# MOODY'S INVESTORS SERVICE

# SPECIAL COMMENT

#### Table of Contents:

| EXECUTIVE SUMMARY                  | 1  |
|------------------------------------|----|
| KOREAN ABS AND RMBS: NO            |    |
| SIGNIFICANT PERFORMANCE            |    |
| DETERIORATION IN 2013              | 2  |
| SINGAPORE CMBS: PERFORMANCE WILL   |    |
| BE STABLE IN 2013                  | 7  |
| STABLE OUTLOOK FOR ASIA (EX-JAPAN) |    |
| SYNTHETIC BALANCE-SHEET CLOS       | 12 |
| COVERED BOND FRAMEWORKS IN ASIA    |    |
| (EX-JAPAN) ARE DEVELOPING          | 15 |
| MOODY'S RELATED RESEARCH           | 17 |
|                                    |    |

#### **Analyst Contacts:**

| HONG KONG  | +852.3551.3077              |
|--|-----------------------------|
| Jerome Cheng<br>Vice President - Senior Credi<br>jerome.cheng@moodys.cor |                             |
| Marie Lam<br>Vice President - Senior Credi<br>marie.lam@moodys.com       | +852.3758.1379<br>t Officer |
| Elaine Ng<br>Vice President - Senior Analy<br>elaine.ng@moodys.com       | +852.3758.1302<br>rst       |
| Joe Wong<br>Assistant Vice President - An<br>joe.wong@moodys.com         | +852.3758.1356<br>alyst     |
| Kan Leung<br>Assistant Vice President - An<br>kan.leung@moodys.com       | +852.3758.1419<br>alyst     |
| ΤΟΚΥΟ  | +81.3.5408.4100             |
| Kei Kitayama<br>Managing Director -<br>Asia Pacific Structured Finan     | +81.3.5408.4161<br>ce       |

Asia Pacific Structured Finance kei.kitayama@moodys.com

MOODY'S CLIENT SERVICES: New York: +1.212.553.1653 Tokyo: +81.3.5408.4100 London: +44.20.7772.5454 Hong Kong: +852.3551.3077 Sydney: +612.9270.8100 Singapore: +65.6398.8308

ADDITIONAL CONTACTS: Website: www.moodys.com

# Asian Structured Finance: 2013 Outlook

# **Executive Summary**

In this report, we discuss the performance in 2013 of the following types of structured finance transactions in Asia (ex-Japan):

- » Korean asset-backed securities (ABS) and residential mortgage-backed securities (RMBS): Credit card receivables, auto loans and residential mortgage loans in new and existing securitization transactions will exhibit stable credit quality, after consideration of both positive and negative factors. Korea's fundamentals have improved since the global financial crisis. Economic policies will likely demonstrate an overall continuity when president-elect Ms. Park Geun Hye takes office in February.
- » Singaporean commercial mortgage-backed securities (CMBS): Rents and occupancy rates for the shopping mall segment will be stable, while the office sector and industrial buildings will exhibit higher volatility.
  - Asian (ex-Japan) synthetic balance-sheet collateral loan obligations (CLOs): The default rate for underlying collateral will be stable. Collateral comprises senior unsecured term loans or trade loans for corporates. The stable outlook reflects
    1) a low projected default rate, 2) robust growth in emerging markets and 3) the mainly stable outlooks for the most represented industries.
- Asian (ex-Japan) covered bonds: Although this market is at an early stage, market participants across the region have shown strong interest. There will be developments in legal, regulatory and market activities.

# Korean ABS and RMBS: No Significant Performance Deterioration in 2013

## ABS: Stable Credit Quality of New and Existing Transactions

The credit quality of receivables in new and existing Korean credit card and auto loan transactions will remain stable, in view of both the credit positives of tightened credit policies and eligibility criteria, as well as the credit negatives of high household debt. Korea's economic fundamentals have improved since the global financial crisis. Economic policies will likely demonstrate an overall continuity when president-elect Ms. Park Geun Hye takes office in February.

#### Credit Cards

New and existing credit card transactions will continue to show stable credit quality because most card companies have tightened their credit policies. For instance, they reduce the credit limits of the borrowers which are delinquent on cards or loans with other lenders. This reduction helps contain the amount of delinquent receivables.

In addition, the transactions will continue to impose eligibility criteria governing the composition of the securitized pool, such as limiting the pool to no more than 30% of revolving receivables. Unlike credit card deals in the US or Europe, which consist mostly of revolving receivables, Korean transactions demonstrate a higher level of lump sum and installment receivables, which repay faster than revolving receivables. This characteristic allows the deals to amortize quicker and have shorter exposure durations to obligors, in the event performance deteriorates and hits the early amortization triggers.

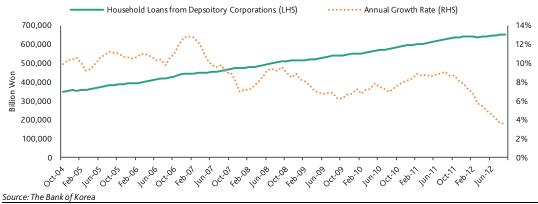
#### Autos

New auto loan transactions will have eligibility criteria that help maintain credit quality by limiting the number of securitized auto loans that have no down payments or minimal down payments. Auto loans with down payments perform better in a stressed economic environment. A large number of auto loans with no or minimal down payments defaulted during the consumer credit crisis in 2003.

