

The composite interest rate of Hong Kong - a new data series

by the Research Department

The HKMA has undertaken to compile and publish a new data series on the composite interest rate to improve interest rate risk management of the banking sector. The new series is being introduced following research which concluded that a composite interest rate reflecting movements in various deposit rates, interbank and other interest rates closely tracked the average cost of funds of AIs over the past six years.

The first data from the new series can be seen on the HKMA website and are reproduced in this article.

Introduction

In July 2005, the HKMA issued a research paper entitled "Hong Kong's Mortgage Rate Setting - An Alternative Reference Rate?"¹ The paper argued that authorized institutions (AIs) should take adequate account of their long-term funding cost in pricing long-term mortgage loans. It compared the Best Lending Rate with other alternative mortgage reference rates to consider which one(s) would enable AIs to better track their cost of funds. The analysis concluded that a composite interest rate reflecting movements in various deposit rates, interbank and other interest rates closely tracked the average cost of funds of AIs in the past six years. The study also highlighted that the use of a reference rate, which closely reflected AIs' cost of funds for the setting of mortgage rates, could provide a means for AIs to better manage the risks of interest rate volatility on their earnings, and help enhance banking stability.

The HKMA has now undertaken to compile and publish a new data series on the composite interest rate on a regular basis to improve interest rate risk

management in the banking sector. The new series will help AIs to keep track of changes in funding costs in the industry and to facilitate AIs which intend to use it for their mortgage rate setting.

This article presents the methodology of the compilation of the composite interest rate, statistics of the first data release and the future schedule.²

The compilation of the composite interest rate

The composite interest rate is a weighted average interest rate of all Hong Kong dollar interest bearing liabilities, which include deposits from customers, amounts due to banks, negotiable certificates of deposit and other debt instruments, and Hong Kong dollar non-interest bearing demand deposits on the books of banks. It is equivalent to the ratio of the aggregate gross interest expenses incurred by banks to their aggregate Hong Kong dollar interest bearing liabilities and non-interest bearing demand deposits. Interest rates used in the calculation of the composite interest rate are the actual interest rates

¹ See Wong et al. (2005), "Hong Kong Mortgage Rate Setting - An Alternative Reference Rate?", *HKMA Research Memorandum*, <http://www.info.gov.hk/hkma/eng/research/RM09-2005.pdf>.

² The methodology for the calculation of the composite interest rate is similar to the approach taken in some other jurisdictions where similar indices are compiled. For example, the 11th District Monthly Weighted Average Cost of Funds Index compiled by the Federal Home Loan Bank of San Francisco in the US is used by banks in the West Coast for the pricing of adjustable rate mortgages.

offered to each of the respective funds on the banks' books.³ The following formula illustrates how the composite interest rate is calculated:

$$\text{Composite interest rate} = \sum (W_i \times IR_i), \quad (1)$$

$$\text{where } W_i = \frac{FC_i}{\sum FC_i}$$

$$\text{Which is equivalent to } \frac{\sum (FC_i \times IR_i)}{\sum FC_i} \quad (2)$$

W_i is the weight applied to IR_i , IR_i represents the corresponding interest rate of liability component i , FC_i is the interest bearing liability component or non-interest bearing demand deposits i , $FC_i \times IR_i$ is equivalent to the interest expense of FC_i , and $\sum FC_i$ is the sum of all interest bearing liability components and non-interest bearing demand deposits.

Data from retail banks, which account for about 90% of the total customers' deposits in the banking sector, are used in the calculation.^{4,5} It should be noted that the composite interest rate represents only average interest expenses. There are various other costs involved in the making of a loan, such as operating costs (e.g. staff and rental expenses), credit cost and hedging cost, which are not covered by the composite interest rate.

The first data release and schedule

The composite interest rate will be compiled and published on a quarterly basis. The first data release on 8 December 2005 provides the composite interest rate from the end of the fourth quarter of 2003 (i.e. the last calendar day of the quarter) to the end of the third quarter of 2005. The composite interest rate series is available in the Monthly Statistical Bulletin on the HKMA website and is reproduced below. The next release is scheduled for mid-February 2006 and will provide the composite interest rate at the end of the fourth quarter of 2005.

Composite interest rate⁶

End of period	Level (%)	Change (basis point)
2003 Q4	0.24	
2004 Q1	0.22	-1.5
Q2	0.24	1.8
Q3	0.45	20.6
Q4	0.30	-15.5
2005 Q1	0.80	50.9
Q2	1.58	77.7
Q3	2.33	75.3

Note: Figures are at the last calendar day of the period.
Source: Compiled from the Return of Interest Rate Risk Exposures and the Return of Assets and Liabilities.

³ For new funds, the interest rates used are the prevailing market interest rates. For existing funds which were originated earlier and carried forward into the reporting day, the actual interest rates are the past interest rates applied to these funds at the time when they were contracted. Note that factors such as changes in the composition of the sources of funds, accounting rules, regulatory reporting instructions and merger and acquisition activities may have an impact on the derived composite interest rate.

⁴ Data for the compilation of the composite interest rate are retrieved from the quarterly Return of Interest Rate Risk Exposures (MA(BS)12, items 5a and 5c for Hong Kong dollar positions only) and the monthly Return of Assets and Liabilities (MA(BS)1, item 6.1b for Hong Kong dollar only).

⁵ Retail banks comprise all the locally incorporated banks plus a number of the larger foreign banks that are not locally incorporated, but whose operations are similar to those of the

locally incorporated banks, in that they operate a branch network and are active in retail banking.

⁶ The composite interest rate is compiled by information obtained from a number of retail banks. Although great care has been taken to ensure that the information provided in this table is accurate and up to date as at the date of publication, there is a possibility that the retail banks may subsequently make amendments or revisions to their reported statistics after submitting the relevant returns to the HKMA. In these circumstances, the HKMA will not make a corresponding amendment to the composite interest rate.

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