

# China's Banking Overseas Acquisition: Long-Term Performance and Causes

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## ABSTRACT

One goal of this study is to investigate the long-term performance of CMB acquisition of WLB. The results reveal that its post-merger BHAR is negative and its profitability also decreases, although its post-performance shows an upward trend. The other goal of the research is the causes for its efficiency loss. Based on the analysis of net interest margin, cost to income ratio and the core capital adequacy, the study found that the main reason is that the high premium acquisition lowered CMB's core capital adequacy ratio, and thus restricts its growth of net interest income.

**Keywords:** China's banking Overseas acquisition Long-term performance

## 1. Introduction

In recent years, China's outward foreign direct investment has developed rapidly, and there is a great demand for the financial support from the home country's banking sector. The historical development of global banking showed that merger and acquisition can quicken bank's internationalization.

During 2002-2011, some major Chinese banks have completed a total of 38 overseas mergers and acquisitions, the cash amount of which was as high as 20.16 billion U.S. dollars. The performance of these deal arouse great concern both in the academic field and the business media. However, the sizes of most of

these deals are relatively small. Luckily, there is one relatively bigger deal conducted by China Merchants bank (CMB). It acquired Wing Lung Bank of Hong Kong (WLB) as its wholly owned subsidiary for about 36.3 billion Hong Kong dollars from 2008 to 2009, which occupies about 50% of its core capital. Moreover, this is a deal for obtaining controlling rights, and its efficiency could more demonstrate whether China's bank have the capability of integrating overseas bank.

Many scholars analyze its short-term effect for the shareholder wealth and conclude Cumulative Abnormal Return (CAR) relative to Hang Seng index for the event window of [-30,30] is -206.42% (Hu, 2009). Chen (2010) use factor analysis to evaluate its performance after two years of merger, and found it hasn't realized expected synergies. But the banker of CMB declared that after-integration is successful when CMA released its 2012 annual report, although the business media still argue its rationality of the high price. The offer price for each share is 3.1 times of P/B of WLB, and the total premium is HK \$ 24.5 billion, ranking the most expensive acquisition in Hong Kong banking industry since 2001.

Those different opinions among management, business media and academic field reflect that there lack of systematic research about it. The almost unanimous agreement among the experts is that all the gains from the merger could be realized within 3 years (Rhoades, 1998), it is better to use at least three-year time peri-

od for analyzing the efficiency of merger. However, so far there is no such long-term research, thus leaving the room for this paper. It is aimed to detect long-term efficiency of merger integration. In view of the long-term negative effect of global financial crisis on the banking sector, the examination period was extended from 3 years to 4 years. The emphasis not only detects efficiency change between pre-merge and post-merge, but also its change trend during post-merger period.

## 2. Literature Review

Over the past decade, substantial research has been devoted to the question whether or not cross-border M&As in the banking industry improve the efficiency of the consolidating firms. Two basic types of methodology are often used: event studies and comparisons of pre-merger and post-merger performance.

Event studies examine the impact of merger announcements on share prices. For the short-term behavior of stock returns, CRA (Brown and Barner, 1980, 1985), the sum of daily abnormal return, is often used to detect the Changes in the market value for the acquiring banks. For the long-term behaviors, B.M.Barber (1997) argued that CRA is conceptually flawed or lead to biased test statistics to calculate long-term abnormal return, and researchers should calculate abnormal returns as the simple buy- and -hold return on a sample firm less the simple buy-and -hold return on a reference portfolio or control firm.

In the second approach, performance indicators based on balance sheet data or calculated with stochastic frontier methodologies are used to compare the performance of the merging banks with that of a control group.

## 3. Research methodology and data

### 3.1 long-term changes of accounting performance

Based on the previous study method and data availability of China's banking sector, 8 measures have been adopted. The ratios of ROA and market share of profit (MSP) are used to evaluate its total efficiency change. The ratio of net interest margin (NIM), the cost to income ratio (CIR), market share of total income (MSTI), market share of interest income (MSII), market share of non-interest income (MSNII) are for measuring the reasons of profit improvement or deterioration. Core capital adequacy ratio (Core CAR) is a ratio of a bank's core capital to its risk. If it is lower, the bank has less capability for risk precaution, and it has to decrease its risk assets.

