Korean Mortgage Markets: Transition to Securitizations

By Seung Dong You[1]

I. INTRODUCTION

Mortgage securitization[2] is new in the mortgage markets in Korea. The Korean Mortgage Backed Securities (MBS) market has grown both domestically and abroad as a result of the expansion of the Asset Backed Securities (ABS)[3] market since the establishment of the legal framework for mortgage securitization in 1998 and 1999. The Korean government enacted new legislation to (1) further the development of the secondary mortgage market and (2) reduce financial risks in the primary mortgage market by promoting long-term mortgages. A fully government-supported Secondary Mortgage Market Enterprise (SMME) was launched, and it issued KRW[4] 3 trillion MBS in 2004. After the kick-off of offshore Residential Mortgage Backed Securities (RMBS) transactions in late 2002, three cross-border RMBS deals were successfully completed in 2004 to probe a new funding source. Moreover, the size of the Commercial Mortgage Backed Securities (CMBS) market has been increasing, and CMBS notes are being backed by cash flows from various types of real estate.

This article provides updated information on the mortgage markets and discusses the latest development in mortgage securitization in Korea. It begins with the evolution of the ABS market and recent developments in the RMBS and CMBS markets. Second, it explains the conditions of the primary mortgage market, reviews the accomplishments of the new Government Sponsored Enterprise (GSE), and provides detailed information on cross-border RMBS transactions. Third, it covers the recent development in the CMBS market and key features of CMBS, and then concludes.

II. TRENDS IN SECURITIZATION MARKETS

Legal Framework

Three acts govern the securitization business in Korea: the Asset-Backed Securitization Act (ABS Act), the Korea Housing Finance Corporation Act (KHFC Act), and the Mortgage-Backed Securitization Company Act (MBS Company Act). Under the provisions of the ABS Act, all assets including residential mortgages that create cash flows are securitized; the other Acts[5] permit securitization of only residential mortgages.

Evolution of the ABS Market

The ABS market has steadily been evolving since its establishment under the financial corporate restructuring promotion plan initiated in 1998. The demand for Collateralized Bond Obligations (CBOs) and Collateralized Loan Obligations (CLOs) was high immediately after the enactment of the ABS Act for the purpose of disposing of the enormous burden of Non Performing Loans (NPLs) at banks; from 1999 to 2001, KRW 17.7 trillion in primary CBOs and CLOs were issued, and KRW 23.4 trillion in NPLs were securitized. Credit card ABS was the predecessor of CBOs and CLOs and accounted for nearly half of the volume in the ABS market; in 2001 and 2002, credit card ABS accounted for 47% of the KRW 90.7 trillion in ABS issued. However, the sudden increase in ABS issuance has given rise to side effects such as a deterioration in asset quality. Thankfully, a new product, auto loan ABS, held up well amidst the turmoil in the credit card sector (Hani and Batchvarov 2004 p. 31), and the real estate backed securities notes have emerged in

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[2] Securitization is the process of pooling and repackaging residential or commercial mortgage loans originated in the primary mortgage market into securities that are sold to investors in the secondary mortgage market.

[3] According to S&P, in 2003 Korea accounted for 82% of the overall Asian securitization market, excluding Japan and Australia. Meanwhile, according to the database of Merrill Lynch, Korean ABS accounts for nearly 60% of offshore Asian ABS issuance volume. (Hani and Batchvarov (2004. p.3)

[4] KRW 1,008 = USD 1 as of March 3, 2005.

[5] The MBS Company Act was enacted in January 1999, and the KHFC Act passed the National Assembly on December 23, 2003. The KHFC Act states that the mission of KHFC is to contribute to the development of the national economy and to promote the housing welfare through the long-term and stable supply of housing funds through securitization in such forms as mortgage-backed securities and the credit guarantee business. The ABS Act was enacted in September 1998.

