Mortgage Securitization in Korea[1]

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INTRODUCTION

The Korean mortgage market has changed rapidly since the financial crisis in December 1997. In the primary mortgage market, the competition between lenders has become intense; the proportion of long-term mortgage loans has decreased; mortgage interest rates have dropped; and prepayments have increased.

In the secondary mortgage market, the government enacted the Mortgage-Backed Securitization Company Act (MBS Company Act) and established Korea Mortgage Corporation (KoMoCo) in 1999. KoMoCo has issued Mortgage-Backed Securities (MBS) seven times, a total amount of 2.5 trillion Korean won as of December 2002.

The purpose of this paper is to review the structural changes of the mortgage market and the institutional framework of mortgage securitization, to discuss policy issues for promoting mortgage securitization.

TREND OF THE MORTGAGE MARKET

Size and Structure of the Primary Market

Table 1 shows the change in the size of primary mortgage market since 1997. As of the end of 2001, the outstanding mortgage balance stood at 73 trillion Korean won, accounting for 13.4% of GDP. Even though the ratio of mortgage loans with respect to GDP is continuously expanding, it is still at a low level compared with advanced countries.[2] Newly originated mortgage loan reached 30 trillion won in 2001, which accounts for about 5.4% of GDP. This ratio has recently enjoyed a rapid increase.

The structure of the primary mortgage market has changed dramatically. The most apparent is the fierce competition that has ensued of late; the fevered pitch of this struggle may even be called a 'war'. The competition began in 1997, when the former Housing & Commercial Bank (H&CB) was privatized, regulations were lifted, and the merits of mortgage loans were highlighted. As a means for competition, both interest rates and non-interest rates were mobilized. In the case of interest rate competition, small-sized foreign and domestic commercial banks have led the rate cut and Kookmin Bank (merged with H&CB in 2001) joined in later. In the case of non-interest rates, most mortgage lenders have exempted borrower from mortgage establishment fee.

An all-out competition was unfolded between both the public and private sectors, between banks and non-banks, and even between banks. Prior to 1997, the primary mortgage market was clearly divided into the public and private sectors due to the difference in mortgage rates. However, the difference between these two sectors has continuously narrowed due to a different speed and range of rate adjustment. In 2001 mortgage rates in the private sector became lower than that of the public sector, causing severe competition between the two sectors (See Table 2).

In the banking sector Kookmin Bank recorded the highest market share, accounting for 36% of the total, 85% of the private sector and 85% of the banking sector in 2001. As well, the NHF loan has been entrusted to, and is currently managed by Kookmin Bank. Therefore, 91% of all mortgage loans made in Korea are provided through the business network[3] of Kookmin Bank.

Table 1. Size of Primary Mortgage Market[1)]

Unit: Trillion Korean won

	1997	1998	1999	2000	2001
Outstanding Balance of Mortgage Loans (A)	53.0	55.5	61.3	67.6	72.9
New Origination of Mortgage Loans (B)	13.4	12.1	17.1	21.4	29.7
Gross Domestic Product (GDP) (C)	453.3	444.4	482.7	522.0	545.0
A/C (%)	11.7	12.5	12.7	13.0	13.4
B/C (%)	3.0	2.7	3.5	4.1	5.4

Note: 1) For 2000, life insurances are not included. For 2001, life insurance companies and installment finance companies are not included.
Source: Bank of Korea; Kookmin Bank

Mortgage Interest Rates

Until 1997 mortgage interest rates were lower than market interest rates because mortgage loans were provided based on policy consideration rather than market principles. As a result, mortgage securitization was impossible since mortgage interest rates were lower than market interest rates. However, market rates have dropped lower than mortgage rates since 1998, which has led to favorable market conditions for mortgage securitization. (See Table 3).

Loan Period and Repayment Method

When the H&CB was a government-run bank, most mortgage loans were originated at a long-term amortizing mortgage. However, in recent times they have rapidly changed to a short-term bullet mortgage. As we see in Table 4, about three quarters of new loans originated in 1998 were long-term loans with an amortizing schedule of 20 years or more. However, in the first quarter of 2002, short-term loans of 3 years or less accounted for three quarters of total loans.