#### Household Debt

Household debt in Korea remains high, negatively affecting the debt-servicing ability of credit card and auto loan borrowers. The growth rate of household lending by depository corporations has slowed, helping control the high household debt problem. The annual growth rate has dropped to 4% from over 6% between 2005 and 2011 (Exhibit 1). The drop is mainly because of government initiatives to limit loan growth, such as requiring lenders to increase loan-loss provisions. The government has also imposed leverage restrictions on financial companies to limit growth in their loan books. These government initiatives and restrictions can slow down the growth in household debt and mitigate the overall downside delinquency wave during the distressed period by controlling and limiting the over-leveraging at the household level.

# EXHIBIT 1 Outstanding Amount and Annual Growth Rate of Korean Household Debt



# RMBS: Credit Quality of New and Existing Transactions Will Be Stable

The credit quality of residential mortgage loans in new and existing RMBS transactions will be stable in 2013, given the credit positives of low loan-to-value (LTV) ratios, a rise in the number of fixed-rate loans, and the credit negatives of high household debt and falling property prices.

#### Low LTVs

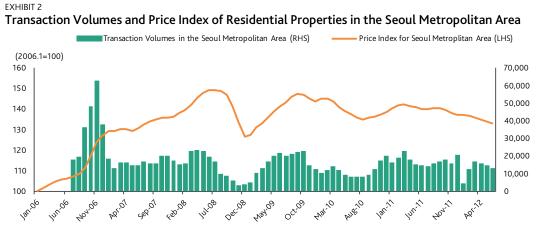
The low LTVs of properties in securitized mortgage loans provides a cushion against property price declines. Mortgage loans in existing transactions have an average LTV of around 40%. New transactions will continue to impose eligibility criteria to limit maximum LTV to 60%-70%.

#### More Fixed-Rate Loans

New transactions will include a higher percentage of fixed-rate loans in the portfolio. Such loans help stabilize performance because borrowers do not face interest rate risk. The increase in the contribution of the fixed-rate loans is driven by government measures to increase the portion of fixed rate mortgage loans in banks' portfolios.

#### High Household Debt and Falling Property Prices

The high levels of domestic household debt are a credit negative for Korean mortgagors. Moreover, most of the properties in RMBS transactions are located in the Seoul metropolitan area, where property prices and transaction volumes have been declining since 2011 (Exhibit 2).



Source: Ministry of Land, Transport and Maritime Affairs

### Stable , Low Level of Delinquencies Will be Likely but Risks Exist

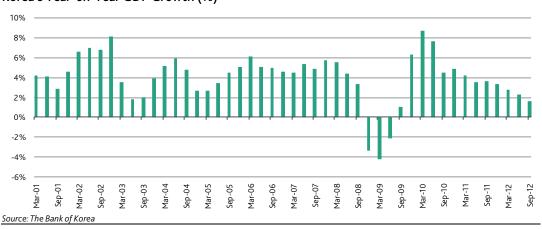
We do not expect a significant increase in delinquencies for credit card receivables, auto loans or residential mortgage loans, mainly because the ability of borrowers to service their debt is supported by the resilience of Korea's economy, and by a low interest rate environment. But this situation would be threatened if there is a severe deterioration in global economic conditions, particularly, one which affects Korea's two largest export markets of China and Europe.

#### GDP and Unemployment

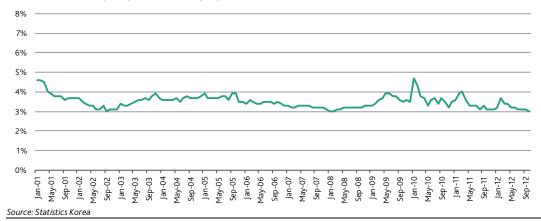
Korean economy will improve in 2013 under our current central scenario. We expect GDP growth to improve to 2.5%-3.5% in 2013 from around 2% for 2012 (Exhibit 3). Korea's unemployment rates have been hovering around 3%-4% since 2H 2010 (Exhibit 4). The export sector is competitive, and will help the economy rebound when the global economy recovers.

EXHIBIT 3





Korea's Seasonally Adjusted Unemployment Rate (%)



#### Low Interest Rates

The low interest rate environment will continue in 2013, helping highly indebted households service their debt. Interest rates are unlikely to increase because of the uncertainty in the global economy. The Bank of Korea lowered its benchmark rate twice in 2012. Interest rates charged by banks on outstanding loans to households have been around 5%-6% from 2009-12 (Exhibit 5).

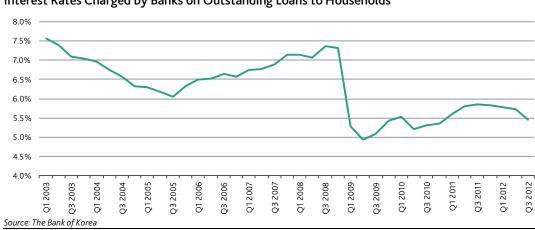


EXHIBIT 5 Interest Rates Charged by Banks on Outstanding Loans to Households

## Severe Deterioration in the Global Economy Would Increase Delinquencies

A severe deterioration in global economic conditions would impact the Korean economy, and in turn, increase the number of delinquent receivables in ABS and RMBS transactions. Korea's economy is export-oriented, constituting around 45% of GDP. Thus, Korea is vulnerable to a slowdown of economies of China and Euro Zone, which account for about 25% and 12% of Korea's exports respectively.