Table 1 ABS New Issuance

(Unit: KRW trillion)

Year	1999	2000	2001	2002	2003	2004
ABS (% Change)	6.8(-)	49.4(629.3)	50.9(3.1)	39.8(-21.8)	39.9(0.1)	27.0(-32.3)
(Factoring Companies)	1.7	6.1	21.5	28.1	19.2	8.5
No. of Issuance	32	154	194	181	191	170

Source: Financial Supervisory Services (FSS)

Table 2 RMBS Issuance

(Unit: KRW billion)

	Domestic		Cross-Border	Total
	KHFC(KoMoCo)[1)]	Others[2)]		
2000	1,279	377	-	1,656
2001	743	477	-	1,220
2002	528	12	411	951
2003	327	-	-	327
2004	3,016	-	2,031	5,047
total	5,893	866	2,442	9,201

Source KHFC, FSS

Note 1 KHFC manages the trust accounts that were originally established by KoMoCo.
2 New State Capital and WooRi Capital issued RMBS under the provisions of the ABS Act.

the market as well. Although the ABS market has contracted since 2002, new types of assets such as receivables of airfares, steel, oil, and internet service fees are slated to be securitized. Table 1 shows the outstanding volume of newly issued ABS from 1999 to 2004.

Recent Developments in the RMBS Market

The RMBS market has experienced two major changes since its inception in 2000. First, the Korea Housing Finance Corporation (KHFC) was established in March 2004 and wholly owned by the Korean government. It was created through a merger with the first government and private MBS joint venture, Korea Mortgage Corporation (KoMoCo), which completed nine MBS transactions totaling KRW 2,877 billion. Second, the first offshore securities backed by Korean residential mortgages were issued in December 2002, and three transactions followed in 2004.

After introducing long-term fixed-rate mortgages with maturities up to 20 years, KHFC issued KRW 3 trillion RMBS in 2004 as shown in Table 2. It also assumed KoMoCo's business including the right to manage KoMoCo's trust accounts in March 2004.[6] Factoring companies such as New State Capital and Woori Capital failed to issue additional RMBS after 2002 because of fierce competition with commercial banks. In a low interest rate environment, they could not accumulate an adequate volume of underlying assets for securitization because of high funding costs to originate mortgages. For the offshore RMBS transactions, Samsung Life Insurance and Korea First Bank completed four deals to explore a new funding source.

Emerging CMBS Market

The CMBS market in Korea has been growing. As the ABS market matures, institutional investors feel comfortable investing in real estate-backed products, and general contractors with low credit ratings, to whom traditional real estate lenders hesitate to originate commercial mortgages, take advantage of off-balance sheet financing. The preferential tax treatment for Special Purpose Companies (SPCs) or Project Financing Vehicles (PFVs) has encouraged increased CMBS issuance. Under the ABS Act, which governs the issuance of most CMBS products, and the Corporate Tax Act reformed in 2004, the dividends of SPC, a bankruptcy remote paper company, are deducted to estimate its income as long as it pays out at least 90 percent of its taxable income as dividends. Also, 50 percent of registration taxes and

[6] KoMoCo is in the process of liquidation after the transfer of its operations to KHFC.

acquisition taxes on real estate owned by SPC are exempt in order to promote corporate restructurings. As shown in Table 3, in 2004 the issuance volume of CMBS backed by cash flows from real estate development projects more than doubled, and 37 transactions (22 per cent of the 170 ABS deals in 2004) were completed.

III. THE GROWING RMBS MARKET

1) Primary Mortgage Market

The primary mortgage market has expanded rapidly since 1999. As shown in Table 4, the volume of outstanding mortgages at commercial banks nearly doubled from 2001 to June 2004. The low interest rates fuelled speculative demand by home buyers, and as nearly every commercial bank and other financial institution has entered the mortgage market due to the relatively lower credit risks in the primary market compared to the corporate loan market, competition between originators has been hot, to say the least.