Moreover, short-term loans are bullet mortgages, in which interest only is paid and the principal is repaid upon maturity. These differ largely from amortizing loans in the motive of home purchase and stability of repayment. In case of an amortizing loan, borrowers repay the principal little by little and increase their housing equity. Borrowers thus purchase a house with the purpose of long-term residence, and repayment of the principal is generally stable.

Meanwhile, in the case of a short-term bullet mortgage, many people purchase houses out of motivation to reap capital gains by selling the house when property prices go up. They implicitly expect that the loan period can be extended upon maturity. However, the loan cannot be extended if a credit crunch of financial markets occurs or credit records of the borrower worsen. This causes a high uncertainty of principal repayment.

It may be said that until 1996 there was barely any prepayment. This was because mortgage rates were relatively low and fixed

Table 2. Trend in the Share of Mortgage Market by Sector and Lender Group
(Based on the Outstanding Balance as of the end of each year)

Unit: %

		1986	1996	1997	1998	1999	2000	2001
Public Sector	NHF[1)]	50	50	48	53	56	56	55
	ACF[2)]	7	4	4	4	4	3	3
Private Sector	Banks	41	41	39	37	36	39	42
	Non-banks[3)]	2	5	10	6	5	1	–
Market Share of Kookmin Bank Against	Total	41	38	35	34	32	35	36
	Private Sector	96	82	72	79	79	86	85
	Banks	100	92	91	92	90	88	85
Share of Kookmin Bank's Channel	(NHF+ Kookmin)/ Total	91	88	83	87	88	91	91

Note: 1) National Housing Fund.
2) Agricultural Cooperative Federation.
3) Life insurance companies and installment finance companies.
Source: Kookmin Bank.

Table 3. Trend in Various Interest Rates[1)]

Unit: %

		1996	1997	1998	1999	2000	2001	2002
NHF's Interest Rate	Mortgage Interest Rate	9.50	9.50	9.50	9.00	9.00	8.00	8.00
Depository Bank's Interest Rate	Mortgage Interest Rate	11.84	13.53	13.37	10.02	9.60	7.02	6.69
	Average Deposit Rate	9.62	11.08	7.33	6.19	5.95	3.98	3.97
Market Interest Rate	Government Bond Rate (3 yrs)	12.19	14.96	7.23	8.85	6.79	5.93	5.28
	Corporate Bond Rate[2)] (3 yrs)	12.57	24.31	8.30	9.85	8.12	7.11	5.88

Note: 1) Based on interest rate as of December for each year
2) Up to Sep. 2000, uncured corporate bond rated A+. Since Oct. 2000, unsecured corporate bond rated AA-.
Source: Bank of Korea; National Housing Fund.

Table 4. Maturity of Mortgage Loans[1)] : Case of Kookmin Bank

Unit: %

	1998	1999	2000	2001	2002[2)]
3 years or less	4.1	55.4	62.6	70.8	75.6
3 years or less than 10 years	12.7	19.5	20.5	12.4	9.3
10 years or less than 20 years	9.1	3.7	4.4	4.9	1.7
20 years of more	74.1	21.5	12.5	11.8	13.4
Total	100.0	100.0	100.0	100.0	100.0

Note: 1) Based on the Newly Originated Loans.
2) From January to August.
Source: Kookmin Bank

for a long-term; thus, there was no motive for refinance. There was also no competition for expanding mortgage loans among financial institutions because of a monopolistic market structure. Houses with remaining loans were also preferred in transactions to houses without loans, due to the difficulty of taking out mortgage loans.

However, prepayment has rapidly increased during the last couple of years. The main reason is an increase in the benefits of refinance. Financial institutions have lowered their mortgage rate in the course of fierce competition and have exempted borrower from mortgage establishment fee. These two factors vastly increased the benefits of refinance. Aggressive promotions by financial institutions and informative reports by the mass media have sensitized borrowers to the benefits of refinance, and consequently have accelerated prepayment.

INSTITUTIONAL FRAMEWORK FOR MORTGAGE SECURITIZATION

There are two laws that govern mortgage securitization in Korea: the Asset- Backed Securitization Act (ABS Act) and the Mortgage-Backed Securitization Company Act (MBS Company Act).