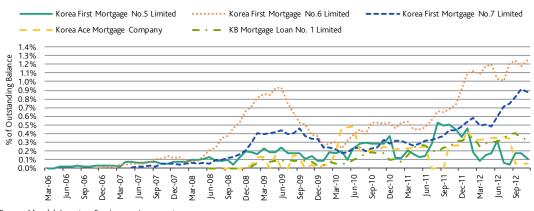
Under a stressed scenario, the delinquency ratios would increase rapidly, given the experience of the consumer credit crisis in 2003. The over 90-day delinquency ratio of securitized credit card receivables was 4.4% in April 2004. By contrast, the ratio was around 0.35% in mid-2002. Nonetheless, that Korean economy in 2013 will perform better than that in 2012 under our central scenario.

# Significant Increase in Delinquency Rates for Securitized Receivables in Outstanding Korean RMBS and ABS Transactions is Not Likely

In 2013, we do not expect the delinquencies of securitized receivables to increase significantly from the low delinquency rates in 2012.

For RMBS transactions, the over 60-day delinquency rate (Exhibit 6) and auction rates (Exhibit 7) were below 1.3%. In relation to auto loan transactions, the over 60-day delinquency rate was below 0.2% (Exhibit 8).

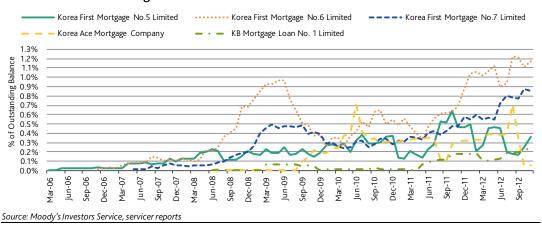
#### EXHIBIT 6 Korean RMBS 60-Plus Delinguencies



Source: Moody's Investors Service, servicer reports

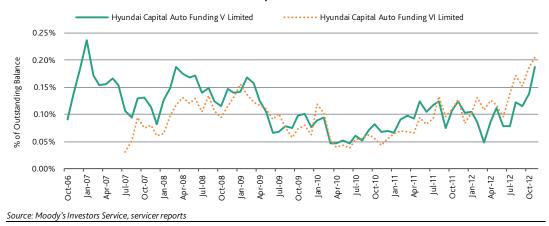
EXHIBIT 7

#### Korean RMBS Outstanding Auction Rates





Korean Auto Loan Transactions 60-Plus Delinquencies



For credit card transactions, the 30-plus delinquency rate (Exhibit 9) was below 0.6%. The annualized default rate was below 2% (Exhibit 10), except for Point-Plus Third International Limited whose default rate was around 4.5%. Point-Plus consists only of non-revolving receivables.

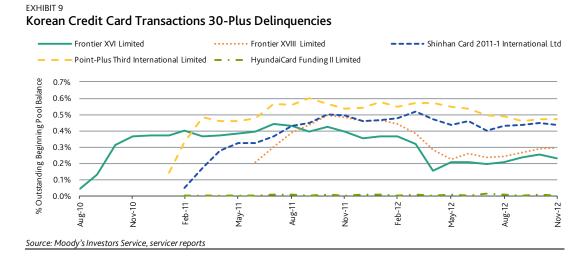
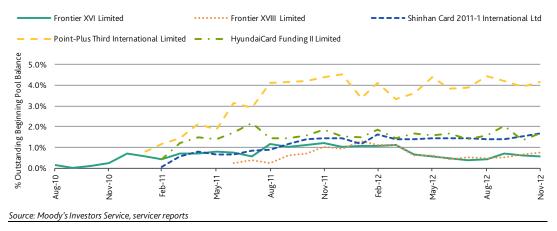


EXHIBIT 10

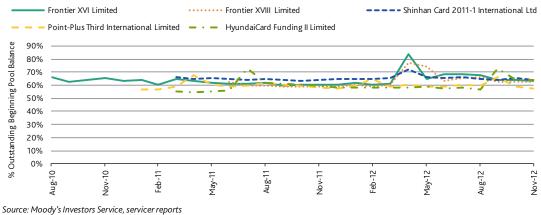
#### Korean Credit Card Transactions Annualized Default Rate

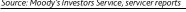


Korean credit card transactions have stable and high monthly principal payment rates of around 60% (Exhibit 11), and annualized excess spreads of around 3.5%-4% (Exhibit 12).

#### EXHIBIT 11

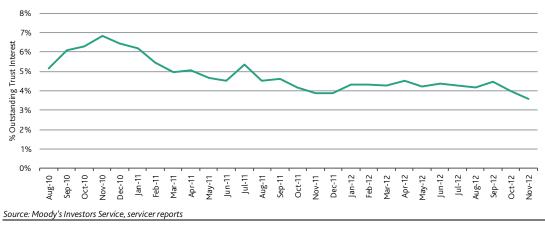
Korean Credit Card Transactions Monthly Principal Payment Rate





# EXHIBIT 12

Korean Credit Card Transactions Annualized Excess Spread



#### Issuance Will Be Low in 2013

We expect cross-border Korean credit card and auto loan issuances to be low in 2013, if pricing remains unattractive. Originators will primarily use new transactions to refinance maturing transactions.