There were previously few long-term fixed-rate mortgages available. If there were any at all, the interest rates were too high. Based on the figures in Table 5 released by the Financial Supervisory Services (FSS), more than 75 percent of mortgages have maturities of less than three years. In 2003, the maturities of mortgages were mainly less than five years: just 13.1 percent of the outstanding mortgages had maturities greater than five years. As shown in Table 5 and Table 6, most mortgages are short-term interest-only variable-rate mortgages. Banks that mobilize short-term savings to fund mortgages obviously cannot assume the risks associated with long-term fixed-rate mortgages, even though these are precisely what most borrowers prefer. According to the survey by Kookmin Bank in 2004, the average maturity of mortgages that homebuyers would choose is 10.37 years, and 67.9 percent of respondents prefer fixed rates to variable rates. In the primary mortgage market, there is indeed a great deal of unmet demand for long-term fixed-rate mortgages among Korean homebuyers.

Table 3 CMBS Issuance for Development and SOC projects

(Unit: KRW billion)

Year	2003		2004	
	No	Amount	No	Amount
Development Projects	16	735.9	37	1,624.6
SOC Projects	1	500.5	3	638.5

Source FSS

Table 4 Outstanding Volume of Mortgages at Commercial Banks

(Unit: KRW trillion, %)

	2001	2002	2003	2004.6
Outstanding Mortgage Balance	85.4	131.3	152.4	161.3
(Increase)	(-)	(53.74%)	(16.07%)	(11.67%)[1]

Source FSS

Note 1 annualized figure

Table 5 Mortgage Maturities

Years	M < 1yr	1 yr <= M < 3yrs	3 yrs <= M < 5yrs	5 yrs <= M	Total
2001	21.2 %	52.8 %	7.6 %	18.4 %	100 %
2002	18.7 %	62.6 %	6.3 %	12.4 %	100 %
2003	27.8 %	50.0 %	9.1 %	13.1 %	100 %

Source FSS

Table 6 Mortgage Portfolios of Three Major Commercial Banks as of Oct. 2004

	Fixed Rate	Variable Rate	Total
A bank	10.8%[1)]	89.2%	100%
B bank	0.2%	99.8%	100%
C bank	4.6%	95.4%	100%

Note 1 73 percent of fixed rate mortgages are mixed forms of fixed and variable rate mortgages

2) Korea Housing Finance Corporation

Establishment of Secondary Mortgage Market Enterprise

This new government-owned entity was established to facilitate the provision of mortgages on a long-term and stable basis, thereby helping increase social welfare and furthering the development of the national economy. The SMME is positioned similarly as GSEs in the US, the Canada Mortgage Housing Corporation, or the Hong Kong Mortgage Corporation. Table 1 summarizes KHFC's median-to-long-term effects on the national economy. To raise public confidence, the SMME is chartered by a more favourable act than the MBS Company Act. Perhaps most importantly, the government and the Bank of Korea wholly financed the capital funds of the GSE. The main business line of this new entity, the successor of KoMoCo, is purchasing mortgages to securitize them up to 50 times its equity capital under its guaranteed MBS program. Other lines of business are its mortgage portfolio business, issuance of Mortgage Backed Bonds (MBBs), and providing credit to lenders to support mortgage origination.

Securitization Commitment Program and Eligible Mortgages

KHFC completed seven RMBS transactions totaling KRW 3 trillion from June to December 2004. To issue MBS and promote origination of eligible mortgages, it developed a unique securitization commitment program. Under the program, KHFC provides participating lenders with underwriting guidelines, including mortgage terms and standard loan documents.

Eligible mortgages are designed to promote home-ownership, stabilize the primary mortgage market, and allow issuance of long-term MBS. The standard maturity is 20 years, though 15-year or 10-year maturities are also available. They are standard fixed-rate mortgages with an optional one-year grace period. Prepayment is permitted on them with penalties of 2.0 percent of the remaining balance if the mortgage is prepaid within the first one-year, 1.5 percent if repaid within the following two years, and 1.0 percent if repaid within the next two years. No penalties apply after five years. Based on the guidelines of the FSS, eligible