The ABS Act was established in September 1998 to promote the restructuring of firms and financial companies. Under the law, a Special Purpose Vehicle (SPV)4 issues Asset-Backed Securities (ABS) based on assets transferred from the originator. Mortgages can also be securitized under the ABS Act. Nonetheless, the government enacted the MBS Company Act in January 1999 under the judgment that mortgage loans, which are basically sound long-term homogeneous assets, could be more effectively securitized by a reliable permanent entity rather than by a SPV with a limited life.

As far as mortgage securitization is concerned, the MBS Company Act forms a basic framework of mortgage Securitization. The main contents of the law are as follows: First, an MBS Company can be founded only if it receives authorization from the Financial Supervisory Commission (FSC). Authorization can be obtained when it satisfies certain specified conditions, such as 25 billion Korean won or more of equity capital and 8% or more of BIS capital adequacy ratio and entity as a corporation.

Second, an MBS Company is required to register the plan of mortgage securitization with FSC to securitize mortgage loans. To take over the mortgage loans from a financial institution and to establish a trust that designates it as a trustee, the MBS Company is required to register the transfer and trust of mortgage loans with the FSC.

Third, as the MBS Company is not allowed to run mortgage portfolio investment business, an MBS Company's function is restricted to acting as a conduit for securitization.[5]

Fourth, an MBS Company issues an MBS by establishing a trust and designating itself as a trustee. In other words, when it trusts the purchased mortgage loans to a trust account that is legally separated from its account, the same trust issues the MBS.

Fifth, the MBS Company Act prescribes the requirements of 'True Sale'[6] to prevent legal disputes and clarify accounting treatments.

Sixth, the MBS Company Act stipulates some special exceptions to the Civil Law regarding countermeasures against the transfer of credit and acquisition of mortgages.[7]

Seventh, an MBS Company can guarantee the payment of principal and interest of the MBS within the limit of 30 times of its equity capital. It can also issue corporate bonds within the limit of 10 times of its equity capital, and may borrow within the limit of its equity capital.

From a legal perspective, although no entry barrier exists in the secondary mortgage market, there is no other MBS Company except KoMoCo that operates in the market. The mission and role of KoMoCo is basically similar to those of Fannie Mae/Freddie Mac in the U.S. KoMoCo is considered a government-sponsored agency because the government stands as the largest shareholder and provides policy support[8].

POLICY ISSUES FOR PROMOTING MORTGAGE SECURITIZATION

Current Status of MBS Market

Table 5 shows the current status of the Korean MBS market as of the end of December 2002. Mortgages securitized by the MBS Company Act and ABS Act stood at a total of about 3.2 trillion Korean won. The various MBS issued by KoMoCo account for 80.5% of the market share. The private-level MBS issued by SPCs, which were established by three non-bank mortgage lenders, accounted for 19.5%.

There is a big difference between KoMoCo and SPC in terms of the ratio of subordinated securities, which an originator underwrites for the credit enhancement of senior securities. The ratio is only 3.8% in case of KoMoCo, while 16.3% in case of SPC average. This reveals that the economy of MBS issuance varies widely, depending on public confidence in an issuing company and the quality of underlying assets.

Table 6 compares the size of MBS market with the ABS and mortgage markets. The MBS market is very small compared with the ABS market. Two major reasons are low demand for mortgage securitization of banks and restrictive legal/regulatory framework. Commercial banks, which have basically little needs to securitize, have dominated the mortgage market and have faced difficulties in investing funds rather than raising them. Banks therefore have intended to hold mortgage loans rather than sell them. Restrictive framework for securitization has also been an important factor retarding the development of MBS market.

Reshaping of Legal and Regulatory Framework

In order to promote the mortgage securitization it is necessary to reshape the MBS Company Act and solve the problems occurring in actual operation over the past 3 years. Four major issues to be improved are as follows:

First, the scope of securitizable assets needs to be broadened. Under the current MBS Company Act, only mortgage loans can be securitized. In reality, however, banks classify mortgage loans as general loans to avoid fees that they should pay to Housing Finance Guarantee Fund. However, mortgage loans that are classified as general loans cannot be securitized under the MBS Company Act, while this is possible under the ABS Act. As a result, the volume of mortgage loans that could be securitized under the MBS Act is very limited.