New RMBS issuances will also remain low because of abundant and cheap alternative funding, such as unsecured bonds, which will limit a bank's need to securitize.

# Singapore CMBS: Performance Will Be Stable in 2013

## **Credit Quality of New Transactions Will Be Strong**

New and existing CMBS transactions in Singapore will share similar features, namely, high quality properties, low LTVs, and high debt-service coverage ratios (DSCRs). The sponsors are likely to be Singapore real estate investment trusts (S-REITs), as has been the market phenomenon in the past. S-REITs own a considerable number of properties and have been securitizing some of them for funding purposes. Deals sponsored by S-REITs add an extra layer of protection in the form of reliable property management, good asset enhancement initiatives and expert leasing management.

## Low LTVs and High DSCRs Provide Good Protection for New Transactions

CMBS transactions in Singapore benefit from low LTVs and high DSCRs because the management strategy of S-REITs is to maintain low corporate leverage ratios. Both refinancing and term default risks are therefore low in these transactions.

The LTVs of appraisers are usually in the high 20% to low 30% range. When measured with Moody's stabilized LTV<sup>1</sup>, the ratio increases to the high 30% range. These levels are low and mitigate against falling property values in the event of borrower default. In addition, low LTVs reduce refinancing risk in stressed market conditions.

The actual DSCRs of CMBS transactions in Singapore are usually more than three. This level provides a good buffer against deteriorations in cash flows from the properties, arising from situations such as a decline in rental rates, an increase in the number of tenants failing to renew their leases, or a prolonged period of vacancy.

#### High Credit Quality S-REITs Provide Stable Collateral Performance

The Singapore government's related entities, such as Temasek Holdings (Private) Limited or JTC Corporation, have ownership in entities that are controlling unit holder in the S-REITs. This support helps S-REITs raise equity and debt capital in stressed market environments.

S-REITs have excellent track records in terms of managing properties. They have implemented asset enhancement initiatives, such as improving the layout of properties to increase usage. All property types have appreciated in value and occupancy has largely stayed above 90%. The expertise of S-REITs in property and leasing management therefore brings stability to collateral performance.

## Strong Fundamentals but Downside Risks Exist Owing to Global Economic Uncertainty

While the rents and occupancy rates of CMBS deals in Singapore will largely be above-average, the transactions backed by shopping malls will exhibit greater stability than those associated with offices and industrial buildings.

Although property prices in Singapore have risen since end-2010, current uncertainty in the global economy and Singapore's slowing GDP growth will moderate the increase in property prices in 2013.

#### Stable Rents and Occupancy Rates

Singapore has demonstrated a high level of economic resilience to global financial shocks. The large 14.8% rebound in real economic growth in 2010, following the 1% contraction during the global financial crisis in 2009 is a prime example of the resilience. Exhibit 13 shows Singapore's GDP growth from 1990 to 2012.

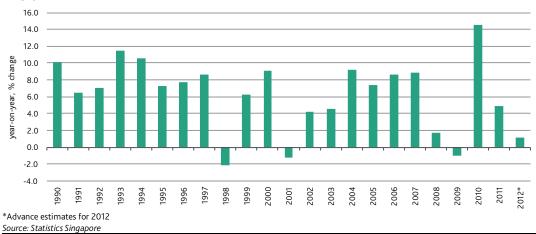
We forecast that the Singapore economy will grow at a rate of 3% in 2013. Such growth should support stable rents and occupancy rates, thereby providing overall stability to the property market.

The domestic economic rebound since 2009 has led to higher property prices. In 3Q 2012, the transaction price of office space increased 38% from 3Q 2009. Similarly, the price of shopping malls appreciated 18% in that time.

However, Singapore's economy has been weakening over the past few quarters, reflecting the overall softening in global economic activity. Exports are down, while construction and financial services have stayed broadly stable.

Moody's "stabilized LTV" uses a "stabilized value". To derive at this value, we make adjustments to the occupancy rates and rents. We also factor in the economic conditions, and the current and future supply and demand of the properties. The stabilized value is applicable for the entire term of the transactions, rather than being a point-in-time value.

Singapore's GDP Growth (at 2005 Market Prices)



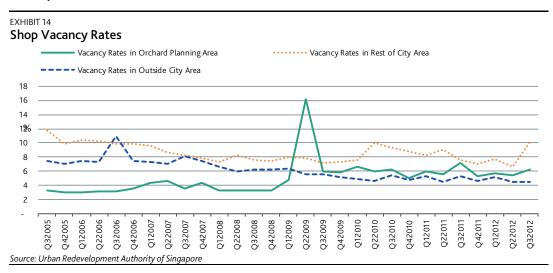
#### Stable Domestic and Tourist Spending Supports Retail Malls

Retailers at Singapore's suburban malls will enjoy stable revenues in 2013, from sustainable levels of domestic spending. Such malls offer daily necessities and enjoy steady patronage. They performed well, for instance, even during the SARS outbreak in 2003.