The year 2008 is taken as the year for the merger. The year from 2005-2007 is taken as the pre-merger period, and the year from 2009-2012 is taken as the post-merger period. For peer groups, two references were adopted, one is the industry average, and the other is comparable bank. Due to data limitation, the average of China's 14 listed banks has to be used as the industry average. For the comparable bank, China Citic bank (CITIC) and Shanghai Pudong Development Bank (SPDB) are to be used based on their size. All of the data are from WIND, annual reports of china banking industry by the China Banking Regulatory Commission and annual reports of each bank's website.

### 3.2 shareholder wealth and event study

Since this study aims for testing long-term shareholder wealth, BHAR is adopted to calculate abnormal return. The following is its calculation

$$BHAR_t = \prod_{i=1}^t (1 + R_i) - \prod_{i=1}^t [1 + E(R_i)]$$

$R_i$  represents the month  $i$  simple return on the firm CMB, and  $E(R_i)$  represents the month  $i$  expected return on the firm CMB. In this study, China Mainland Bank Index is used as the comparable portfolio to represent CMB's expected return. CMB announced its merger on June 2, 2008. Considering information leakage, one month before that date was taken as the beginning, and the 55th month after that date (the end of 2012) was taken as the end, and the total 55 months during the time period of [-1, 55] was taken to calculation of BHAR. The positive BHAR represents to create values for the shareholders, and the negative BHAR means destroying the values.

#### 4. Analysis and Results

##### 4.1 The Changes of Profitability

It's clearly shown at the table 1 that CMB's ROA is higher than both the industry average (IA) and the comparable banks (CB) before the merger. The average ROA from 2005 to 2007 are higher than the two peers at 0.17% and 0.2% respectively. However, after-merger, there differences in ROA decreased greatly. At the year of 2009, it dropped to 0.01% with the comparable bank and even -0.04% with the industry average. After that, it bounces back to 0.13% and 0.12% at 2010, 0.25% and 0.27% in 2011, 0.30% and 0.33% in 2012. But, until 4 years later, it didn't come back to the level of 2007 yet, and its four-year-average of difference after merger are also lower than that of pre-merger.

Another measure is also used to evaluate CMB's profitability. That is the market share of bank's profit, reflecting more about the bank's competitiveness in the banking industry. As shown in the Figure 1, the change of CMB's market share is similar with that of ROA. Before merger, CMB's market share increased gradually,

however, it dropped from 3.41% in 2007 to 2.73% in 2009. After that, its profitability began to resume, but until 2012 its market share didn't come back to the level of the year 2007 and 2006. In contrast, although both the market share of SPDB and CITIC also decreased in 2009 due to macro conditions, they declined relatively little, 0.1% and 0.17% respectively and quickly restore the level of 2006 and 2007.

Table 1: ROA Difference

	IA%	CB%
2005	0.03	0.04
2006	0.17	0.19
2007	0.31	0.37
2008	0.47	0.37
2009	-0.04	0.01
2010	0.13	0.12
2011	0.25	0.27
2012	0.30	0.33
Average Premerger	0.20	0.17
Average Post Merger	0.18	0.16

The change of CMB's profit market shares further verifies that the merger damaged greatly on its profitability. Although the positive integration effect began to show after 2009, it doesn't come back to its historical highest level.

What causes such substantial decrease for CMB's profitability? Since the interest income has occupied more than 80% of its total income before the merger, the reasons for affecting it will be first analyzed. Generally, there are 3 reasons for its decrease. First, it is the lower NIM. Secondly, it is the higher expenses to the operational income. Thirdly, it is the decrease of the scale of interest-bearing asset.

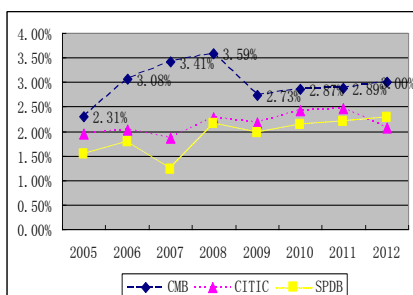


Figure 1: Changes of Profit Market Share

## 4.2 The Changes of NIM

Although CMB's NIM has been lower than the industry average from 2005 to 2012 as shown in figure 2, its post-merger NIM difference with the industry average is higher than that of premerger except the year 2009. This trend also holds true for the comparison with the comparable banks. Holding other conditions unchanged, the rise of NIM should improve the bank's profitability, and thus it can be concluded that NIM is not the cause of CMB's profit decreases. In contrast, it helps to offset the loss of the profit.

