on the basis of medium-term financial operation plan (2011~2014) by Ministry of Strategy and Finance, IMF (2010)

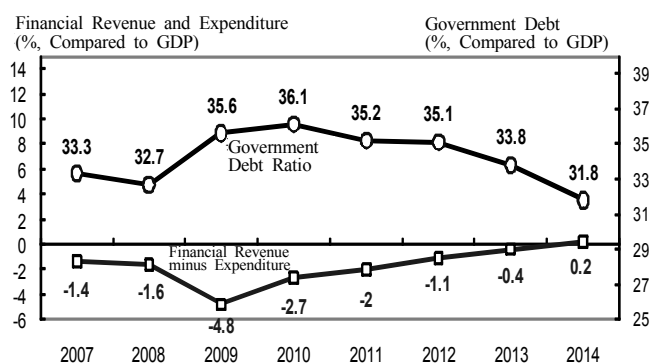


Fig. 3. Governmental Finance Trends(2007~2010) and Management Plan(2011~2014)

Source: Made on the basis of medium-term financial operation plan (2011~2014) by Ministry of Strategy and Finance

Since 2007, the national financial operation plans are submitted to National Assembly 90 days prior to the opening of fiscal year according to the newly established regulation of National Financial Law.

According to the medium-term financial operation plans from 2010 to 2014, the basic direction is the recovery of financial soundness as well as investment expansion for the future and reinforcing the support for housing stability of people. Financial revenue and expenditure (revenue and expenditure to be managed) will be managed to achieve the balance from 2013 to 2014, and government debt will be managed to be the level of 30% in 2014 by gradually reducing it (Fig. 3).

Besides, to accomplish the target, ‘fiscal rules’³⁾ that keeps the

3) Fiscal rule is a financial operation method that accords a certain target value to a total amount of finance such as financial revenue and expenditure, financial expenditure, and government debt etc. There is a case that it is enacted by the law or by the internal regulations of the government. EU makes it a rule to keep budget deficit be within 3% compared to GDP by Maastricht Treaty in 1991. U.S. sets up the upper limit of discretionary expenditure

Table 4. Distribution by Sectors of Public Welfare Expenditure in Korea (Based on Total Expenditure)

(Unit: Trillion Won (Numbers in parenthesis are %))

Classification	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Annual Average Increase Rate	
											2006-2009	2010-2014
Total Expenditure	209.6	224.1	238.4	262.8	301.8	292.8	309.6	324.8	337.7	353.0	11.6%	5.1%
Welfare Expenditure (proportion in Total)	37.9 (18.2)	56.0 (25.0)	61.4 (25.7)	70.1 (26.6)	81.3 (26.9)	81.2 (28.0)	86.3 (28.0)	92.8 (29.0)	98.1 (29.0)	102.3 (29.0)	15.1% -	6.5% -
•Budget	14.7	17.3	16.8	20.6	27.3	25.2	26.5	26.8	27.4	28.1	19.3%	3.9%
•Public Fund	23.2	38.8	44.6	49.4	54.1	56.1	59.8	66.0	70.7	74.2	12.0%	8.1%
<Social Welfare>	32.8	50.5	56.1	64.2	74.4	73.9	78.8	85.3	90.7	94.8	15.8%	7.1%
•Guarantee of Basic Standard of Living	4.6	5.3	6.6	7.3	8.2	7.3	7.5	7.8	7.9	8.2	18.2%	3.1%
•Weak Class	1.2	1.5	1.9	3.5	7.0	5.5	5.7	5.7	6.0	6.1	122.2%	2.7%
•Public Pension	16.1	17.2	19.0	22.4	23.8	26.0	28.2	31.8	35.3	39.1	12.8%	12.6%
•Childcare/Family/Women	0.7	0.9	1.2	1.7	1.9	2.4	2.9	3.0	3.1	3.2	37.0%	8.3%
•Labor	7.8	9.3	10.4	11.0	14.7	12.3	12.7	12.8	13.3	13.8	19.4%	3.0%
•Veterans Welfare	2.5	2.7	2.9	3.1	3.4	3.7	3.8	3.9	4.0	4.1	8.6%	2.7%
•Housing(*)	-	13.5	14.0	15.2	15.4	16.7	18.0	20.3	21.1	20.3	4.7%	5.4%
<Health>	5.0	5.5	5.3	5.9	6.9	7.3	7.5	7.5	7.5	7.5	8.5%	0.7%
•Health&Medical Care	0.9	1.1	1.0	1.2	1.5	1.7	1.5	1.6	1.5	1.5	12.1%	-2.9%
•Health Insurance Support	4.0	4.3	4.1	4.5	5.2	5.4	5.7	5.7	5.7	5.8	7.0%	1.9%
•Food&Medicine Safety	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0%	12.5%