Retail malls in tourist areas such as the Orchard shopping belt will also benefit from stable shopper traffic because of high visitor numbers. Tourists are attracted to the island by, for instance, the two integrated resorts and high profile events such as the Formula One race.

The growing visitor numbers, their average expenditure in retail shops and the limited supply of well located new malls provide both stable rents and occupancy rates to the shopping malls located in prime areas. According to the Singapore Tourism Board (STB), seven million people visited the island state in the first six months of 2012, an increase of 11% over the same period in 2011. The STB plans to grow visitor arrivals to 17 million by 2015. In addition, about one-fifth of average tourist spending is on shopping.

Exhibits 14 and 15 show the vacancy rates and rents of shops in various areas of Singapore. Vacancy rates and rents are both stable.



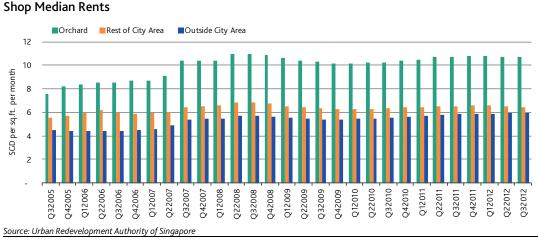
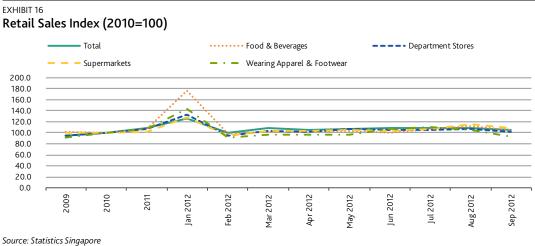
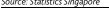


Exhibit 16 shows the retail sales index from 2009 to September 2012. It measures the short-term performance of Singapore's retail industry, based on the sales records of certain retail establishments. As the retail index show, retails sales are steady.





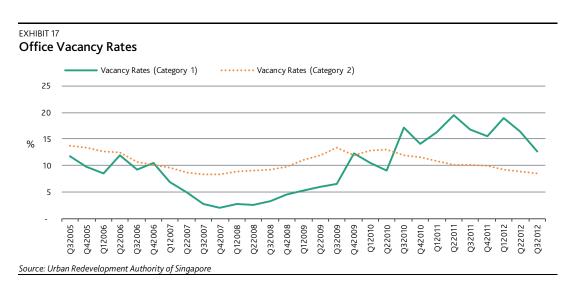
#### Global Economic Uncertainties and Upcoming Supply Remain a Risk to the Office Sector

The office segment is more vulnerable to a global economic slowdown when compared with shopping malls, because the main tenants of office buildings are typically financial institutions and their operations are sensitive to the health of the global economy.

In addition, increased supply will negatively affect rents and occupancy rates. The steady completion of office space reduces rents and adds pressure on occupancy rates. The bulk of the development pipeline will be available starting in H2 2013.

These risks are mitigated by the forecasted 3% economic growth for Singapore in 2013 and Singapore's flexible labor and product markets.

Exhibits 17 and 18 show the vacancy rates and rents of office buildings. Vacancy levels in core office areas (Category 1) are high, at around 13%. Vacancy rates in the non-core office areas (Category 2) have improved.







#### Source: Urban Redevelopment Authority of Singapore

# Industrial Buildings Sector is Stable, But Pressure Exists from New Supply and Economic Uncertainty

The leasing environment for industrial buildings in Singapore is stable, because of the diversified nature of the industrial sector, which includes conventional manufacturing industries, as well as businesses in the aerospace, engineering, pharmaceuticals and biomedical industries. In addition, the industrial buildings can be used as factory, back office, data center, logistics and distribution centers.

However, global economic uncertainties and the abundant supply of industrial buildings will pressure rents and increase vacancy rates, throughout 2013.

## **Issuance Will Remain Low in 2013**

We expect limited issuances of CMBS in 2013, given the abundant and cheap funding alternatives.

# Stable Outlook for Asia (Ex-Japan) Synthetic Balance-Sheet CLOs

## **Transactions Provide Good Protection Features for New Transactions**

New balance sheet collateralized loan obligations (CLOs) in Asia (ex-Japan) will have features similar to transactions in 2011 and 2012: 1) country risk exposures will remain diversified in the reference pools, and 2) the utilization of conservative credit default swap structures, such as long loss determination periods, improved loss estimation methods, and conservative replenishment criteria, in order to ensure the ongoing quality of reference pools.

#### **Diversified Country Risks**

While most of the borrowers in the reference pools are from Asian countries with sovereign ceilings below Aaa, and with foreign currency ceilings averaging Aa3, diversification of countries in the reference pools mitigates the sovereign risks associated with the deals. Asian corporates constitute 70%-75% of CLO borrowers, with the remainder from countries mainly in Africa, Eastern Europe and South America.

Corporates face risks that are specific to the country in which their business is located. Transactions also face the externalities and event risks<sup>2</sup> of those countries where the corporation operates. Credit enhancement levels will reflect any significant sovereign risk.<sup>3</sup>

#### Long Loss Determination Period

Recoveries of new deals will continue to improve in comparison with deals closed before 2011 because new deals will feature the minimum three-year loss determination periods adopted in 2012 and 2011.<sup>4</sup> The relatively long loss determination periods will increase the likelihood of higher recoveries from defaulting borrowers on or before the legal maturity dates of CLOs. The extended period is an advantage because the workout process for defaulting borrowers in emerging countries tends to be long, and defaulting loans may not have liquid trading markets.