Chart 1 Overview of KHFC and its Mid-to-Long-term Effects

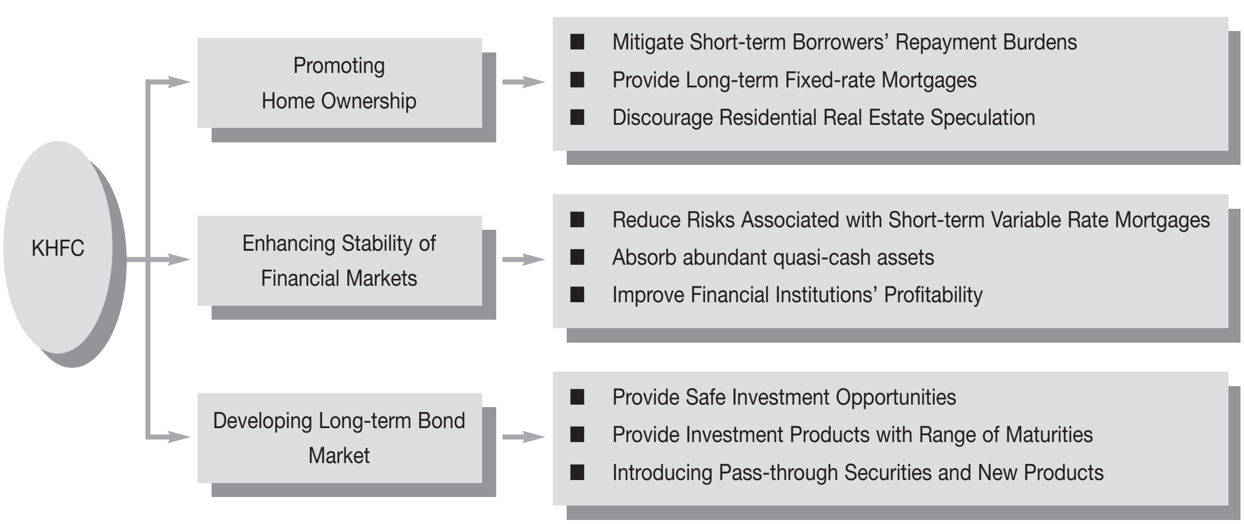


Table 7 Characteristics of KHFC Mortgages Originated in 2004

Avg. mortgage amount	69 million	Avg. House price	125 million
Avg. Mortgagee's Age	38.2 yrs	Avg. Borrower income	28.2 million (per annum)
Avg. LTV ratio	59%	Seoul Metropolitan Area	64.8%

Source: KHFC

Table 8 Bond Origination by Maturity in 2004

(Unit: KRW trillion)

Maturity	Total Bonds		Major Bonds[1]		MBS	
M < 5 yrs	273.0	77.5%	163.2	77.7%	0.53	17.4%
5 yrs <= M <10 yrs	57.4	16.3%	30.6	14.6%	1.23	40.8%
M>=10 yrs	21.7	6.2%	16.3	7.8%	1.26	41.8%
Total	352.1	100.0%	210.1	100.0%	3.02	100%

Note 1 Monetary Stabilization Bonds, government bonds, and municipal bonds

mortgages under the KHFC program have an LTV of 70 percent. However, mortgage lenders are required to cap their lending at 60 percent LTV. The mortgage rate is a single base rate (5.95 percent as of March 2005) determined by KHFC for every qualified borrower.

Contributions to the Korean Finance Market

KHFC has laid the foundation to upgrade the mortgage market by proposing innovative fixed-rate long-term mortgages in the primary mortgage market and by providing long-term MBS in the secondary mortgage market.

In the primary mortgage market, KHFC was issuing mortgages via twenty-one originators as of March 2005, rather than buying mortgages already held by financial institutions in their portfolios. It provides the standard underwriting guidelines and asks partner originators to review the parameters, as some did not examine them before. For example, KHFC considers the borrower's income a key factor because it applies ratios of maximum Debt to Income (DTI)[7]. Before the establishment of KHFC, most originators did not review the borrower's income because mortgages were heavily collateralized. With sound collateral, originators did not always need to apply very stringent underwriting criteria because they could realize additional income in the form of charges for defaults on loans or late payments. Furthermore, after working with KHFC, several originators began to originate a fully amortization basis mortgage product.