Second, an MBS Company needs to be allowed to buy and hold the mortgages either for securitization at an appropriate time or for holding in their portfolio. The current law allows only for the purchase of mortgages for simultaneous securitization. As a result, lending institutions cannot sell mortgage loans to an MBS company at any time, and must hold them until the minimum required volume is accumulated. Therefore, mortgage lenders face financial burdens before securitization.

Third, the guarantee limit of MBS Company needs to be expanded. The current MBS Company Act sets the guarantee limit to 30 times of equity capital. This method is problematic in that the expansion of MBS issuance becomes impossible, unless MBS Company Act is amended or equity capital is increased on a periodic basis.

The current method also increases the capital costs of an MBS Company and thus lowers the economy of securitization. Limiting the MBS Company's guarantee limit to 30 times of equity capital is like making the MBS Company hold an equity capital equivalent to 3.3% of the outstanding balance of guaranteed MBS. This level is as much as 7.3 times larger than that (0.45%) of the US.

Fourth, the transfer procedure of *Keun*-mortgage[9] should be improved. The current MBS Company Act hampers the promptness and economy of securitization, by stipulating the sending of contents-certified mail to fix the outstanding credit amount secured by *Keun*-mortgage. This process turns *Keun*-mortgage into a common mortgage, making it impossible to get additional loans from an established mortgage after securitization is completed. This becomes a factor restricting the demands for securitization. Therefore, some method that makes it possible to transfer a mortgage credit and its attendant mortgage without fixing the outstanding credit amount should be introduced to the related laws.

Table 5. Issuance Record of MBS as of the end of 2002

Unit: Billion Korean won

		2000	2001	2002	Total	Market Share	Law Based
KoMoCo MBS		1,278.9	742.7	528.2	2,549.8	80.5%	MBS Company Act
	Senior	1,216.0	728.0	509.5	2,453.5		
	Junior (Share)	62.9 (4.9%)	14.7 (2.0%)	18.7 (3.5%)	96.3 (3.8%)		
Private-level MBS		99.9	95.3	423.3	618.5	19.5%	ABS Act
	Senior	76.0	68.7	372.8	517.5		
	Junior (Share)	23.9 (23.9%)	26.6 (27.9%)	50.5 (11.9%)	101.0 (16.3%)		
	Total	1,378.8	838.0	951.5	3,168.3	100.0%	–
	Senior	1,292.0	796.7	882.3	2,971.0		
	Junior (Share)	86.8 (6.3%)	41.3 (4.9%)	69.2 (7.3%)	197.3 (6.2%)		

Source: Financial Supervisory Service; KoMoCo

Table 6. Relative Size of MBS Market

Unit: Billion Korean won

	2000	2001	2002
Issuance Amount of MBS (A)	1,378.8	838.0	951.5
Issuance Amount of ABS (B)	49,383.2	50,934.2	39,827.4
New Origination of Mortgage Loans (C)	21,398.9	29,677.0	–
A/B (%)	2.8	1.6	2.4
A/C (%)	6.4	2.8	–

Source: Financial Supervisory Service; Kookmin Bank; KoMoCo.

Promotion of Long-term Mortgage Loans

The most disturbing trend occurring in the current mortgage market is the rapid increase in short-term bullet mortgages (See the table 4). The reason for the sharp increase in short-term bullet mortgages results from a coincidence in the interests between lenders and borrowers. On the part of depository mortgage lenders, short-term loans are more competitive because of their lower interest rates, and more advantageous for avoiding the mismatch risk that arises from short-term funding and

Table 7. Comparison of Minimum Capital Regulation on Securitization Companies

Country and Company		Criteria of Regulation		Indicator of Regulation[2]		Remarks
				Capital/Asset Ratio	Leverage	
USA	Fannie Mae Freddie Mac	On B/S assets[1]		***2.5%***	(40 times)	
		Off-B/S assets	Guaranteed MBS Other assets	***0.45%*** ***0.45%***	(222 times) (222 times)	
Hong Kong	HKMC	On B/S assets[1]		***5.0%***	(20 times)	
		Guaranteed MBS		***2.0%***	(50 times)	Revised in 2001
Korea	KoMoCo	On B/S assets	100%risk weight 50% risk weight[1] 20% risk weight 10% risk weight	***8.0%*** ***4.0%*** ***1.6%*** ***0.8%***	(12.5 times) (25 times) (62.5 times) (125 times)	FSC regulation on BIS capital adequacy ratio
		Off-B/S assets	Guaranteed MBS	***2.0%***[3]	(50 times)	MBS Act
				(3.3%)	***30 times***	

