Speech by Mr. SEO Jong Dae

July 31, 2013

The Development of Korean Mortgage Securitization Market
Talking Points

- Korean Housing Finance Market
- KHFC Overview
- KHFC MBS and Covered Bond
- Driving Factors behind Korean Securitization Market Growth
- Recent Developments on Korean Covered Bond Act & Outlook
### Korean Housing Market Overview

<table>
<thead>
<tr>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total 50 mn</td>
</tr>
<tr>
<td>10 mn live in Seoul with another 15 mn living in the Seoul metropolitan area</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Housing Overview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total housing stock is 17mn units</td>
</tr>
<tr>
<td>Apartments account for 47.1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Apartment</th>
<th>Detached house</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.2</td>
<td>6.9</td>
<td>2.2</td>
<td>17.3</td>
</tr>
<tr>
<td>(47.1%)</td>
<td>(39.6%)</td>
<td>(13.3%)</td>
<td>(100.0%)</td>
</tr>
</tbody>
</table>

Source: Korean Statistical Information Service, Housing Census, 2010

| Average floor space of an apartment is 85 sq.m.                          |
| Average price of an apartment is KRW 3 mn (USD 2,700) per sq.m.         |
| Owner occupied houses account for 54.2%                                  |

<table>
<thead>
<tr>
<th>Owner occupied</th>
<th>Rent</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.4</td>
<td>7.5</td>
<td>0.4</td>
<td>17.3</td>
</tr>
<tr>
<td>(54.2%)</td>
<td>(43.2%)</td>
<td>(2.6%)</td>
<td>(100.0%)</td>
</tr>
</tbody>
</table>

Source: Korean Statistical Information Service, Housing Census, 2010

<table>
<thead>
<tr>
<th>Property Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidenced by registration at the Real Estate Property Registration Office</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Creditor Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>If the proceeds from the auction is not enough, the creditor can seize or lay claims on other assets of the borrower (full recourse)</td>
</tr>
</tbody>
</table>

Source: MOSF, BOK and IMF as of 2012
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>Economic Development Plan launched</td>
<td>Urbanization → Housing Shortage Problem → House Price ↑ → Need for Housing Financing</td>
</tr>
<tr>
<td>1973</td>
<td>Korea Housing Bank launched National Housing Account</td>
<td></td>
</tr>
<tr>
<td>1981</td>
<td>Korea Housing Bank launched National Housing Fund</td>
<td></td>
</tr>
<tr>
<td>1997</td>
<td>Housing finance market was changed with deregulation after Asian financial crisis</td>
<td>KHB was privatized in 1997, and commercial banks entered the market&lt;br&gt;Mortgage loan balance grew at an annual growth rate of 12%</td>
</tr>
<tr>
<td>1998</td>
<td>Asset-Backed Securitization Act was enacted</td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td>Korea Mortgage Corporation (KoMoCo) was established</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>LTV was introduced</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>Korea Housing Finance Corporation (KHFC) was established</td>
<td>Signed transfer agreement with KoMoCo&lt;br&gt;Took over Public Housing Finance Credit Guarantee Fund business</td>
</tr>
<tr>
<td>2005</td>
<td>DTI was introduced</td>
<td></td>
</tr>
<tr>
<td>Today</td>
<td>‘Conforming Loan’ was launched to support the soft landing of household debt</td>
<td>Banks are now primary mortgage lenders with 79% market share&lt;br&gt;KHFC’s mortgage market share is around 10%</td>
</tr>
</tbody>
</table>
The Market Has Grown to be Robust, Substantial and Resilient

**Housing Price Index**

- Nationalwide
- Seoul
- 6 Metropolitan Cities
- Gyeonggido

Note: 6 Metropolitan Cities are Busan, Daegu, Daejeon, Kwangju, Incheon and Ulsan

**Mortgage Loan Outstanding**

<table>
<thead>
<tr>
<th>Year</th>
<th>(KRW Tn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>189</td>
</tr>
<tr>
<td>2005</td>
<td>190</td>
</tr>
<tr>
<td>2006</td>
<td>217</td>
</tr>
<tr>
<td>2007</td>
<td>222</td>
</tr>
<tr>
<td>2008</td>
<td>240</td>
</tr>
<tr>
<td>2009</td>
<td>264</td>
</tr>
<tr>
<td>2010</td>
<td>285</td>
</tr>
<tr>
<td>2011</td>
<td>306</td>
</tr>
<tr>
<td>2012</td>
<td>317</td>
</tr>
</tbody>
</table>

Source: BOK

**Fixed Rate Loan Share Trend**

- Household debt measures announced on Jun 2011
- Govt. Target for 2016

Source: FSS, as of 2012 end

**Installment Loan Share Trend**

- Household debt measures announced on Jun 2011
- Govt. Target for 2016

Source: FSS, as of 2012 end
Korean Housing Finance Market Overview (Cont’d)