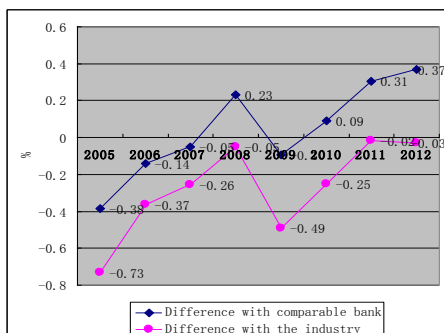


Figure 2: Changes of NIM Difference

## 4.3 Analysis of Cost to Income Ratio

The difference of CIR between CMB and its peer groups is shown in the figure 3. It can be seen clearly that CMB has a comparative advantage in cost control before merger. Its 3-year-average of CIR is 2.24% lower than its comparable bank and 6.68% lower than its industry average.

Yet, after the merger, its CIR increased dramatically. The four-year average of CIR is 6.25% higher than its comparable banks and 0.29% lower than its industry average.

There are two reasons for the rise of CIR. One is the relative increase of the cost, and another is the relative decrease of total sales. Since CMB's total cost in 2009 only increase by 2%, sharply lower than 29% of its past four-year-average growth rate, we turn to its change of total income for analysis.

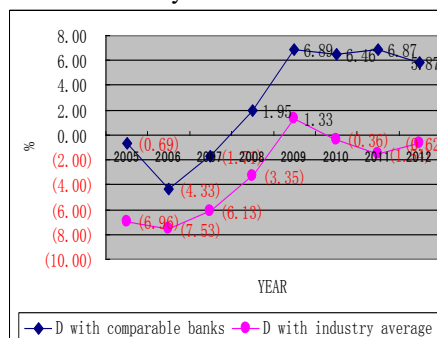


Figure 3: Changes of CIR Difference

## 4.4 Analysis of MRTI, MRRI and MRNI

The total income includes interest income and non-interest income. CMB's non-interest income (NII) has been increasing after the merger. In contrast, both market share of total income (TI) and interest income (II) fall in 2009, and start to come back to the premerger level in 2010 or 2011 (due to space limitation, the figure is no shown here). The previous analysis shows its NIM is increasing after the merger, so the reasons of the fall of the interest income could result from the relative decrease of the interest-bearing assets.

## 4.5 Analysis of Deposit Liability

The limitation for the increase of interest-bearing assets usually comes from two aspects. One is the lack of funding; the other is the restriction of capital adequacy ratio.

As shown in the figure 5, CMB's share of the deposit liability isn't affected by the merger and it continues to rise, so the relative fall of interest-bearing assets is not resulted from the funding sources.

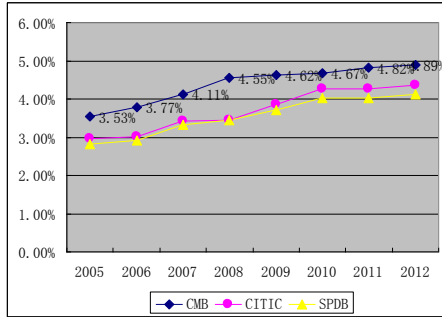


Figure 5: Change of market share of DL

#### 4.6 Change of core CAR

Unlike the “big-four” bank in China, CMB is not able to obtain the capital from the central government, so its core capital adequacy just lies at the mid level of banking industry before the merger. In 2007, it is even 2% lower than the industry average. After the merger, this ratio is much worse, 4% lower than that of the industry average in 2008, 2.16% in 2009 and about 1.5% until 2012.

The reason for its sharp fall of core capital adequacy is due to the high premium of acquisition price. The sum of total ¥18.30 billion business reputation, amounting to about 28% of its core capital is regarded as the business reputation. It can't be calculated as the core capital based on China's accounting principal, and thus decreased CMB's core capital adequacy by 2%. Assuming its core capital adequacy 7%, the loss of 18.30 billion core capital will lead to the loss of loan ¥228.7 billion. Assuming 3% of NIM, the net interest income will decrease about ¥6.8 billion, which is almost the similar size of decrease for CMB's net interest income in 2009.