Note: 1) Mortgage loans are included
2) Numbers in bold italic type represent actual method of regulation. Numbers in parentheses represent leverages or capital/asset ratios corresponding to the actual method of regulation.
3) 50% risk weight*50% credit conversion factor*8% minimum required BIS capital adequacy ratio.

long-term investing. On the part of borrowers, the repayment burden of short-term loans is lower due to lower interest rates, and they can enjoy higher residential utility and capital gains by purchasing bigger and better houses with larger loans.

However, a rapid increase of short-term bullet mortgages is not desirable from the following point of views: First, if an extension of the loan period is not allowed upon its maturity, borrowers must refinance with a higher interest rate. In that case, borrowers face an increase in the repayment burden or the possibility of losing their shelter. Lenders also face an increase in risks of delinquency and default. Second, most short-term bullet mortgages are linked to market interest rates and there is no rate cap, therefore, repayment burdens in a period of rising rates can sharply increase. Third, there may be over-consumption of housing beyond affordability, and housing speculation aiming at capital gains.

For the prevention of these problems and the stable development of a mortgage market, mortgage loans should be originated with a long-term amortizing type, as is the general case in advanced countries. To do so, the government should actively induce both lenders and borrowers with incentives to prefer long-term amortizing mortgage loans by providing incentives.

Fostering Non-bank Mortgage Lenders

The market size of mortgage securitization has not increased significantly because commercial banks, providing majority of mortgage loans, have little incentive of mortgage securitization due to the huge amount of liquid assets. In contrast to commercial banks, non-banks have relatively strong incentive for securitization, since by selling mortgage loans on origination they can reduce or avoid funding burdens.

Therefore, for fostering the secondary mortgage market, non-bank mortgage lenders such as mortgage companies should be able to increase its shares in the primary mortgage market. One of policies for this purpose is to allow KoMoCo to run the mortgage portfolio investment business and to provide mortgage lenders with credit at a lower rate for funding mortgage loans.

Utilization of Mortgage Insurance

The average LTV ratio in Korea has steadily increased to record 40.7% in 2001. However, it is still very low compared with advanced countries. The average LTV ratio is expected to continuously increase as mortgage loans are expanded, but it may be difficult to attain the level of advanced countries in the near future.

One of the most important reasons is the matter of repayment burden due to the high level of housing prices-to-income ratio. The other is a problem unique to Korea, which involves a small amount leasehold deposit system. This small amount leasehold deposit always holds priority over a mortgage lien. For this reason, all mortgage lenders deduct the small amount leasehold deposit from the collateral value when calculating the loanable amount. Therefore, the loanable amount substantially diminishes.

Putting aside the issue of repayment burden, and assuming the decrease in housing price and cost of auction as 30% of the housing price, as well as the small amount leasehold deposit as 10~20% of the housing price, a maximum LTV ratio cannot exceed 50~60% in Korea. Accordingly, mortgage insurance needs to be utilized to enhance overall LTV ratio from the mid- and long-term point of view.

Once mortgage insurance is widely used, those people who do not have a sufficient down payment can borrow as much money as they want. Mortgage lenders also can expand mortgage loans since they can avoid default risks. If the LTV ratio becomes 20% higher through mortgage insurance, it will rise up to 70~80%. Therefore, as is the case in advanced countries, home ownership will be possible with a down payment of only 20~30% of the house value.

Reinforcement of Government Assistance

Although Fannie Mae and Freddie Mac are private shareholder-owned companies listed on the New York Stock Exchange, they enjoy high public confidence since they considered government-sponsored agencies. Based on high creditworthiness, these agencies raise low-cost funds for buying mortgages and supply the funds for mortgage loans to lending institutions.