Sound Loan Performance and Cautious Government Supervision

Average LTV Ratio

<table>
<thead>
<tr>
<th>Year</th>
<th>LTV Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>48.5</td>
</tr>
<tr>
<td>2008</td>
<td>47.1</td>
</tr>
<tr>
<td>2009</td>
<td>47.5</td>
</tr>
<tr>
<td>2010</td>
<td>48.0</td>
</tr>
<tr>
<td>2011</td>
<td>48.1</td>
</tr>
<tr>
<td>2012*</td>
<td>48.5</td>
</tr>
</tbody>
</table>

* As of March 2012, all other figures based on year-end values

Source: FSS

Delinquency Ratio - Banks

Source: FSS, as of May 2013

Delinquency Ratio - KHFC

Source: KHFC, as of June 2013

LTV / DTI Regulation

<table>
<thead>
<tr>
<th>LTV Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floating Rate: 60%</td>
</tr>
<tr>
<td>Fixed Rate: 70%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DTI Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>40%~60%</td>
</tr>
</tbody>
</table>

Source: FSS

Floating Rate: 60%
Fixed Rate: 70%

Source: KHFC, as of June 2013

LTV / DTI Regulation

Current LTV / DTI Restriction

LTV Limit

DTI Limit

40%~60%

Source: FSS

Delinquency Ratio - Banks

Source: FSS, as of May 2013

Delinquency Ratio - KHFC

Source: KHFC, as of June 2013

LTV Limit

DTI Limit

0.6%
**KHFC Overview**

*Leading the Role in Developing Korean Mortgage Securitization Market*

### 100% Government Owned

- **Korean Government**
- **Ministry of Strategy and Finance**: 61.5%
- **Bank of Korea**: 31.1%
- **Ministry of Land, Infrastructure & Transport**: 7.4%

### Company Snapshot

<table>
<thead>
<tr>
<th>Established</th>
<th>March 2004</th>
</tr>
</thead>
</table>
| Key Policy Roles | Promote stable and robust housing market
| Facilitate stable supply of long-term fixed mortgage loans |
| Credit Ratings | Sovereign equal ratings
| Aa3 (Moody’s) / A+ (S&P) / AA- (Fitch) |
| Key Product | Long-term fixed rate installment loans
| Provided total of KRW 76 tn (USD 70 bn) since inception
| Originated through 20 participating institutions |
| Funding Activities | 150 MBS transactions totaling KRW 72 tn (USD 65 bn)
| 3 cross-border and 5 domestic covered bond transactions totaling KRW 3 tn (USD 2.7 bn) |

Source: KHFC, as of June 2013
Mortgage Origination
Supplementing Long-term Fixed Rate KHFC Mortgage Loans & Conforming Loans

- Government has set a goal to increase fixed rate mortgage loans up to 30% of the total mortgage loans by 2016 in order to control household debt
- In line with such measures, KHFC provides long-term, fixed rate installment mortgage loan products

< Securitized Loans by KHFC >

<table>
<thead>
<tr>
<th></th>
<th>KHFC Mortgage Loans</th>
<th>Conforming Loans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Origination &amp; Servicing</td>
<td>KHFC</td>
<td>Banks</td>
</tr>
<tr>
<td>Mortgage Rate Decision</td>
<td>KHFC</td>
<td>Banks</td>
</tr>
<tr>
<td>Purchasing Price</td>
<td>Par</td>
<td>Market Price</td>
</tr>
</tbody>
</table>

KHFC Mortgage Loans & Conforming Loans

<table>
<thead>
<tr>
<th>Borrower Eligibility</th>
<th>KHFC Mortgage Loans &amp; Conforming Loans</th>
<th>Other Commercial Bank Mortgage Loans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income proof required, CB grade eligibility</td>
<td></td>
<td>Same</td>
</tr>
<tr>
<td>Maximum LTV</td>
<td>70%</td>
<td>60%</td>
</tr>
<tr>
<td>Loan Limit</td>
<td>KRW 500 mn (USD 0.5 mn)</td>
<td>No restriction</td>
</tr>
<tr>
<td>Collateral</td>
<td>Max. price of KRW 900 mn (USD 0.8 mn)</td>
<td>No restriction</td>
</tr>
<tr>
<td>Interest Rate</td>
<td>Fixed</td>
<td>Floating or Hybrid</td>
</tr>
<tr>
<td>Securitization</td>
<td>MBS or Covered Bond by KHFC</td>
<td>No securitization</td>
</tr>
</tbody>
</table>
The KHFC Act enables KHFC to issue two types of mortgage-backed instruments to fund its mortgage business:

- **MBS (Article 32)**
  - A trust is set up and the trust assets are excluded from insolvency estate of KHFC