Note: * Annual average increase rate of housing sector was calculated since 2006, because it was included in social welfare sector since 2006.

Data: Until 2009, it is based on 'National Budget' by Ministry of Strategy and Finance on the basis of a revised supplementary budget proposal, and it is based on the medium-term financial plan from 2010 to 2014.

increase rate of financial expenditure 2~3%p. lower than the increase rate of financial revenue every year were introduced.

It can be said that whether this financial target or fiscal rules is somewhat strictly managed or not depends on, in the end, the willingness of the government and whether the growth rate of GDP on a plan is achieved or not but it must be considered to be top priority constraints in fiscal operation.

3.2 Structure and Trends of Public Welfare Expenditure

The welfare expenditures consist of 12 sectors belong to two fields of 'Social Welfare' and 'Health' in national total expenditure (Table 4).

The welfare expenditures reached 81 trillion won in 2010, which accounts for 28% of the total expenditure of the government. The amount of the welfare expenditures and the portion of it in government total expenditure have the tendency to gradually expand.

In comparison with international, the portion of welfare

for 5 years in the future by the law and applies the principle of Paygo for the mandatory expenditure. Through this, net liabilities compared to GDP in the fiscal year of 2015~16 must be reduced by the comparison with the previous year.

expenditures was still quite low than that of main OECD countries, but the speed of increase is very rapid.

The rapid increase of welfare expenditures comes from the welfare expenditures structure itself rather than political willingness. Most of welfare expenditures have the nature of mandatory spending and pay are determined on the basis of the law⁴⁾, the automatic increase of mandatory spending takes the lead of total welfare spending increase. The increase of public pension and health insurance in the future is inevitable according to low birth rate, aging society, and the demand of public service⁵⁾.

The systematic framework of social security system in Korea was built up recently. Government Employees Pension was introduced in 1960, Occupational Health and Safety Insurance in 1964, Health Insurance in 1977, National Pension in 1988, and Unemployment Insurance in 1995.

4) 4 kinds of individual pension law such as the law on guarantee of the basic standard of living, the law on basic old-age pension, and the law on national pension etc. and the law on unemployment insurance etc.

5) The representative cases are differential support of childcare cost, support of nurturing children who don't use a childcare center, many kinds of babysitter services, and disabled pension system etc.

Table 5. Operation Achievement and Plan by Years of NHF

(Unit: Trillion Won)