## Improved Loss Estimation Method

Another factor that will lead to improved levels of recovery is the use of financial provisioning by banks in estimating the unrecoverable ultimate loss from a defaulting borrower, adopted in 2012 and 2011. Making financial provisions on a defaulting loan is part of a bank's normal procedure and is a credit positive because it is an objective assessment based on accepted accounting principles.

Previously, when CLO transactions did not explicitly apply financial provisioning, banks estimated unrecoverable ultimate losses by obtaining market quotations prior to the legal maturity dates of CLOs. The banks could also deem the ultimate losses as zero if they could not obtain a quotation.

## Conservative Replenishment Criteria Ensures Ongoing Collateral Quality

All Asian balance-sheet CLO transactions will continue to feature strong replenishment criteria that support stable collateral quality. In such situations, originating banks can not add new loans to their portfolios, if the portfolios deteriorate to the extent that the reference pool cannot meet key replenishment criteria.

The restriction on adding new loans will lead to a deleveraging of the portfolio through amortization, thereby reducing the risk to investors. Risk exposures will continue to recede until the

<sup>&</sup>lt;sup>2</sup> These externalities and event risks include the country's economic, financial, political, and legal risks, including political instability, the risk of government intervention, the risk of systemic economic disruption, severe financial instability risks, currency redenomination, and natural disasters.

<sup>&</sup>lt;sup>3</sup> Moody's will be updating certain assumptions used in rating emerging market exposures to account for the idiosyncratic characteristics of these portfolios. Moody's will apply various scenario assumptions in the quantitative model, in addition to the base case assumptions on existing and future transactions. The quantitative model simulates defaults and recoveries of each individual asset in the portfolio and allocates portfolio loss to the CLO tranches. Please refer to Moody's press release, "Moody's plans to revise its approach to rating emerging market CDOs," published on 12 October 2012.

<sup>&</sup>lt;sup>4</sup> At the end of the loss determination period, which is a date close to the legal maturity date of CLO deals, banks will finalize the actual recovery amount for each defaulting loan and estimate the non-recoverable portion. The credit protection seller will then have to pay the bank the non-recoverable portion of the defaulting loans.

reference pool can once again meet its replenishment criteria of creditworthiness and diversity, at which point, originating banks can then resume adding new loans to their portfolios.

In addition, transactions referencing trade finance loans will either have cumulative default triggers or cumulative loss triggers to irrevocably stop the banks from replenishing their portfolios when their aggregate defaulted loan amounts exceeds a pre-specified amount and for a period of time. These triggers are credit positive because the portfolio will deleverage rapidly, reducing further risks to investors, owing to the fairly short weighted-average life (WAL) of these trade finance loans, usually 60-90 days. For other transactions referencing term loans, the WAL is usually less than two years.

### Default Rates of Underlying CLO Reference Pools Remain Low

Our outlook for the default rate of underlying reference pools remains stable. The underlying reference pools are senior unsecured term loans or trade loans to corporate borrowers, originated by large- and medium-sized banks. These banks have strict lending standards.

The stable outlook reflects 1) a low projected default rate for borrowers in Asia (ex-Japan), 2) robust growth in emerging market economies, and 3) the mostly stable outlook for the industry sectors heavily represented in CLOs.

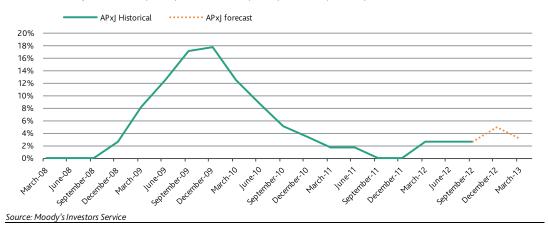
Nevertheless, defaults may increase if China's economy experiences a hard landing or if the weakerthan-expected growth in the euro area is prolonged.

## Low Borrower Default Rate in Asia (ex-Japan)

We estimate that the default rate for speculative-grade non-financial borrowers in Asia (ex-Japan) will peak at end-2012, at the 5% level, and moderate to 3% in 1Q 2013 (Exhibit 19). We raised our projected rate to 5% from 2.3%<sup>5</sup> because of the ongoing European sovereign crisis. Nonetheless, the default rate will remain close to historically low levels.

#### EXHIBIT 19

Trailing 12-Month Speculative-Grade Default Rate in Asia Pacific (ex-Japan) March 2008 to September 2012 (Actual), Full-Year 2012 (Actual) and 2013 (Forecast)



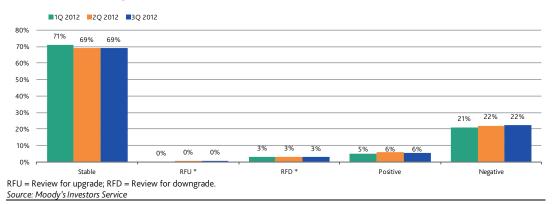
The outlook was stable for 69% of rated non-financial borrowers in Asia (ex-Japan), based on third-quarter data for 2012 (Exhibit 20).