In 2004, KHFC sold KRW 3.3 trillion in mortgages to 47,841 households. It is meeting much of the unmet demand of middle-income homebuyers, as shown in Table 7. The average age of KHFC's mortgagors is 38.2, and the average mortgagor's income is KRW 28.9 million, somewhat less than the average Korean household's income of KRW 36.68 million based on the survey of Kookmin Bank in 2004.

In the secondary mortgage market, KHFC issues long-term securities, helping to develop the long-term bond market. In 2004, MBS held a 5.8 percent market share of the market for bonds with maturities of more than 10 years, as shown in Table 8. In the Korean bond market, where bonds with maturities of more than five years are considered long-term, 82.6% of KHFC MBS are long-term securities with maturities of more than five years, whereas 22.5 percent of bonds are long-term. As shown in Chart 2, most types of institutional investors put fresh money in MBS.

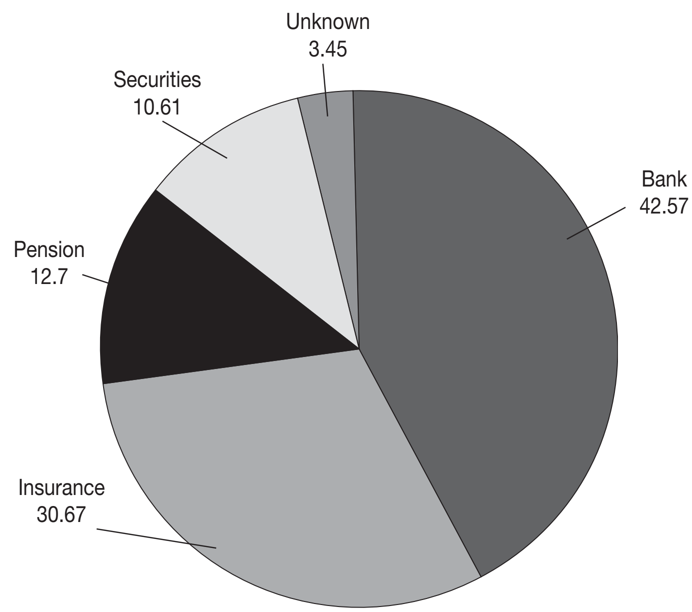
3) Cross-Border RMBS Transactions

Four cross-border securitization transactions of Korean residential mortgages were completed from 2002 to 2004. As shown in Table 9, Samsung Life Insurance Co., Ltd issued the first KRW 411 billion RMBS in December 2002, and Korea First Bank securitized KRW 2,031 billion in residential mortgages three times in the global market in 2004. To enjoy the legal protection of the ABS Act in Korea, the four securitization plans were registered on the Financial Supervisory Commission registration system (http://dart.fss.or.kr).

[7] Two DTI ratios are considered for decisions on the mortgage amount.
1) DTI1 = {(Monthly Principal & Interest Payment Amortized) / (Monthly Income)}
2) DTI2 = {(Monthly Principal & Interest Payment Amortized + Estimated Interest Payment* Amortization of Other Debts) / (Monthly Income)}

* Estimated Interest Rate = Weighted Average Loan Interest Rate published by the Bank of Korea

Chart 2 Institutional Investors of KHFC MBS in 2004 (Unit: %)