	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09
Total of Operation	14.0	19.1	19.2	20.8	20.3	22.7	26.4	24.5	22.1	27.7
Subtotal	13.4	17.9	18.3	16.9	14.6	18.3	21.9	20.0	20.4	27.0
Raising										
Collection of the Principal and Interest of Loan	5.9	8.6	9.5	8.1	6.9	7.7	8.8	7.9	8.3	9.8
Housing Bond	3.7	5.4	7.6	7.1	6.0	8.5	10.6	8.6	8.5	9.6
Subscription Deposit	0.2	0.3	0.6	0.9	1.2	1.6	1.9	2.1	2.0	6.1
Others	3.6	3.6	0.7	0.9	0.6	0.6	0.6	1.5	1.7	1.6
Subtotal	12.8	18.2	15.3	15.0	16.0	18.2	22.0	22.7	21.3	23.3
Use										
Repayment of Loan	4.4	7.7	8.1	6.8	8.4	7.8	9.8	11.1	10.1	9.9
Loan for Rental Housing Construction	3.4	4.1	3.7	3.1	2.9	2.9	4.0	4.1	2.6	5.2
Loan for Distribution Housing Construction	1.0	0.6	0.4	0.9	1.4	1.6	1.5	0.9	0.7	1.4
Consumer Loan	3.8	2.7	2.2	3.6	2.7	5.2	6.0	4.9	6.0	5.4
Others	0.3	3.1	0.8	0.7	0.4	0.5	0.6	1.8	1.7	1.5
Beginning Balance	0.6	1.2	0.9	3.9	5.7	4.4	4.5	4.5	1.7	0.7
Carried Forward	1.2	0.9	3.9	5.7	4.4	4.5	4.5	1.7	0.8	4.4

Note: Other raising (transferred money of general account, transferred money of lottery fund, deposit received of public capital management fund etc.), other operation (loan for projects such as housing improvement projects, construction of sites, urban rehabilitation projects etc.), current project expenses (national rental investment, permanent rental investment, capital transfer of purchase and lease, investment of Korea Housing Finance Corporation etc.), basic project expenses (fund operating expenses))

Data: Until 2009, it is based on Manual on National Housing Fund, and since 2010, it is based on medium-term financial plan.

The full-scale beneficiary in National Pension is started to occur from now on (Park, Seong Min et al., 2007). Especially, The soundness of Health Insurance will be the main issue sooner or later.

According to IMF (2010), annual average increase rate of pension expenditure compared to GDP in Korea is 12.9% from 2011 to 2030, which exceeds 7.3% of 9 countries (G7+Korea and Australia) and it will be 41.6% from 2031 to 2050, which is expected to exceed greatly 20.4% of the 9 countries.

This increase of welfare expenditure with high speed is mainly due to the automatic increase of mandatory expenditure based on the law rather than discretionary political willingness. Therefore, it is expected that financial conditions for discretionary expenditure are inevitably narrowed, and public housing construction that occupied the largest portion among discretionary expenditure could be affected the most.

3.3 Perspectives of Public Expenditure Structure and Conditions Related to Housing Sector

The public expenditures on housing sector was previously classified into the field of SOC, but included in welfare sector by UN standard (UN COFOG: Classification Of the Function of Government) since 2005, and actually has been applied in the government budget proposal since 2006.

The annual average of public expenditures on housing sector is expected to increase from considerably 14~15 trillion won during 2006~2009 to nearly 20 trillion won during 2010~2014. This rapid increase is due to the expansion of annual construction

goal of Bogeumjari housing ; the origin plan of Bogeumjari housing was to construct 150 thousand unit per year from 2009 to 2018, but has changed to construct 210 thousand unit per year from 2009~2012 and 120 thousand unit per year from 2013~2018.

In the housing sector expenditure (16.7 trillion won in 2010), NHF (14.8 trillion won in 2010) accounts for dominant portion more than 90%, and budget revenue accounts for the rest 10%. Therefore, the diagnosis on NHF will be important for the conditions of financial expenditure on the housing sector.

Table 5 shows the financial conditions of NHF as of 2009.

The NHF loan is mainly used for public housing construction and for low-moderate income households.⁶⁾

Total amount of NHF operation was 27.7 trillion won in 2009.

Newly raising was 17.1 trillion won ; excluding the collection of the principal and interest of loan, and the beginning balance from total. Newly raising were mostly depend on Housing Bond⁷⁾ and contract saving.⁸⁾ The achievement of housing bond is

6) The expenditure on housing included in the field of welfare is defined by UN standard as Housing benefits in cash for low-income class and inexpensive housing service (IMF, Government Finance Statistics (GFS), Sep. 2009 (CD-Rom)), but in Korea, the financial support for sales housing construction and housing purchase also included in welfare expenditure.

7) Housing bond (1st, 2nd class) is a kind of government bond that is added or liquidated in the process of real estate transaction contract or sold medium&large size housing purchaser.