- **Covered Bond (Article 31)**
  - Having a statutory priority right, the Cover Pool is ring-fenced from KHFC default
  - Covered Bond holders have dual recourse to KHFC and the Cover Pool

Since its inception, KHFC issued MBS and Covered bonds totaling KRW 74.9 trillion (USD 68.1 billion).
KHFC MBS Structure

Providing 100% Guarantee on Senior MBS P&I payment

**Underlying Assets**
- KHFC Mortgage Loans & Conforming Loans

**Issuance Amount**
- KRW 500 billion ~1 trillion (per issuance)

**Issuer**
- Trust (Trustee: KHFC)

**Issuance Structure**
- Multiple tranches with each tranche having a different tenor
- 1, 2, 3yr tranches are not callable
- Sequentially Partially Callable tranches

**MBS Coupon & Issuance procedure**
- Fixed-rate Coupon
- AAA Credit rating, Deposited in KSD, Listed in KRX

**Servicer**
- Participating Lenders (or KHFC in case of u-Bogeumjari Loans)
KHFC Covered Bond Overview
The Only Institution With Statute To Issue Covered Bond

Korea Housing Finance Corp
- Executed 15 July 2010
- 144A / Reg S
- USD 500mn notes with 5.5-year maturity and 4.125% coupon
- KHFC’s first ever overseas funding in the international capital markets
- Asia’s very first statutory covered bonds
- Book size was USD 2.75bn with orders from 130 accounts

International Awards
2010
Best Deal Korea
Best Securitisation Deal
Asia Pacific
KHFC Covered Bonds

Distribution by Investor Type
- Fund Managers 47%
- Banks 36%
- Insurance 9%
- Others 8%

Distribution by Geography
- Asia 48%
- US 25%
- Europe 11%

Distribution by Investor Type
- Funds 48%
- Banks 30%
- Central Banks 25%
- Others 11%

Distribution by Geography
- Asia 45%
- US 20%
- Europe 15%

KHFC Covered Bond Overview
- Executed 25 July 2011
- 144A / Reg S
- USD 500mn notes with 5.5-year maturity and 3.500% coupon
- KHFC’s second covered bond issuance in international bond market
- Highly successful transaction despite volatile market environment
- Book size: USD 1.5bn with orders from 121 accounts

KHFC Covered Bond Overview
- Executed 7 March 2013
- 144A / Reg S
- USD500 mn notes with 5.5-year maturity and 1.625% coupon
- KHFC’s third covered bond issuance in international bond market
- Achieved one of the tightest pricing among recent Korean quasi-sovereign bonds
- Book size: USD 1.7bn with orders from 91 accounts
KHFC’s Achievement and Challenge

Playing Integral Role in the Korea Housing Finance Market

Market Share - Mortgage

- GDP 1,272tn
- Household Debt 908tn (71%)
- Mortgage 402tn (44%)
- KHFC 39tn (10%)

Source: BOK, KHFC

Market Share - MBS

(End of June, 2013, TN, %)

<table>
<thead>
<tr>
<th></th>
<th>Amount</th>
<th>Portion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bond Balance</td>
<td>1474.4</td>
<td>100.0</td>
</tr>
<tr>
<td>KTB</td>
<td>447.6</td>
<td>30.4</td>
</tr>
<tr>
<td>Special Bond</td>
<td>335.8</td>
<td>22.8</td>
</tr>
<tr>
<td>Bank Bond</td>
<td>174.4</td>
<td>11.8</td>
</tr>
<tr>
<td>KHFC</td>
<td>45.0</td>
<td>3.1</td>
</tr>
<tr>
<td>Others</td>
<td>471.6</td>
<td>32.0</td>
</tr>
</tbody>
</table>

Source: KFIA, KHFC

MBS Investor Breakdown

- Insurer 33.0%
- Banks 29.9%
- Pension&Fund 16.0%
- Securities 11.6%
- Investment 9.4%

Source: KHFC as of June 2013

Pool Information Disclosure

- **Current**: Disclosure of cover assets through KHFC Homepage
  - Information including payment history, outstanding balance, prepayment rate and delinquency rate
- **On-going Plan**: Enhanced disclosure system through Bloomberg
  - Additional disclosure to include expected MBS repayment schedule, secondary trading levels, and other secondary market data

Source: KHFC as of June 2013
Driving Factors behind Korean Securitization Market Growth

**Advanced Legal and Institutional Environment**

### Legislative Framework for Mortgage Securitization
- Introduction and support of the legal framework for securitization market growth
  - 1998: Legislation of the ABS Act
  - 1999: Legislation of the Korea Mortgage Corporation Act
  - 2004: Legislation of the KHFC Act