Source: KHFC

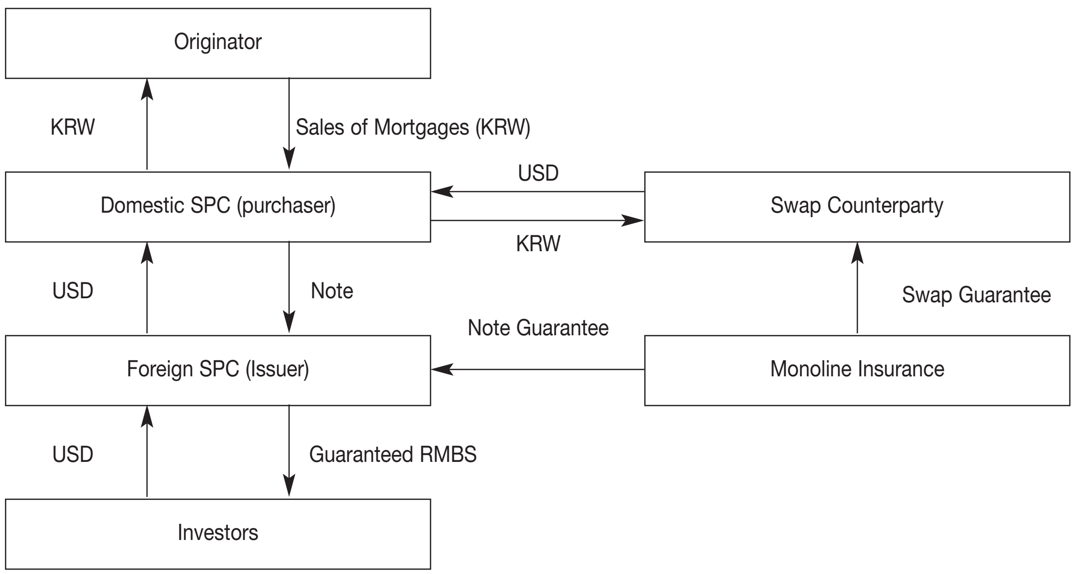
Table 9 Summary of Cross-Border RMBS Transactions

(Unit: KRW billion)

		Samsung Life Insurance Co., Ltd	Korea First Bank		
			1st	2nd	3rd
Date		2002.12.10	2004.3.29	2004.7.29	2004.12.6
Amount	Senior	364.0	588.1	378.1	787.1
	Junior	-	90.0[1]	-	-
	Sub	47.0	23.1	76.8	87.5
	Total	411.0	701.2	454.9	874.6
No of Mortgages		15,525	18,067	9,758	11,073
Type of Mortgages	Fixed	-	7.6%	2.1%	-
	Variable	100%	43.4%	63.9%	100%
	Others	-	49.0%	34.0%	-
	Total	100%	100%	100%	100%
Type of Underlying Assets	Apartments	96.6%	95.7%	95.2%	92.8%
	Others	3.4%	4.3%	4.8%	7.2%
	Total	100%	100%	100%	100%
Servicer		Samsung Life Insurance Co., Ltd	KFB	KFB	KFB
Sub Servicer		Korea Development Bank	Kookmin Bank	Kookmin Bank	Kookmin Bank

Note 1: Three junior tranches with different maturities

Chart 3 Cross-Border RMBS Transaction Diagram



The cross-border RMBS deals were pooled by mortgage loans of high quality. The underlying assets are first liens and mortgages on mostly apartments that 75.7 per cent of future homebuyers hope to buy, according to the Kookmin bank survey in 2004.

The high credit rating of structured financial products in the international bond market allowed the financial company to offer low rates. Moody's, for example, rated the Samsung Transaction Aaa[8] and the KFB transactions Aa3[9], although it assigned A3 to Korea's Sovereign rating. Four US dollar deals of Korean RMBS were structured with LIBOR-indexed coupons. The LIBOR has historically been lower than any other index rates in Korea. In addition, originators could build good reputations for their innovative financial products in the domestic and foreign bond markets.

Table 10 Issuance of CMBS backed by Equitable Mortgages and Construction Loans

(Unit: KRW Billion)

Year	No	Underlying Assets	Senior	Junior	Total
1999	1	Equitable Mortgages	190.0	37.8	227.8
2000	1	Equitable Mortgages	17.9	-	17.9
2001	8	Equitable Mortgages			
		Construction Loans	827.0	31.6	858.6
2002	17	Equitable Mortgages			
		Construction Loans	1,136.0	12.4	1,148.4
2003	22	Equitable Mortgages			
		Construction Loans	1,158.9	1.5	1,160.4
Total	49		3,329.8	83.3	3,413.1

Source: Lee and Jung (2004) p. 30

[8] S&P rated this deal AAA.

[9] Moody's rated Korea First Bank Baa3.