While the proportion of stable outlooks declined to 69% at end-September 2012 from 71% at end-March 2012, the overall ratio of stable and positive outlooks was at 75%, reflecting a broadly stable credit environment for corporate borrowers in the region.

<sup>&</sup>lt;sup>5</sup> See <u>High-Yield Default Rate for Asian Non-Financial Corporates to Rise Modestly in 2012</u>, published on13 July 2012.

EXHIBIT 21

#### Distribution of Rating Outlooks for Asian Issuers



#### **Robust Growth in Emerging Economies**

Moody's Macroeconomic Board's GDP growth forecast for the G20 emerging market economies for 2012 is 5%, 5.5% for 2013, and 5.75% for 2014.<sup>6</sup> The forecast for China's economic growth is 7.5% for all of 2012, with similar growth likely in 2013 and 2014. Such robust expectations support strong CLO performance for Asian corporates. This segment constitutes the lion's share of underlying borrowers.

## Mostly Stable Outlook for Heavily Represented Industry Sectors

Most of the industries in CLO reference pools in Asia (ex-Japan) will experience stable credit performance in 2013.<sup>7</sup> Of the eight most relevant industry sectors, five have stable outlooks (Exhibit 21).

| Top Industries                | % in CLO Portfolios | Relevant Industry Sectors           | Outlook  |
|-------------------------------|---------------------|-------------------------------------|----------|
| Metals & Mining               | 14.56%              | Steel (Asia)                        | Stable   |
|                               |                     | Base Metals (Global)                | Negative |
| Beverage, Food & Tobacco      | 8.13%               | Beverages (Global)                  | Stable   |
| Energy: Oil & Gas             | 7.92%               | Exploration & Production (Global)   | Stable   |
|                               |                     | Refining & Marketing (Global)       | Negative |
| Banking                       | 6.78%               | Banking Systems (Various Countries) | Various  |
| Construction & Building       | 6.60%               | N/A                                 | N/A      |
| Chemicals, Plastics, & Rubber | 6.18%               | Chemicals (Global)                  | Stable   |
| Wholesale                     | 6.08%               | N/A                                 | N/A      |
| Consumer Goods: Non-durable   | 5.66%               | Consumer Products (Global)          | Stable   |
|                               | 61.92%              |                                     |          |

# Top Industries as Represented in CLO Portfolios and Their Industry Outlooks<sup>8</sup>

Source: Moody's Investors Service, reference registries

"N/A" denotes the portfolio industry which doesn't have a direct corresponding Moody's industry sector outlook

<sup>&</sup>lt;sup>6</sup> See <u>Update to the Global Macro-Risk Outlook 2012-14: Slow Adjustment to Weigh on Growth</u>, published on 12 November 2012.

<sup>&</sup>lt;sup>7</sup> Based on the reference registries as of end-August 2012.

<sup>&</sup>lt;sup>8</sup> See <u>Non-Financial Corporate Global Industry Sector Outlooks: US Homebuilding and Wireless Improve but Steel and Base Metals Struggle</u>, published on 11 October 2012

## Key Risk Factors: Hard Landing in China and Weaker-Than-Expected Euro Area

The prime risk to CLO deals is a hard landing in China, an economy that has been Asia's growth engine for a number of years. A significant deceleration of growth in China would severely affect Asian borrowers and CLO performance. Our central scenario is for a soft landing in China, with GDP growth of 7.5% from 2012 to 2014, supporting stable CLO performance.

A secondary risk factor is the likelihood of a deep and prolonged recession in the euro area. While CLOs in Asia (ex-Japan) have little direct exposure to European borrowers, a more severe crisis would pose a serious threat to the global economy and result in significant ripple effects on emerging market economies. In such a scenario, CLO portfolios with exposures to export-driven economies would be particularly vulnerable.

## Issuances Will Remain Stable

We expect to see in 2013, similar levels of issuances from existing sponsors of 2012 transactions. New sponsors may also emerge because more banks are seeking to generate client-focused growth and to improve the efficiency of economic and regulatory capital, through deals such as CLOs.

## Covered Bond Frameworks in Asia (Ex-Japan) Are Developing

## Market at Early Stage

While the covered bond market in Asia (ex-Japan) is in its infancy, with only Korea having participated, there has been strong interest from market participants across the region, with some developments in the legal, regulatory and market activities, as covered bonds are seen as alternative funding tools.

## Legal and Regulatory Developments

## Korea Is Ahead of All Other Jurisdictions

Korea is more advanced than the other Asian jurisdictions, on legal and regulatory issues related to the covered bond market. A draft covered bond law was published in October 2012 and will be submitted for enactment.

The proposed law would be credit positive for Korean covered bonds because it provides for strong legal protection on dual recourse and cover pool registrations. It also requires an independent party to monitor the management of the cover pool, and sets out clear definitions for eligible issuers, registration, public disclosure and supervision.

#### Singapore's Regulatory Authority Is Likely to Publish Covered Bond Guidelines Soon

The Monetary Authority of Singapore (MAS) published a consultation paper in March 2012 on covered bond guidelines and has been collating comments from the market over the last few months. The MAS is expected to publish the guidelines soon. While these guidelines will greatly assist market participants, they will not offer the same legal protections as a statutory law.