8) The contract saving grants the qualification for subscription to newly constructed public housing.

Table 6. Financial Position of NHF (As of 2009)
(Unit: Trillion Won)

Assets			Liabilities			Net Assets (Capital)
	Loan	Securities		Housing Bond	Contract saving	
76.9	68.2	7.0	67.2	48.3	10.6	9.7

Source: Ministry of Land, Transport, and Maritime Affairs, *Handbook on National Housing Fund*

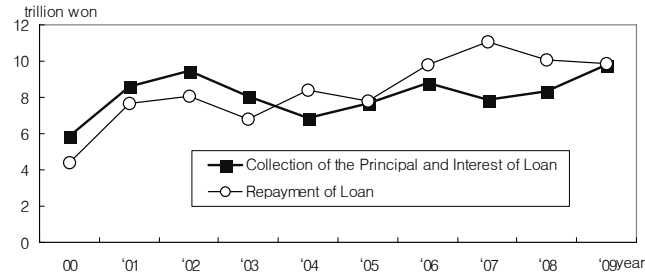


Fig. 4. Comparing the Collection and Repayment of National Housing Fund

directly connected with the volume of real estate transactions, and the contract saving is sensitively affected by housing cycle.

Net operation was 13.4 trillion won ; excluding the repayment of debt and carried forward. 13.0 trillion won was operated for loan for public housing construction and the consumer loan. The loan for public housing is not only depend on government’s construction plan but also on the housing market. The consumer loan (loan for purchasing and rent) is sensitively affected depending on the circumstances of a market.

The main newly raising method (housing bond, contract saving) and main net operational object (housing construction, consumer loan) of NHF are all sensitive to the real estate business cycle and has the tendency of going together with that cycle.

Considering these raising and operational method of NHF, there will be little room for notable increase for the rental housing construction.unless a new innovative source of raising is discovered.

Moreover, NHF’s financial soundness is worthwhile to pay attention. The asset of NHF was 76.9 trillion won as of 2009 which consists of loan obligation (68.2 trillion won) and securities (7.0 trillion won) Most of loan obligation are for housing construction and for consumer, and almost of them are long-term loan with the maturity of 10 ~ 30 years (Table 6).

Liabilities were 67.2 trillion won as of 2009, which consists of dominantly housing bond (48.3 trillion won). Housing bond’s maturity is 5 to 10 years.

We have compared the cash flow both of assets and liabilities. The comparison can be summarized between the cashflow of the collection (principal and interest) and repayment of debt (Fig. 4).

Both have the same trends to increase together with the assets · liabilities increase. But the problem is that the trend of debt repayment exceeds the collection since 2003. If this trend is

Table 7. sum up of main fiscal value

classification		2009year (trillion won)
Central Government budget	Total expenditure	301.8
	Expenditure on Welfare	81.3
	Housing sector	15.4
Government’s support plan for Bogeumjari Housing	Total	10.6
	Rental housing	4.9
	Government Grants Rental housing	1.2
	NHF’s Loan Rental housing	1.2
NHF’s Operation	Total(a)	23.3
	Repayment and other(b)	11.4
	consumer loan(c)	5.4
	carried forward(d)	4.4
	Loan Availability for Bogeumjari(a-b-c-d)	10.9

deepened, the collection is not sufficient for the repayment so that NHF can confront with potential financial insolvency.

3.4 Sum up of Government Fiscal Conditions (as of 2009)

The annual amount of government’s supports for Bogeumjari housing is planned to 10.6 trillion won as of 2009 constant price. Which is composed of government’s grants of 1.2 trillion won and NHF’s loan of 9.3 trillion won.

The NHF’s total sum of operation is 23.3 trillion won as of 2009. After deduction the repayment, consumer loan, and other, the maximum loan available for Bogeumjari is 10.9 trillion won.⁹⁾ Therefore, NHF’s annual loan plan for Bogeumjari is nearly feasible compared to its loan availability.