In Korea, KoMoCo has acquired quite a high level of public confidence since the government led the establishment of KoMoCo and participated as its largest shareholder. Nonetheless, the institutional framework for enhancing public confidence is weaker compared with foreign securitization companies.

KoMoCo is being allowed to conduct mortgage portfolio business in the near future. As the ability that the KoMoCo borrows at a low rate is very crucial for mortgage portfolio business, the government had better consider support such as credit granting to KoMoCo. Also, favorable taxation of long-term MBS is expected to vitalize the long-term bond market. Also, the government needs to scrutinize the policy of (i) putting MBS on the list of RP transactions between the central bank and financial institutions and (ii) designating MBS as an exceptional security when calculating the long-term securities investment ratio of banks.

CONCLUSION

The Korean government has developed policies and improved institutions by modeling the domestic housing finance system after those found in advanced countries. One of these measures is the mortgage securitization system introduced in 1999. The fact that Korean government and KoMoCo have successfully created a secondary mortgage market within 3 years can be highly evaluated. There are still, however, a great deal of challenges.

The market structure and institutional framework needs to be continuously improved to vitalize the MBS market. The policy tasks to be urgently revamped are as follows: In the primary mortgage market, a policy to convert short-term bullet mortgages to long-term amortizing mortgages should be devised and the role of non-bank mortgage lenders should be strengthened.

In the secondary mortgage market, the legal and regulatory framework should be reshaped. Above all, three core tasks must be targeted: Allowing an MBS Company to run mortgage portfolio business; improving restrictive MBS payment guarantee limits; and improving Keun-mortgage transfer procedures. In addition, various policies should be prepared to streamline the securitization process, enhance MBS Company's public confidence for low-cost funding and expand the demand for MBS investment.

NOTES

[1] This paper is an updated version of my paper (2002b) that presented at AsRES/AREUEA 2002 Joint International Conference held in Seoul, Korea.

[2] However, it is worth pointing out that current housing finance statistics underestimate the size of the housing finance market. For example, the mortgage balance reached about 25% of GDP as of the end of 2001, using the author's most recent estimates (2002a).

[3] Table 2 is limited to mortgage loans. There is thus a possibility that Kookmin Bank's ratio was overestimated, since commercial banks tend to treat mortgages loans as general loans.

[4] Special Purpose Company (SPC) and trust company are included.

[5] The revised MBS Company Act, which allows an MBS company to run mortgage portfolio business, is suspending in the National Assembly.

[6] The four requirements of True Sale are as follows: (i) the transfer of mortgage loans should be conducted by way of sale and purchases or exchanges; (ii) the transferee must have the beneficiary right and the disposal right of the transferred mortgage loans; (iii) the transferor does not have any right to claim the return of transferred mortgage loans and the transferee does not have any right to claim the return of consideration for the transferred mortgage loans; (iv) the transferee assumes all risks with respect to the transferred mortgage loans.

[7] Under the Civil Law, the transfer of credit shall not be perfected against the obligors and third parties unless the transferor sends notice to, or obtains consent from, the obligors. The Civil Law also stipulates that the sale and acquisition of real property rights, including the mortgage, are effective when registered at a registry office. Since an MBS is usually issued based on tens of thousands of mortgages loans, to take procedures of notice or consent and

registration under the Civil Law is virtually impossible due to the enormous time and costs involved. The MBS Company Act thus provides special exceptions to reduce obstacles to the transfer of mortgage loans.

[8] The ownership structure of KoMoCo, as of the end of 2002, is as follows: the Korean government (31.8%), Kookmin Bank (26.7%), Korea Exchange Bank (13.3%), Saumsung Life (8.9%), IFC (8.9%), KML holdings (8.9%), and others (1.5%). As far as policy support is concerned, the government has securitized, through KoMoCo, the mortgage loans originated by the National Housing Fund, which is a government-owned public housing finance institution. The government has also applied 20% BIS-based risk weight to the MBS issued by KoMoCo.

[9] The *Keun* mortgage, which is widely used in Korea, is a mortgage that serves, up to a predetermined amount, as a collateral for several uncompleted obligations that will be created and extinguished in the course of continuous transactions and whose remaining balance will be fixed at the settlement date of accounts.

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