### Institutional Framework for Enhancing Asset Quality
- Information sharing and management system covering delinquent borrowers through the Korea Federation of Banks
- Monitoring of credit information through commercial credit bureau agencies
- Efficient valuation system for collateralized assets
- Implementation of prudent regulatory measures such as LTV and DTI since 2002

### Policy Support for Fixed Rate Mortgages
- Borrower incentive through benefits on income tax over adjustable rate mortgages
- Banks required to maintain a certain percentage of fixed-rate loans
- Banks are encouraged to securitize mortgage assets through KHFC
Driving Factors behind Korean Securitization Market Growth (Cont’)

Government’s Strong Support for KHFC

### Financial Support
- Compensation of losses by the Government (Article 51)
- Borrowings from the Government (Article 53)
- Authorized capital of KRW 2 tn (USD 1.8 bn) by the Government (Article 5)
- Mortgage Interest Subsidies
- Tax reduction for mortgage purchase from banks

### Regulatory Support
- Legislative help from National Assembly
- Favorable regulatory requirements for financial ratios
- 0% risk weight for KHFC’s MBS
- Only institution with statute to issue Covered Bonds (Article 31)

### Operational Support
- KHFC’s President appointed by President of Korea
- Non-Standing BOD members are nominated by the government
- Oversight from the government
  - Approval of business plan and budget
  - Monitoring of capital adequacy, liquidity, risk management

### Capital Injection to KHFC

<table>
<thead>
<tr>
<th>Date</th>
<th>Institution</th>
<th>Amount (KRW bn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb 2004</td>
<td>Bank of Korea</td>
<td>310.0</td>
</tr>
<tr>
<td>Mar 2004</td>
<td>Ministry of Strategy &amp; Finance</td>
<td>10.0</td>
</tr>
<tr>
<td>Jun 2004</td>
<td>Ministry of Land, Infrastructure &amp; Transport</td>
<td>56.6</td>
</tr>
<tr>
<td>Jun 2007</td>
<td>Ministry of Strategy &amp; Finance</td>
<td>50.0</td>
</tr>
<tr>
<td>Jan 2008</td>
<td>Ministry of Land, Infrastructure &amp; Transport</td>
<td>50.0</td>
</tr>
<tr>
<td>Dec 2008</td>
<td>Ministry of Strategy &amp; Finance</td>
<td>200.0</td>
</tr>
<tr>
<td>Jan 2009</td>
<td>Ministry of Strategy &amp; Finance</td>
<td>150.0</td>
</tr>
<tr>
<td>Jan 2009</td>
<td>Ministry of Strategy &amp; Finance</td>
<td>50.0</td>
</tr>
<tr>
<td>May 2009</td>
<td>Ministry of Strategy &amp; Finance</td>
<td>200.0</td>
</tr>
<tr>
<td>Jul 2012</td>
<td>Bank of Korea</td>
<td>135.0</td>
</tr>
<tr>
<td>Mar 2013</td>
<td>Ministry of Strategy &amp; Finance</td>
<td>120.0</td>
</tr>
<tr>
<td>Jun 2013</td>
<td>Ministry of Strategy &amp; Finance</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Total** 1,431.6
Recent Developments on the Korean Covered Bond Act

Covered Bond Act will Come into Force in the Near Future

- **Oct 23, 2012**
  - Legislation Notice of Covered Bond Act

- **Jan 29, 2013**
  - Approval from Cabinet Meeting

- **Jun 26, 2013**
  - Approval from Sub Committee of National Assembly

- **Upcoming Schedule**
  - Final Parliamentary Approval and Public Announcement
  - Enforcement of the Act after 6 Months of the Public Announcement
Korean Covered Bond Act Overview
Establishing the Legal Framework for the Statutory Covered Bonds

Eligible Issuer
- Banks
- Korea Housing Finance Corporation / Korea Finance Corporation
- Equity capital of KRW 100bn (USD 92mn)
- Capital ratio of 10% or above

Cover Assets
- Residential mortgage loans (LTV 70% or lower)
- Loans extended to central / local governments
- Government bonds and municipal bonds
- Cash or certificate of deposits (not exceeding 15% of total cover pool)

Minimum Collateralization Ratio
- 105% of the outstanding amount of the covered bond

Issuance Limit
- Within 8% of the issuer’s total assets
Covered bonds to be actively utilized by banks as a way of funding fixed rate loans

On-shore funding:
Banks to fund part of their fixed rate loan portfolios through issuing their own covered bonds instead of selling assets to KHFC for securitizations

Off-shore funding:
Banks to issue covered bonds as an alternative funding to senior unsecured bonds to achieve more competitive pricing

Mortgage outstanding of banking sector:
KRW 317tn (USD 288bn)

Fixed rate portion: 30%

Potential Covered Bond Capacity
KRW 80tn (USD 72bn)

Issuance Limit: 4%

Total asset size:
KRW 2,050tn (USD 1.8tn)
Thank You

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