But as mentioned above, the NHF’s financial soundness is so fragile to exercise additional loan in the long run. And the operational rigidity can be happened due to the excess proportion of loan for Bogeumjari housing (Table 7).

Moreover, the critical problem is remained. Although the government’s support is realized as planned, it is insufficient to cover the construct cost. The main agency, LH have the burden to finance the remaining cost.

4. Financial Conditions for Performance of Rental Housing Policy of LH

4.1 Portion of LH in Public Rental Housing Policy

LH (Housing Corporation before integration) plays the absolute role in the provision of public rental housing. Based on the end of

9) The actual loan executed in 2009 is only 6.6 trillion won. It is because of housing busts and loan demand decrease.

Table 8. Status of Ownership of Long-Term Public Rental Housing by Main Agencies of Projects (Lease duration more than 10 years, as of the end of 2010)
(Unit: 10 thousand households, %)

Classification	Total	L H	Local government
Households	80.6	58.2	22.4
Proportion	100.0%	72.3%	27.7%

Source: Ministry of Land, Transport, and Maritime Affairs, *Handbook on Housing Job*

Table 9. Construction Achievement by Main Agencies-Years of National Rental Housing(Based on Project Authorization)
(Unit: 10 thousand households, %)

Classification	Total	'98~'02	'03	'04	'05	'06	'07	'08	'09	'10
Total	69.2	11.9	7.2	9.1	9.2	8.9	8.9	7.4	3.9	2.8
LH	62.4	11.7	6.4	8.5	7.5	8.2	8.3	6.5	3.4	1.9
Local government	6.8	0.2	0.8	0.6	1.6	0.7	0.6	0.9	0.5	0.8

Source: Ministry of Land, Transport, and Maritime Affairs, *Handbook on Housing Job*

2010, LH possesses 1.17 million housing units which is 52% of total rental housing 2.27 million housing units and 582 thousand housing units which is 72% of 806 thousand housing units of the long-term rental housing stock more than 10 years. In the case of National rental housing that makes up the main part of long-term rental housing that was constructed after foreign exchange crisis in 1997, LH provided 90.2% and local governments provided 9.8%.

Looking into public rental housing provision for the past 20 years, the participation of private sector was only possible for the type of 5-year rental housing that could be relatively profitable, but there is no achievement of participation by private companies for long-term rental housing which has a big burden to cover the construction cost and can hardly expect the profitability such as Permanent rental housing or National rental housing.

Local governments has also a limit in raising the financial resources necessary for provision of rental housing, The participation of local government except for Seoul in long-term rental housing programs is very low (Table 8, 9).

For a while, the organization that can stably provide the public rental housing is limited to LH.

4.2 Financial Conditions

The total assets of LH were the level of 130 trillion won as of 2009 and total liabilities were the level of 108 trillion won. Financial liabilities that has a burden of repaying interest were 75 trillion won.¹⁰⁾ Financial liabilities related to rental housing is approximately 29 trillion won.

10) As of the end of 2010, the total assets are 150 trillion won, total liabilities are 125 trillion won, and financial liabilities are 90 trillion won.

In the case that if LH progressed all the existing big projects such as 1.5 million unit of Bogeumjari housing, large scale land development, Sejong City development, and innovation city development, etc. under this financial circumstances, the scale of liabilities in 2018 would be expected exceed 320 trillion won. (Special Committee on Financial Korea Land & Housing Corporation, 2010)

LH's enormous scale of liabilities accrued to primarily excessive investments at a early stage of project, and long-lasting recovery period. In the case of rental housing construction, the investment is made for the early 7 years but the collection is made for over 14 years.

Moreover, as the real estate market depression has been prolonged after global financial crisis, unsold land and housing amounted to 25 trillion won deepened the liquidity crunch of LH. The government take several measures including the relief financing when LH realize loss in the process of performing public projects such as Bogeumjari Housing, National Rental Housing, etc.

But it is difficult to say that the liquidity crunch of LH is fundamentally solved until an innovative measure to reduce liabilities comes out.