Nonetheless, as shown in Chart 3, the financial companies must deal with several disadvantages from structural features such as swap costs to mitigate currency and interest rate mismatches, guarantee fees on interest and principal payments of notes to international monoline insurance companies, and several expenses incurred through cross-border transaction structures. Additionally, the senior notes are protected by ample subordination as well as reserves.

IV. DEVELOPMENT OF THE CMBS MARKET

CMBS is securitization of mortgages backed by commercial real estate (Fabozzi(2001), p.1). The volume of the CMBS issued by general contractors (usually construction companies in Korea) with low credit ratings is increasing due to the limitations they experience issuing corporate bonds (Lee and Jung, p. 30). As the structure of CMBS in Korea is similar to that of ABS and is designed for the purpose of funding land costs or initial construction costs during the construction period, CMBS would be considered a sort of project-financing vehicle. Most CMBS notes in Korea are backed by equitable mortgages[10] or construction loans. CMBS backed by equitable mortgages is considered a security of high quality because equitable mortgages are expected to produce stable cash flows. The cash flows of equitable mortgages come from those who buy the apartments or the buildings under construction, whereas the general project-financing vehicle is backed by incomes generated after the completion of the project. Another popular underlying asset of CMBS is the construction loan generated by commercial banks. After the first equitable mortgage CMBS transaction of Hyundai Development Company in 1999, KRW 3.4 trillion in CMBS backed by equitable mortgages and construction loans was issued from 1999 to 2003, as shown in Table 10.

As the maturities of CMBS generally do not exceed the construction period, they are much shorter than those of ABS; construction projects usually are completed within two or three years. In comparison with other structured financial products, the volume of CMBS transactions is small. The average volume of CMBS transactions was KRW 67.6 billion in 2002 and KRW 52.7 billion in 2003, whereas that of ABS transactions was KRW 220.0 billion and KRW 208.8 billion, respectively.

CMBS notes are issued in the domestic and international markets, and are denominated in US dollars as well as Japanese yen, depending on the funding needs. New vehicles such as Asset Backed Loans (ABL) and Asset Backed Commercial Papers (ABCP) and master-trust[11] structured CMBS are being introduced to maximize the benefit of the sophisticated real estate structured products in the CMBS market.

V. CONCLUSION

The Korean MBS markets are expected to continue to grow. A thriving RMBS market will greatly facilitate the continued development of the Korean financial markets, including especially the long-term bond market. One of the main objectives of establishing KHFC was to shield the primary mortgage market from systemic risks stemming from the increased issuance of short-term variable-rate mortgages. Up to the present time, commercial banks have led the structural change in the primary mortgage market, and banks have tried to keep profitable mortgages in their own portfolios rather than transfer them to the secondary mortgage market through an SMME such as KHFC or KoMoCo. However, competition between commercial banks will cause originators to sell their mortgage assets in the secondary mortgage market in the near future. Obtaining these mortgages from commercial banks that dominate loan origination will be one of the major challenges for the success of KHFC. The volume of offshore RMBS transactions will increase because originators believe that issuing RMBS in the international financial market will raise their image and the public's confidence as well as afford them lower funding costs. Nonetheless, cross-border RMBS transactions may be less attractive due to the swap economies (i.e. decline in domestic interest rates vs. a rise in interest rates in the US) (Hani and Batchvarov (2004) p. 5) and the lack of funding needs of financial institutions with high deposit balances that generate wide spreads by holding mortgage loans.

The CMBS market is also expected to expand because contractors fund construction costs based on cash flows from the projects themselves. The development of the structured financial products market would also remove obstacles to the evolution of the CMBS market and reduce the risks associated with CMBS transactions. Nevertheless, uninterrupted preferential tax treatment is critical for the market to flourish.

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[10] Before the completion of the construction project, the developer pre-sells the building and finances construction costs or land costs from the buyer – the future occupier – based on the stage of work. The buyer's equity grows as the buyer submits installments according to the process of construction. The future obligations of installments are called equitable mortgages.

[11] In the Korean master trust scheme, a single master ABS plan was filed with the Financial Supervisory Commission at the initial closing, and an amendment is proceeding as new assets are added to trust. (Hani and Batchvarov (2004. p.7))