#### Other Jurisdictions Are Undertaking Feasibility Studies

Regulators in other Asian economies, such as Hong Kong, India and Malaysia have been studying the feasibility of introducing covered bonds to their markets. Each of these jurisdictions will likely adopt a similar approach as Korea to help facilitate the development of covered bonds in their respective countries.

# **Issuance Outlook**

## Korea leads market activity while elsewhere, interest is high

Looking ahead to 2013, we expect that covered bond issuance will pick up in Korea with further issuance likely from Korea Housing Finance Corporation and other Korean banks entering the market. Korea has historically led market activity.

Although there have been no issuances in the other Asian jurisdictions, strong interest prevails, with market participants eyeing covered bonds as an alternate funding tool. For now, most banks have good access to the capital markets via senior unsecured issuance, but covered bonds would provide funding diversification. Issuing covered bonds can also be considered prudent to allow banks to tap the debt capital market during any future period of distress. We expect Singapore to be the next market after Korea. Meanwhile, Hong Kong, India, Malaysia, and China will also start developing their covered bond markets.

# Moody's Related Research

For a more detailed explanation of Moody's approach to this type of transaction as well as similar transactions please refer to the following reports:

Rating Methodologies:

- » Moody's Approach to Rating Korean RMBS using MILAN, September 2010 (SF218550)
- » Moody's Approach to Rating Consumer Loan ABS Transactions, October 2012 (SF302805)
- » Moody's Approach To Rating Credit Card Receivables-Backed Securities, April 2007 (SF92650)
- » <u>Moody's Approach to Rating CMBS Large Loan/Single Borrower Transactions, April 2000</u> (SF8803)
- » <u>Moody's Approach to Evaluating Singapore CMBS Liquidity Arrangements, March 2010</u> (SF196173)
- » Rating Caps for CMBS in the Tail Period, October 2011 (SF259026)
- » Moody's Mapping Methodology for Bank Balance-Sheet CLOs, January 2011 (SF208590)
- » Moody's Approach to Rating Collateralized Loan Obligations, June 2011 (SF252891)
- » <u>Moody's Approach to Rating Corporate Collateralized Synthetic Obligations, September 2009</u> (SF175879)
- » Moody's Approach to Rating Covered Bonds, July 2012 (SF291041)
- » Assessing Swaps as Hedges in the Covered Bond Market, December 2009 (SF142765)

Rating Implementation Guidance:

- » <u>Global Structured Finance Operational Risk Guidelines: Moody's Approach to Analyzing</u> Performance Disruption Risk, June 2011 (SF243145)
- » Framework for De-Linking Hedge Counterparty Risks from Global Structured Finance Cashflow Transactions, October 2010 (SF73248)

Newsletters:

- » Structured Thinking: Asia Pacific, November 2012 (SF308534)
- » High Yield Interest, Asian Edition, November 2012 (146412)

**Global Risk Perspectives:** 

» <u>Update to the Global Macro-Risk Outlook 2012-14: Slow Adjustment to Weigh on Growth,</u> November 2012 (146944)

To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.

Moody's publishes a weekly summary of structured finance credit, ratings and methodologies, available to all registered users of our website, at <u>www.moodys.com/SFQuickCheck</u>.

#### Report Number: SF312443

© 2013 Moody's Investors Service, Inc. and/or its licensors and affiliates (collectively, "MOODY'S"). All rights reserved. CREDIT RATINGS ISSUED BY MOODY'S INVESTORS SERVICE, INC. ("MIS") AND ITS AFFILIATES ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND CREDIT RATINGS AND RESEARCH PUBLICATIONS PUBLISHED BY MOODY'S ("MOODY'S PUBLICATIONS") MAY INCLUDE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL, FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS AND MOODY'S OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. CREDIT RATINGS AND MOODY'S PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. NEITHER CREDIT RATINGS NOR MOODY'S PUBLICATIONS COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS AND PUBLISHES MOODY'S PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process. Under no circumstances shall MOODY'S have any liability to any person or entity for (a) any loss or damage in whole or in part caused by, resulting from, or relating to, any error (negligent or otherwise) or other circumstance or contingency within or outside the control of MOODY'S or any of its directors, officers, employees or agents in connection with the procurement, collection, compilation, analysis, interpretation, communication, publication or delivery of any such information, or (b) any direct, indirect, special, consequential, compensatory or incidental damages whatsoever (including without limitation, lost profits), even if MOODY'S is advised in advance of the possibility of such damages, resulting from the use of or inability to use, any such information. The ratings, financial reporting analysis, projections, and other observations, if any, constituting part of the information contained herein are, and must be construed solely as, statements of opinion and not statements of fact or recommendations to purchase, sell or hold any securities. Each user of the information contained herein must make its own study and evaluation of each security it may consider purchasing, holding or selling.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY SUCH RATING OR OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

MIS, a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MIS have, prior to assignment of any rating, agreed to pay to MIS for appraisal and rating services rendered by it fees ranging from \$1,500 to approximately \$2,500,000. MCO and MIS also maintain policies and procedures to address the independence of MIS's ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at <u>www.moodys.com</u> under the heading "Shareholder Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

For Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail clients. It would be dangerous for retail clients to make any investment decision based on MOODY'S credit rating. If in doubt you should contact your financial or other professional adviser.