The liabilities that LH bears can be ultimately seen as a potential debt of a government. As of the end of 2009, the scale of LH liabilities reached 30% of national debt 360 trillion won, and 51% of public corporations debt 212 trillion.

The scale of LH projects as of June 2010 is amounted to 425 trillion won at total 414 districts(593.4km²). In 276 districts(282 trillion won, 397.8km²), projects are already in progress with undertaking land compensation. If all projects are progressed as planned, 45 trillion won are required every year and 20~30 trillion won of external loan through bond issue are necessary, but it is impracticable to raise external funds as much as that.

Especially, cumulative construction of rental housing becomes a structural cause that deepens the financial problem, which can be largely divided into the aspect of liquidity and the aspect of debt management.

First, there is liquidity problem.

The real project cost required has been increasing compared to the planned cost that is the basis of government grant, the excess burden is delegated to the burden of LH. As of 2010, the cost sharing ratio of LH for National rental housing construction has been growing to be more than 40% that exceeds 10% by far which was originally expected.

Second, There is problem of liabilities management.

The accumulation of rental housing construction by LH, accompanied by automatically increasing of NHF loans, which is reflected as financial liabilities of LH. Considering the 3.7 trillion won(Table 1) of NHF loan is excised every year, the total NHF loan outstanding is expected to be more than 60 trillion won in 2018.

To stabilize the LH management within the financial com-

Table 10. Cost Sharing ratio for National Rental Housing Construction (As of 2010)

Classification	Total	Investment	Fund Loan	Residents	LH
Planned ratio	100%	19.4%	46.4%	24.2%	10.0%
Real ratio	100%	13.2%	29.6%	15.3%	41.9%

Data: Internal data of LH

petency scope, the current scale of investment for the project cost every year must be considerably adjusted from 45 trillion won to around 30 trillion won reduced by 33%. (Special Committee for Financial Improvement in LH, 2010).

Assuming the quantity of Bogeumjari housing construction every year should be reduced inevitably from 150 thousand unit to 100 thousand unit, public rental housing among Bogeumjari should be also adjusted from 80 thousand housing unit every year to 50 thousand housing unit.

5. Summary and Conclusion

Social agreement is made for the necessity of the provision of public rental housing for residential stability of low-moderate income household. But provision scale can't help but have restrictions of performance competency such as financial sources etc. So far as provision of public rental housing concerned, depending on the role of LH is inevitable for the meantime, but there is a limit within the current pattern of financing.

The public rental housing policy could be changed somewhat in the scale of construction volume or in the speed depending on the governmental policy philosophy or the market circumstances but ultimately the financial distribution for rental housing is of paramount concern.

Transfer of administrative authority from central to local, without financial back-up, could not work itself as the sufficient incentive to participate in rental housing policy

This paper mainly tried to analyse the fiscal, financial constrains which undermine the sustainability of public rental housing policy. The main study to find the alternatives to overcome these obstacles are left behind for other researchers.

We just try to point out the basic directions of policy to enforce the sustainability of rental housing project.

First, the realization of construction plan by considering finance and market conditions is urgent. It is necessary to adjust flexibly the policy goal according to financial and market conditions rather than cling to the achievement of quantity goal (number of newly construction unit, stock ratio etc).

After near 2018, the speed in the increase of households is expected to slowdown, then the urgency of massive housing construction can be relieved. Prolonging the total construction

period from 2018 to 2023 or 2028, thereby reducing the scale of annual housing construction plan can be a sort of alternative.

Meanwhile, type of housing occupation also needs to be flexibly adjusted according to the market conditions.

When the housing demand decreased by the housing busts, it is more efficient to increase rental housing construction instead of sales housing. On the contrary, when the market is overheated, it is more efficient to increase sales housing than rental housing.

Lastly, the ways to be able to reinforce the supply competency of LH must be also sought. LH is now facing with a financial limit in sustaining large-scaled land development and long-term rental housing construction. The key issue is the reorganization of rental housing system and financial plan possible for performing projects within LH's financial competency.

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