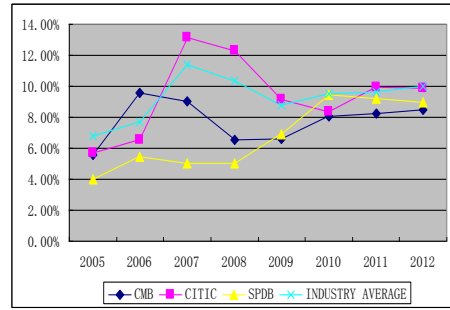


Figure 6: comparison of core CAR

The source of accumulation of core capital results from either stock issuing or retained earnings. CMB's average annual profit is ¥23.6 billion during 2008 -2010, and thus the ratio of its core capital adequacy can gradually improve through the retained earnings. The improved condition of core capital adequacy can increase its interest income, and thus the profitability.

However, CMB is still difficult to issue new stocks due to the downturn of stock markets since 2008. China banking regulatory commission (CMRC) has also tightened its capital rules. In 2011, the minimum core capital adequacy requirement has been more than doubled to 8.5% from 4%, so CMB has been under capital pressure these years. Although CMB tried to increase its profitability through non-interest income, however, its profitability can't reach its pre-merger level yet.

#### 5. Long-term shareholder wealth

Figure 8 shows the detailed change of BHAR after the merger. Shareholders experience the most of loss, about 25% of its value in August, 2009, 13 months after the merger. After that, the BHAR started to come back to the average level of 20% loss during the second year, and two years later, it fluctuates at about 13% of loss until the end of 2012. The good news is that the loss of BHAR has been decreasing after 2009, which in accordance

with the improvement of accounting measures mentioned above. But, since CMB is still facing the capital pressure, the limitation for its proficiency improvement is still existed, so the shareholder wealth doesn't turn positive yet.

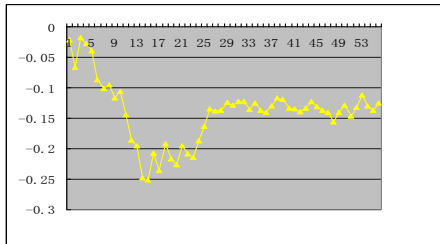


Figure 7: Changes of BHAR

## 6. Conclusion and Suggestion

Both the accounting ratio analysis and the event study show that CMB haven't successfully realized its expected synergies. Its market share for profit is decreasing, its relative advantage of ROA with the peer groups is reducing, and the shareholders BHAR return is still negative until 4 years later.

Although it isn't a successful acquisition, it gradually showed integration improvement. In 2009, one year later of the acquisition, its accounting measures and stock return showed the worst performance. Since 2010, these measures improved gradually, which demonstrate CMB's integration ability.

The further analysis shows the reasons for its profit loss and abnormal return loss. It is not caused by the net interest margin. NIM has been improving after the merger. One reason is the rapid increase of the cost to income ratio, which is mainly caused by the decrease of interest-bearing assets scale. Its decrease can attributed to the pressure of core capital adequacy. High acquisition premium and the lack of stable capital refunding channels are the reasons for that.

One reasons for the high acquisition premium is that several Chinese banks including ICBC and JIAOTONG bank

are also making competitive biddings for the acquisition of WLB. If there is some collaboration between Chinese banks, the merger performance would improve a lot. At the same time, this case demonstrates the effect of capital adequacy for the merger. Generally, china's bank capital is not sufficient for the large-scale acquisition, which would limit the process of bank's internationalization. It is an issue needed for solution from the higher lever of administration.

## 7. Acknowledgement

The research work was supported by Academic Human Resources Development in Institutions of Higher Learning under the Jurisdiction of Beijing Municipality (Grant No. 356005), Beijing Municipal Party Committee (Grant No. 2011D005008000003), China Scholarship Committee (No.201307127016), Beijing International Studies University (BISU) (Grant No. 13Ba008) and Research Center of Event Management & High-end Service Industry, BISU

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